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Automobile Topics

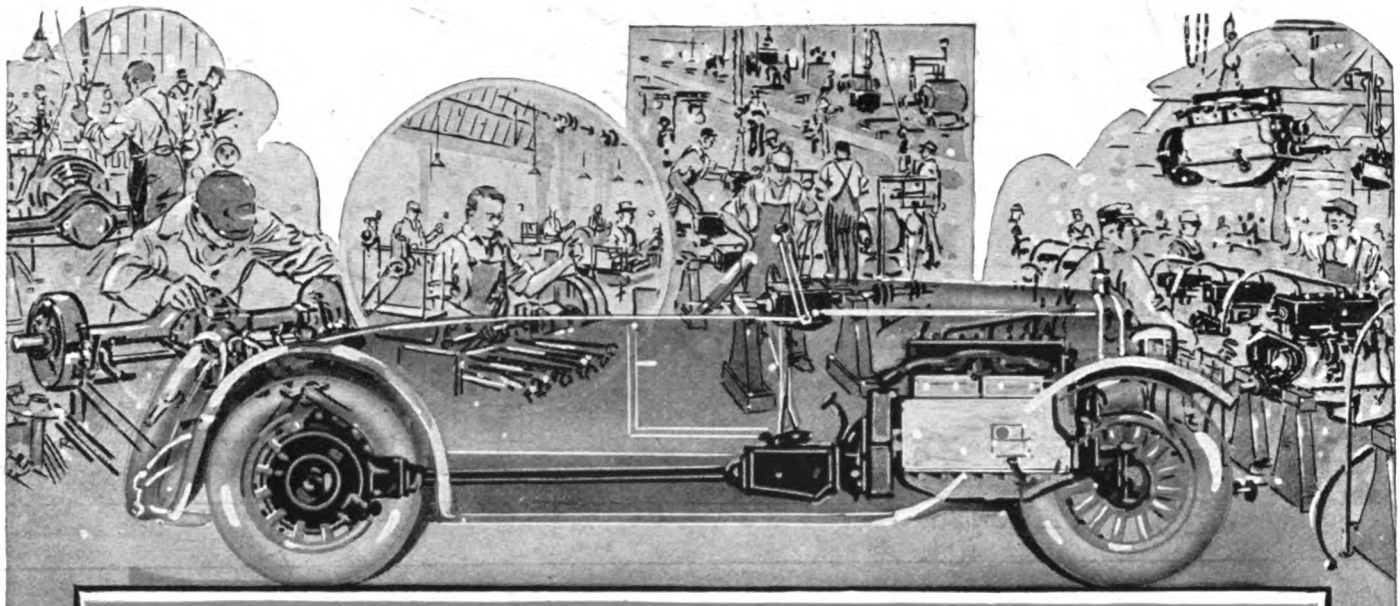
THE TRADE AUTHORITY

Vol. LXVII. No. 1 | PUBLISHED WEEKLY NEW YORK, AUGUST 19, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



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Back of the SPECIALIZED vehicle

Tests that no one organization could afford to conduct

The car market today is peculiarly a buyer's market. Not only is the buyer in a position to be most exacting but *he knows how to be,* to a greater degree than ever before.

This explains the preference for the SPECIALIZED car whose major units—motor, clutch, transmission, universal joints, axles—are *proven in production* by tests more detailed and exacting than any one manufacturer could afford to conduct.

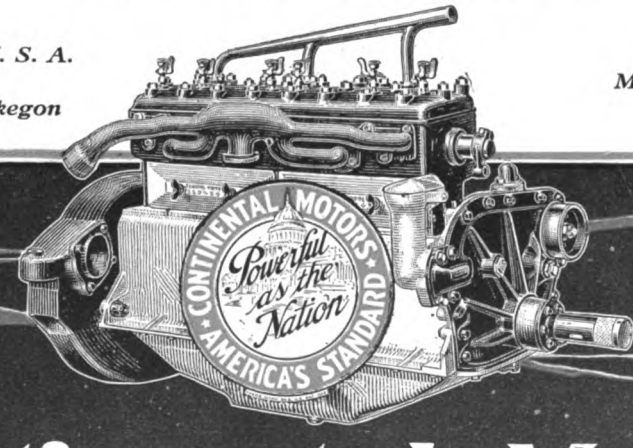
Before the Continental Motor, for example, is delivered to the car builder it is run for hours under the scrutiny of experts; it is taken down and minutely examined; is reassembled and tested again. Careful production tests also insure the service of the genuine replacement parts that are sent to parts-distributing stations throughout the world.

Dealers who would be in a position to meet and profit by the requirements of today's exacting market are lining up with the SPECIALIZED car, whose steady gain in favor follows the dependable performance of such proven units as the widely-known power unit—the Continental Red Seal.

CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U. S. A.
Factories:
Detroit and Muskegon

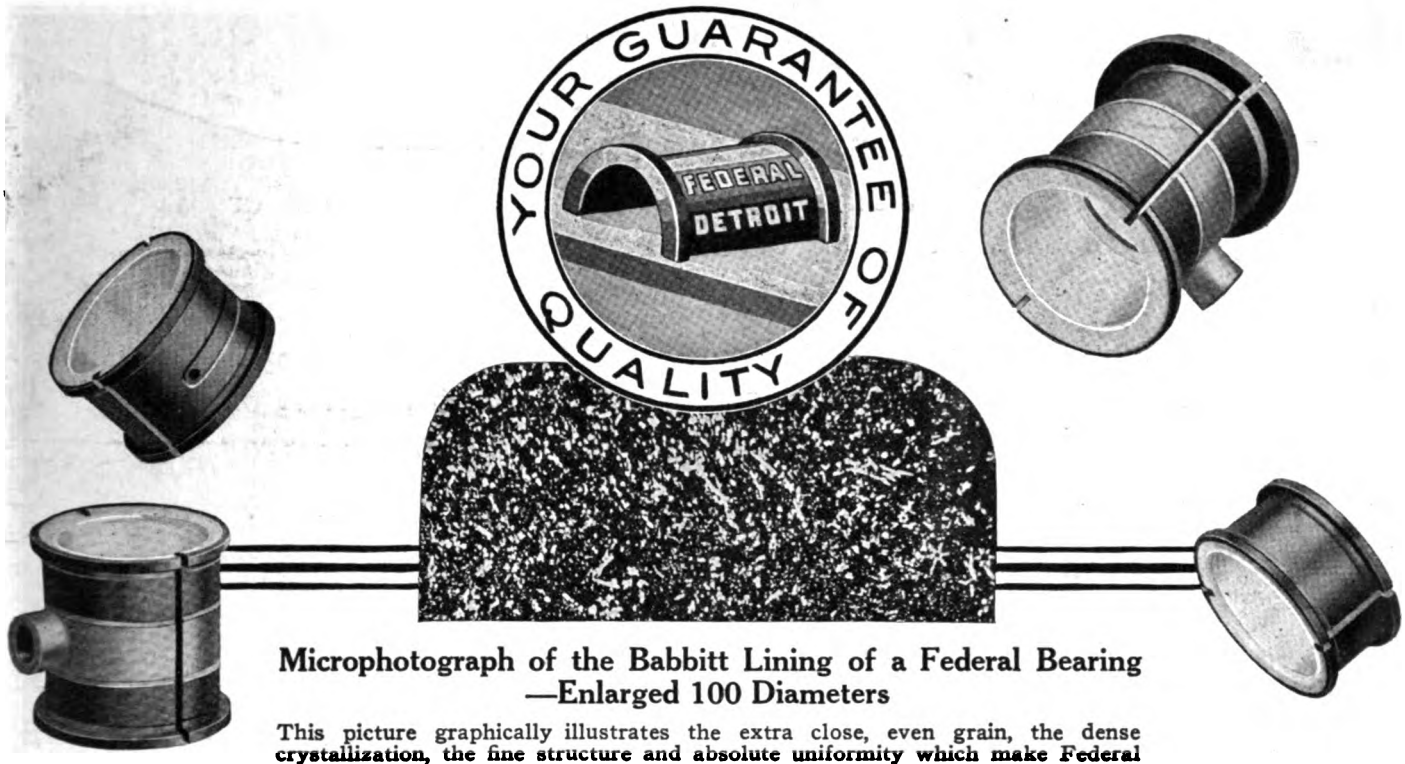
Largest Exclusive Motor Manufacturers in the World



Continental Motors

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Federal Bearings



Microphotograph of the Babbitt Lining of a Federal Bearing —Enlarged 100 Diameters

This picture graphically illustrates the extra close, even grain, the dense crystallization, the fine structure and absolute uniformity which make Federal Bearings so superior in wearing quality and toughness.

This finer crystallization in the Babbitt Lining of Federal Bearings is due to the rapid rate of cooling—which prevents the large and uneven crystallization so noticeable in the bearing pictured below.

Microscope Reveals Outstanding Quality of Federal Bearings

Look at the two microphotographs shown here. They tell a graphic story.

The picture at the top reveals the inherent, structural qualities of the Babbitt Linings of Federal Bearings. Notice the even, close grain, the fine structure and notice especially the absolute uniformity of grain and structure.

This picture shows conclusively *why* Federal Bearings outwear any other make of Bearing on the market—for the microphotograph shows the actual, physical superiority of Federal Bearings—which is due to the Federal Centrifugal Force Process.

The picture below shows an average bearing, used in a well-known make of automobile. Here is revealed the absence of uniformity, the coarseness of grain, the large, uneven crystallization which cause such bearings to break down long before they should.

Everywhere Federal Bearings are winning enthusiastic approval. Our engineers are at your service with reference to your requirements. Federal Bearings will give your motor unusual strength and stamina in the most wear subjected parts. Write for details.



Microphotograph of a Bearing Used by a Well-Known Automobile—enlarged 100 Diameters

Notice the large and uneven crystallization as compared with the Federal Bearing pictured above. This bearing is uneven in structure and diverse in texture—it will show wear quickly in spots—in other words, will flake off under frictional pull.

The structural and physical defects shown in this microphotograph are not visible to the naked eye—and while it looks like a good bearing upon casual inspection, a microscopic analysis reveals that it is not.

FEDERAL BEARING & BUSHING CORPORATION

BABBITT-LINED BRONZE-BACK BEARINGS_BRONZE BUSHINGS_BRONZE CASTINGS

DETROIT — MICHIGAN

28X110

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Exclusive!

IN the many characteristics which distinguish Disteel Wheels from all other wheels, of either spoke or disc construction, are certain Factors of Service absolutely exclusive.

Such advantages are the logical result of this Company's long experience as the pioneer and leader in the field of steel-disc wheels. Added to the similarly exclusive merits of workmanship—perfected through the same patient process—they have conferred on Disteel Wheels a leadership which cannot be questioned. and a vogue today world-wide.

There is, we repeat, no adequate substitute for genuine Disteel Wheels.

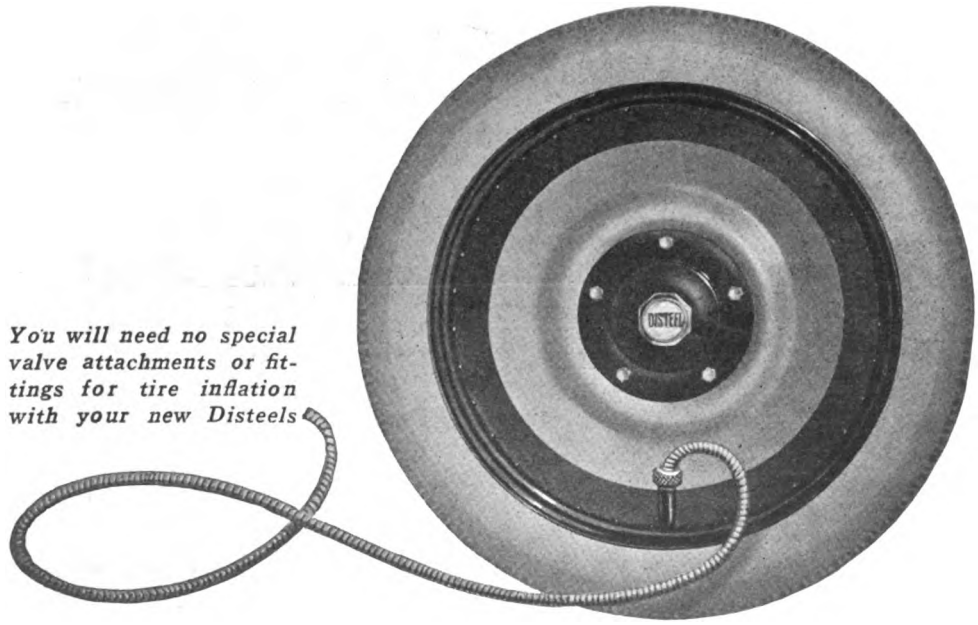
Exclusive Manufacturers

DETROIT PRESSED STEEL COMPANY

6660 Mount Elliott Avenue Detroit, U. S. A.

DISTRIBUTORS:

189 Academy Street LONG ISLAND CITY
732 So. Michigan Street CHICAGO
682 Beacon Street BOSTON
865 Post Street SAN FRANCISCO



You will need no special valve attachments or fittings for tire inflation with your new Disteels

DISTEEL WHEELS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, AUG. 19, 1922 No. 1

TABLE OF CONTENTS

Automobile Output Shows Seasonal Drop..... 17
U. S. Ruling on Fuel Rouses Motor Makers..... 17
Boulden Named Head of Industrial Motors Sales.. 18
Robb Made Vice-President of Stephens Motor Co. 18
Brandt Heads Line-Up of Brunswick Tire Officials 18
New Offerings May Offset Price Cuts..... 19
Maxwell Ships to New York By Boat..... 19
U. S. Chamber to Help Gather Statistics..... 20
Former Saxon Plant Leased By Columbia..... 21
H. C. S. Brings Out New Series 4 Model..... 21
Liberty Introduces New Model Commander Coupe 21
Packard Tries New System of Bonuses..... 22
New Buick Delivery Cars are Announced..... 22
American Welding Co. Now Reorganized..... 22
Schwab's Magic Wand to Wave for Stutz..... 23
Willys-Overland Co. Reports Large Sales..... 23
Marlin-Rockwell Corp. Earnings $883,818..... 23
U. S. Rubber Profits Grow By Millions..... 24
Frontenac Co. Clears Skirts of Ryan Tangle..... 24
Ajax Profits For 6 Months $191,536..... 25
Stewart-Warner Sees Big Business Ahead..... 25
Contest Brings Out Champ Tire Fighters..... 26
Republic Rubber Sales Continue to Increase..... 26
More Stutz Stock Sold..... 26
June Exports Show Better Conditions..... 27
July Rubber Imports Bound up 9,000 Tons..... 27
French Cut Costs of Operating Motor Cars..... 27
Body Builders Plan Second Annual Show..... 29
Light Trucks Found Favorite of Buyers..... 29
Urge Greater Care in Shipments to Canada..... 29
World Road Congress Announces Program..... 30
World Registration Reaches 13,000,000..... 30
Michigan Leads U. S. In Census of Gas Engines... 30
Many Factors Clear South's Sales Sky..... 31
Taxi Owners Study Ethics of Morality..... 31
Club Buyers of Parts Heard from Once More..... 31

FEATURES IN THIS ISSUE

Tractors Pull the Farmer Through..... 35
Selling Goods at Retail..... 39
Full Value Always, Is Darling's Motto..... 40
New Models of Interest to Dealers..... 42
Products that Aid in Quick Repairs..... 45
With the Wholesalers and Retailers..... 47
Calendar 54
Table of Passenger Car Selling Points..... 59
Quarterly Tables of Contents.....
Alphabetical Index to Advertisers..... 98

"NORMA"
PRECISION
BALL BEARINGS

The buyer of a motor car, truck or tractor buys simply an assembly of mechanical parts with a certain capacity for rendering service. What may be called the over-all service capacity can be no greater than the service capacity of the weakest component part.

It is significant of the confidence placed in the service capacity of "NORMA" Bearings that—today as for a decade past—they are the accepted standards in the ignition apparatus and lighting generators used on motor cars, trucks and tractors with a reputation for dependable service.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Double-row, maximum type, radial bearing


Double-acting, self-aligning thrust bearing. 2100 Series


Double-acting, self-aligning thrust bearing with leveling washers. 2100-U Series


Single-acting, self-aligning thrust bearing, leveling washer. 1100-U Series


Double-acting, thrust bearing, flat seats. 2100-F Series


Double-row, deep-groove Conrad type, radial bearing

Strom BEARINGS

Meet Every Ball Bearing Requirement

STROM BEARINGS are made for the purpose of giving maximum ball bearing service under the most exacting conditions. Every step in their manufacture is directed toward this end.

They are correctly designed, made of the highest grade materials, and heat-treated by the most modern and approved methods.

They are conscientiously manufactured in a wide range of types and sizes by expert workmen, and are rigidly inspected after every operation.

A staff of Strom engineers will be glad to give you the benefit of their experience in the selection of the type and size of bearing for your particular installation.

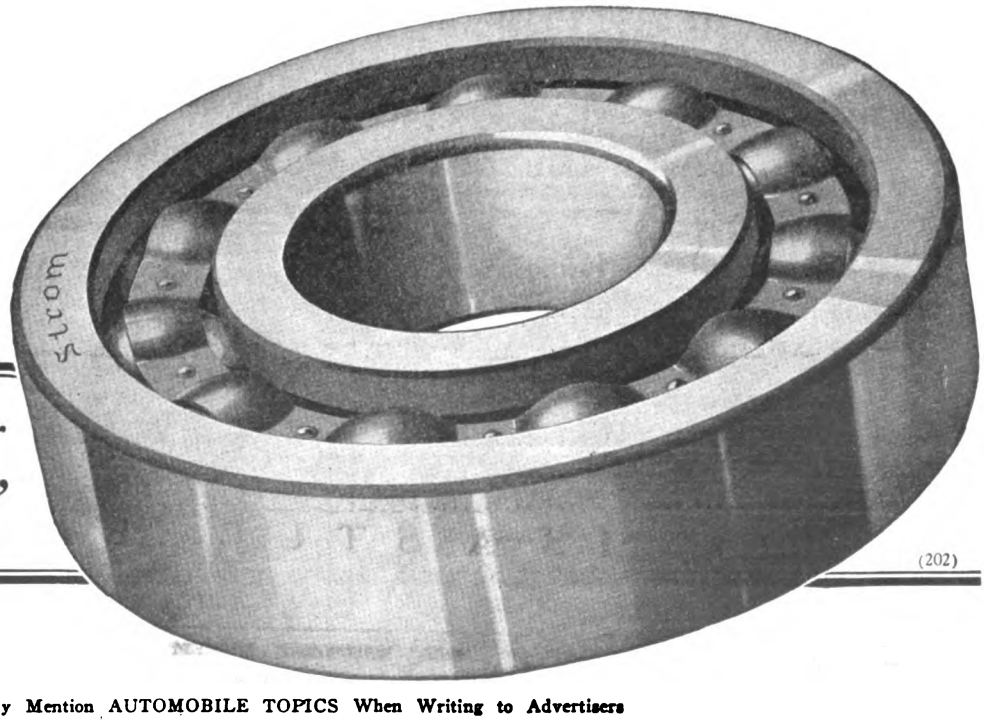
U. S. BALL BEARING MFG. CO.
(Conrad Patent Licensee)
4538 Palmer Street CHICAGO, ILLINOIS


Single-row, deep-groove Conrad type, radial bearing


Angular contact bearing—combination radial and thrust


Single-row, maximum type, radial bearing

—used "Wherever a Shaft Turns"



(202)

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Studebaker

NEW PRICES

Effective August 1st, 1922

Studebaker plants, representing the investment of $38,000,000, operating at capacity, produced 60,000 cars the first six months this year, and broke all records. Although we have on hand unfilled orders for 15,000 cars, we believe our manufacturing savings should be shared with our customers, and hence the following price reductions are hereby announced:

MODELS	New Prices f. o. b. Factories	Old Prices f. o. b. Factories	Reductions
LIGHT-SIXES			
Chassis	$ 785	$ 875	$ 90
Roadster	975	1,045	70
Touring	975	1,045	70
Coupe-Roadster	1,225	1,375	150
Sedan	1,550	1,750	200
SPECIAL-SIXES			
Chassis	1,000	1,200	200
Roadster	1,250	1,425	175
4-Pass. Roadster	1,275	1,475	200
Touring	1,275	1,475	200
Coupe	1,875	2,150	275
Sedan	2,050	2,350	300
BIG-SIXES			
Chassis	1,300	1,500	200
Touring	1,650	1,785	135
Speedster	1,785	1,985	200
Coupe	2,275	2,500	225
Sedan	2,475	2,700	225

The quality of Studebaker cars has not been decreased one iota. On the contrary, they are better than ever. You can depend upon the performance, durability, comfort, and quality of Studebaker cars, and the integrity of their makers.

THE STUDEBAKER CORPORATION OF AMERICA

South Bend, Indiana,
August 1st, 1922

THIS IS A STUDEBAKER YEAR

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1

The actual bump in the road—just one bump to take.



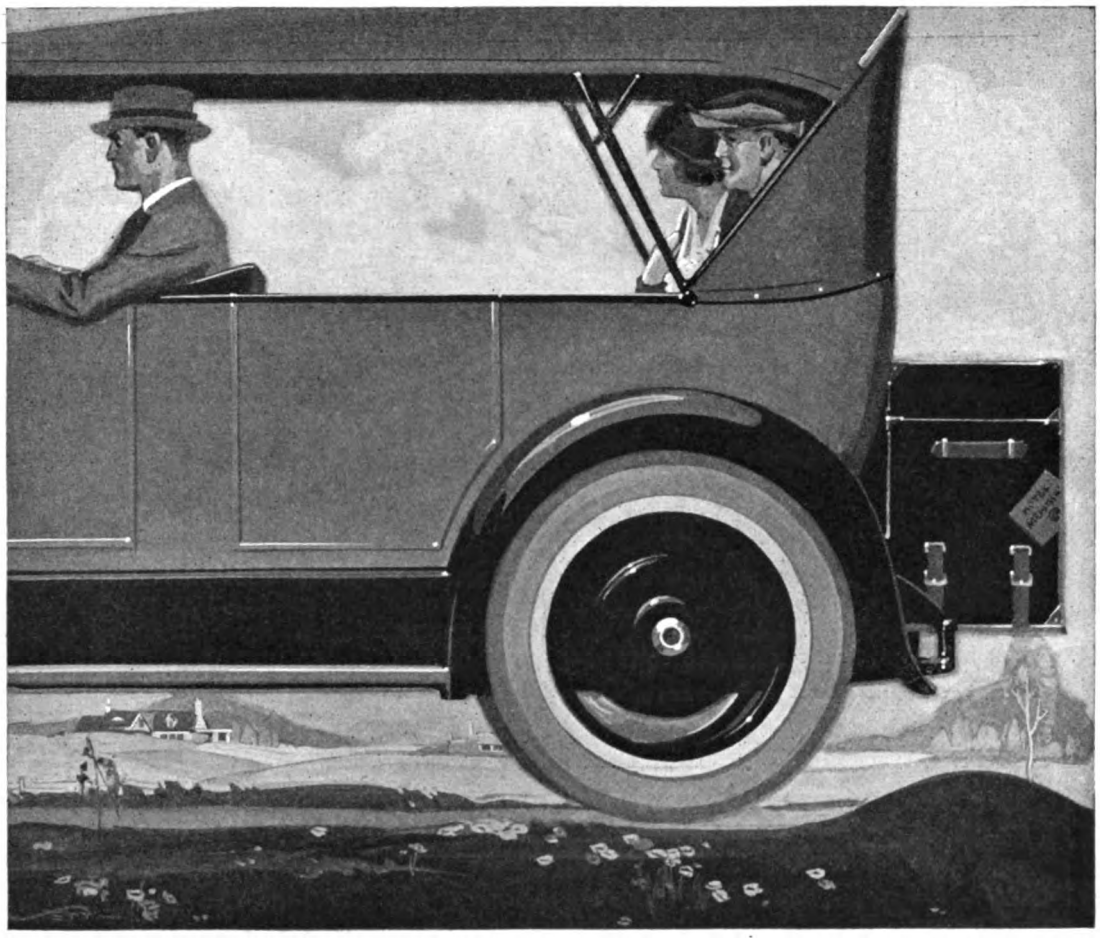
2

This shows the line of the car that is *not* Snubber-equipped. Note the number of unnecessary bumps or rebounds caused by *one bump*.



3

Here is the way a snubber-equipped car takes a bump. The springs soften the first shock—the Snubbers eliminate the rebound. Why let your car put more bumps in the road than actually exist?



How Many Bumps in One Bump?



A CAR that is *not* equipped with Gabriel Snubbers gets a good many more bumps per bump than it should. There's the *actual* bump—then there comes the succession of rebounds—the continued bouncing after the actual bump is past. It's annoying—it's tiring—it's injurious to the car.

Put on Gabriel Snubbers and you'll stop this unnecessary discomfort. With Gabriel Snubbers you ride *on the seat*—no unnecessary rebounds—no hitting your head on the top. Here's why—

When the wheels hit a bump, the natural flexibility of the springs allows them to compress and soften the shock. Then instead of a terrific up-throw, Snubbers control the spring expansion and let the compressed springs back to normal position slowly and gently—without throwing you from the seat or without strain on your car.

Gabriel Snubbers are sold in sets of four—two front and two rear. Any dealer who does not make from $40 to $50 a set selling high priced shock absorbers will tell you that Gabriel Snubbers give the best results regardless of price.

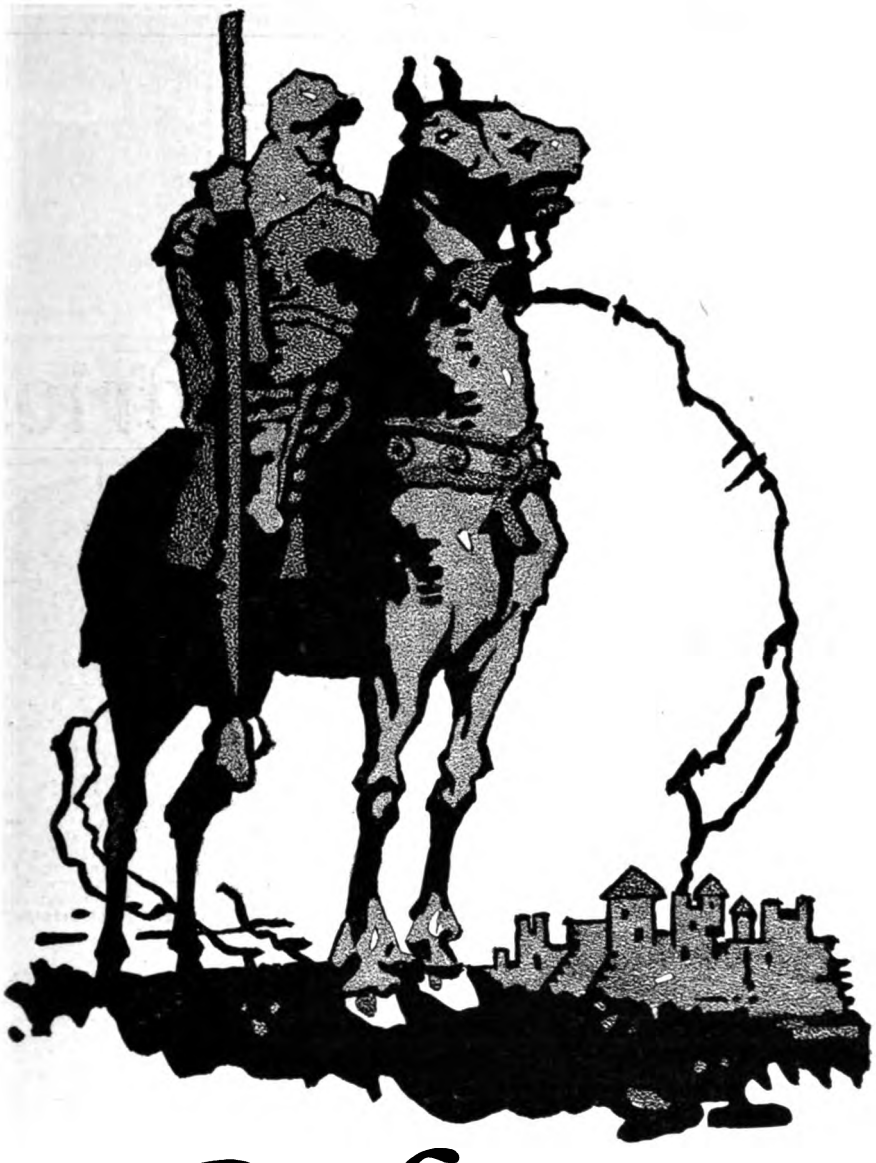
GABRIEL MANUFACTURING COMPANY, 1421 E. 40th St., Cleveland, O.

Sixty-Three Well Known Makes of Cars are Equipped With or Drilled for Snubbers at the Factory

GABRIEL SNUBBERS



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Confidence

The very fact that guesswork has never entered into our manufacturing processes would seem to explain, in part, the wide-spread confidence in the quality of our products.

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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YALE

Super-Quality Storage Batteries



Harry Murphy
President

Organized Pumpelly Battery Co. in 1907 and operated it until 1915 when on consolidation with the Prest-O-Lite Co. he was elected Vice-President, in charge of Battery Division. In October 1920, he resigned to become President of Yale Storage Battery Company.



Martin Geiszler
2nd Vice-President

Probably the best-known storage battery designer in America. Operated his own company from 1907 to 1914. On consolidation with American Eveready Works he was made Chief Engineer, organizing their storage battery department. Joined Yale Storage Battery Company as Vice-President and Chief Engineer, January, 1921.



I. W. Meridith
Purchasing Agent

With Prest-O-Lite Co. as Assistant Purchasing Agent 1912-1919 and Purchasing Agent 1919 to 1921, when he joined Yale Storage Battery Co. as Purchasing Agent.

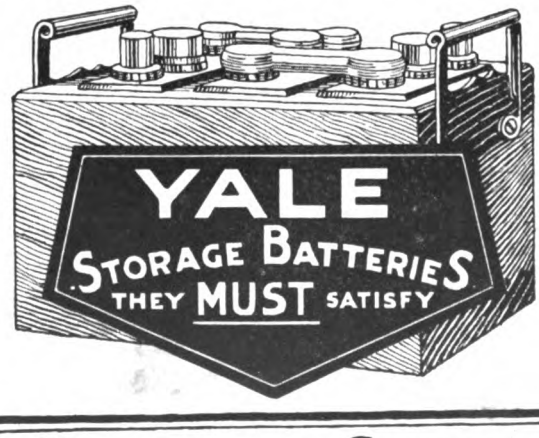
Built and Sold by Men Who KNOW the Battery Business

THE men who direct the manufacture and sale of YALE Storage Batteries know every angle of the automobile battery business—men who for years were prominently identified with the largest battery-building companies in the country.

They know how to build a battery that is really superior—a battery combining the best features of all other batteries. They know what kind of contracts make dealers and distributors successful. They know what kind of a guarantee assures every user full satisfaction.

For these reasons YALE Dealers are making more money than other battery dealers. The line is complete—a type for every car, with five sizes that cover 90% of the sales. Prices are popular. Profit-margins are liberal. Substantial distributors in leading centers insure prompt shipments. The guarantee means just what it says "They MUST Satisfy." And the factory's policy on adjustments gives every one a square deal.

If you are not making money in your present battery connection, let us show you a dealer contract that offers you a genuine opportunity to build a permanent and profitable battery business in your local field.





L. H. Keller
1st Vice-President

One of the foremost sales executives in the battery business. From 1910 to 1921, General Sales Manager of American Eveready Works of the National Carbon Co. In January, 1921, he joined the Yale Storage Battery Company, as Vice-President in charge of sales.



B. E. O'Conner
Secy-Treas.

For 25 years Secretary and Treasurer of M. O'Connor Company, Indianapolis. Interested in storage battery manufacture since 1916. Joined Yale Storage Battery Company in January, 1921, elected Secretary-Treasurer.



H. B. Ramey
Sales-Manager

For years connected with well-known manufacturers of electrical automobile equipment. Sales Manager of storage battery division, American Eveready Works from 1914 to 1920. Joined Yale Storage Battery Company as Manager of Sales in 1921.

Yale Storage Battery Company, Indianapolis Ind. U.S.A.

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FISK RED-TOPS

"Whip the demand for cheap tires"

Their sale brings a good profit, holds present customers and secures new ones.

This is what they have done for one dealer:

Flemingsburg, Ky., July 19, 1922

Fisk Tire Co.,
816 Main Street,
Cincinnati, Ohio

Gentlemen:—

When your Mr. Leonard fought me into buying Fisk Red-Tops back in 1919 he started me on the road to success in the tire business.

My business has steadily increased since then, and I attribute this to the fact that every man that ever bought a Red-Top has not only continued buying them, but sent me more customers.

The Red-Top has successfully whipped the demand for low-priced tires by demonstrating that they are cheapest in the long run.

In all the years I've sold Red-Tops, I have only had two come back for adjustment.

I am giving you this information in appreciation of the fine service and treatment accorded me by your company.

Yours,
Central Garage,
M. C. Foxworthy.

When you sell Fisk Red-Tops you will have the one tire that is without competition.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



Extra Ply of Fabric—Extra Heavy Tread

FISK
RED-TOP
CLINCHER TIRE

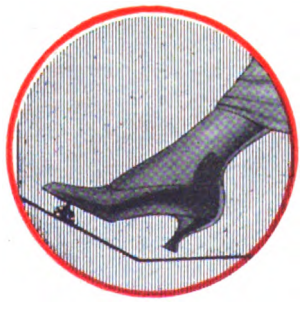
Trade Mark Reg U. S. Pat Off.

Time to Re-tire?
(Buy Fisk)

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Auto-Lite

Starting, Lighting & Ignition



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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ONLY one thing proves to an engineer the unquestioned superiority of a product! That is, its success in the hands of the user.

All over the world more than two million car owners have learned from satisfactory experience to have implicit faith in the reliability of the Auto-Lite System, under all driving conditions.

There are many reasons for the ruggedness, simplicity and long life of the Auto-Lite System. May we have an opportunity to go into these with you?

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works, Toledo, Ohio **Detroit Sales Office, 1309 Kresge Bldg.**

WILLYS LIGHT DIVISION

Of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, Etc.



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ASK THE MAN WHO OWNS ONE



The
SINGLE-SIX
SPORT

The va… …ting that thou-
is so em… …for such a
spire aln…
ship am… …and
the h… …he
It… …n

POCOTOP

Pocotop Top Fabrics are standard equipment on the new Packard Single Six cars. Need we say anything more to interest you in Pocotop—the best top fabric for fine cars?

Send for Samples

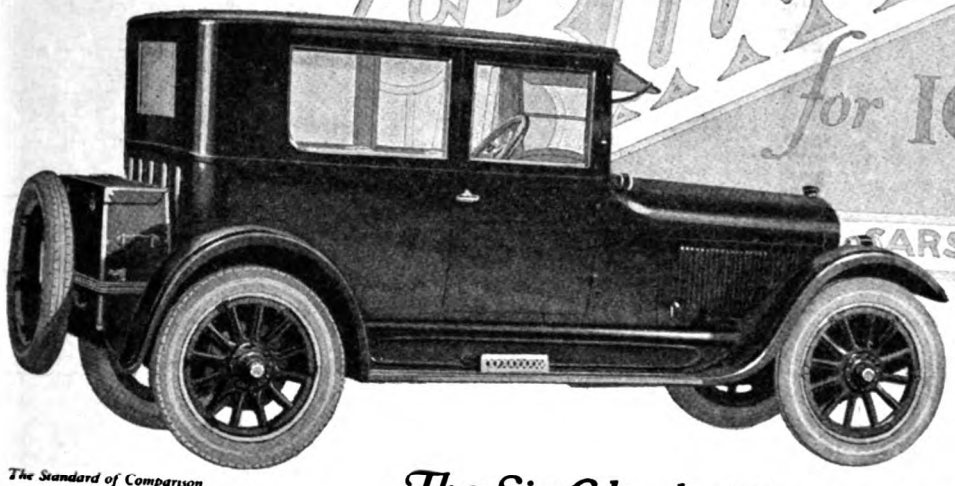
POCONO RUBBER CLOTH CO.
TRENTON, NEW JERSEY
DETROIT OFFICE:
1617 First National Bank Bldg.

PACKARD

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The Literary Digest

VALVE-IN-HEAD Buick for 1923



The Standard of Comparison

The Six-Cylinder Touring Sedan

Built primarily for de luxe touring this newest of Buick models, the six-cylinder, five-passenger Touring Sedan, offers a degree of comfort unsurpassed by the highest priced cars.

Its rugged, metal-covered body, custom-made by Fisher, and the well-knit chassis with its distinctive new cantilever springs absorb and soften the jars and jolts of cross-country travel.

Five passengers may ride in the Touring Sedan in utmost comfort, yet in conversation range. The individual front seats and the broad rear seat are deeply upholstered in plush. A single wide door on either side affords easy entrance and permits the use of two large plate glass windows, thus offering the passenger a wider range of vision.

The Tour... trunk carried upon a sturdy rack

Among other items of equipment are the... mission lock, cowl ventilator, drum... and parking lamps, wind... step plates on... shock...

Why

A Buick Dealership Never "Goes Begging"

The finest line of Buick cars ever placed upon the market, *plus* a powerful widespread advertising campaign in magazines, newspapers and farm papers, *plus* the unparalleled prestige of the Buick name,—that's what makes the Buick franchise the most coveted by progressive dealers. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

Branches in all Principal Cities—Dealers Everywhere

VALVE-IN-HEAD Buick MOTOR CARS

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DODGE BROTHERS
BUSINESS COUPE

You will realize, the moment you see this coupe, how perfectly it fulfills a very real need.

It was designed and built by Dodge Brothers in response to that need—long-standing and often-expressed by people in all parts of the world.

With Dodge Brothers chassis as a starting point, it only remained to create a coupe body which would unite the usual coupe refinements with greater lightness, hardihood and economy.

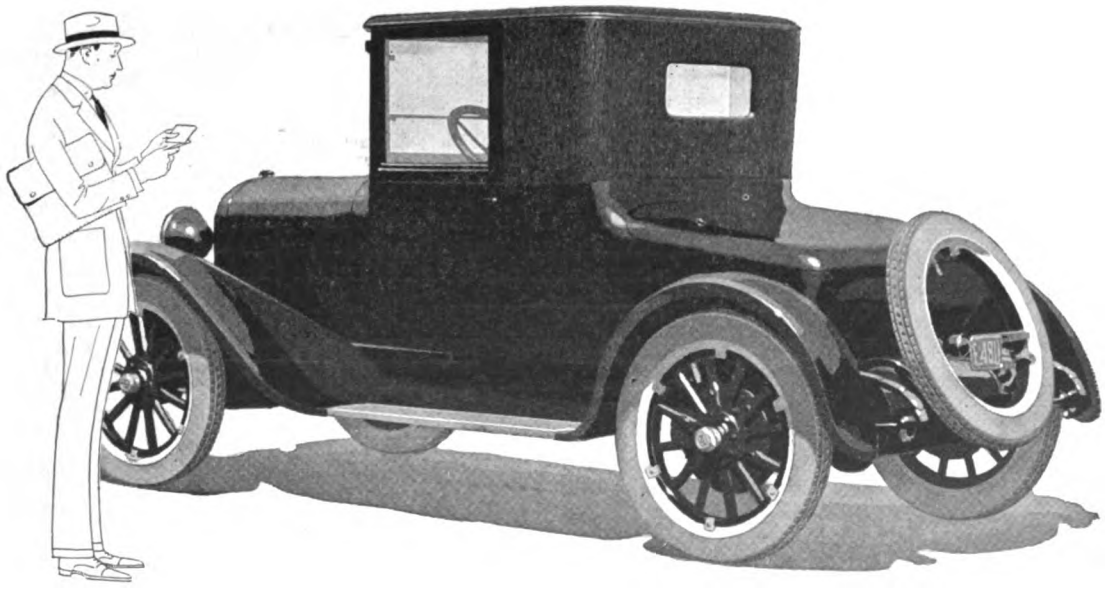
The world now knows how this was accomplished. An entirely new precedent in closed car construction was established. The body is built of steel.

Moreover, the deep, comfortable seat is upholstered in genuine leather. The doors are exceptionally wide. The rear compartment will hold a small steamer trunk and other luggage. The enamel, baked on the steel at high temperature is readily restored, after hard usage, to its original lustre.

In every detail the car reflects the purpose of the builders—to make it a practical car of universal appeal.

The price is $980 f. o. b., Detroit

DODGE BROTHERS



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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five big reasons

for being a Goodrich dealer

1 You get all-the-year-round cooperation from Goodrich. Not just a spurt of helpfulness in the "tire season" but an honest, sincere, intelligent effort to help you build a lasting business.

2 You handle a complete line of cords and fabrics. You have the advantage of being able to sell Silvertown Cords in all sizes from 30 x 3½ up, as well as the Goodrich "55" clincher fabric.

3 You get every possible sales help from Goodrich—signs for your store, display materials for your windows, proven tire-selling letters to your customers and many other genuine business-getters.

4 Your own selling activities are backed up and supplemented by advertising which is based on the thought of making two arguments to benefit the local dealer to every one argument for Goodrich as an institution.

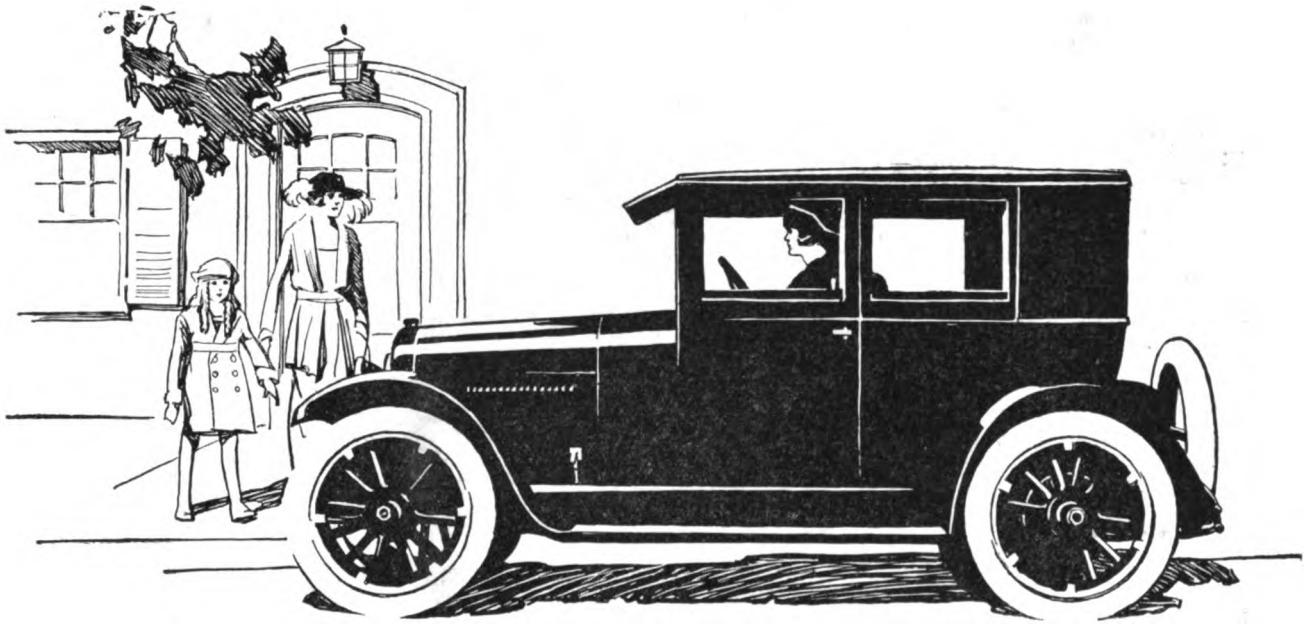
5 You handle tires which have established a permanent reputation, and have the lasting goodwill of the motoring public—tires that more than make good on every promise we make concerning them.

Write or wire us for full particulars. You will be greatly interested in what we have to tell you and you will see at once the profitable possibilities in our proposition.

THE B. F. GOODRICH RUBBER COMPANY, *Akron, Ohio*

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Nash Leads the World in Motor Car Value



THE NASH CARRIOLE FOR FIVE

This recently introduced model in the Nash line has attracted immediate and widespread interest.

Intensely practical for business purpose or family use it provides the broadest possible measure of open car economy in operation and closed car convenience whether for about-town trips or longer travel.

The gracefully shaped all-metal body pleasantly roomy, and with exterior finish of rich and lustrous tone, compares favorably with America's finest coupes and sedans.

The upholstery and luxurious interior trimmings are of the best grade wool cloth purchasable.

The parlor-car type front seats are individual with a wide aisle between. And the two doors are unusually wide, making easy entrance and egress.

At the newly reduced price of $1275 it is a pronounced example of the wonderful automobile values that C. W. Nash has ever been foremost in presenting to the American public.

Fours and Sixes

New Reduced Prices Range from $915 to $2190 f. o. b. factory

NASH

(525)

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, AUGUST 19, 1922 No. 1

AUTOMOBILE OUTPUT HAS SEASONAL DROP

N. A. C. C. Figures for July Reveal 14 Per Cent Decrease as Compared with June—Shipments Exceed Best Previous July by 20 Per Cent.

Shipping reports of the National Automobile Chamber of Commerce for the month of July, issued this week, show a seasonal slump in production of approximately 14 per cent when compared with June. Indicated shipments from all factories for the month, as based on the Chamber's figures, which are 90 per cent complete, is 246,600. June's total exceeded 288,000.

Despite the slight dropping off in totals, July's was the third largest single month's production in the history of the industry. It exceeded July, 1921, by 39 per cent and the best previous July (1920) by 20 per cent.

July shipments may be compared with those of the preceding months of the year in the following table:

	Carloads		Driveaways		Boat	
	1922	1921	1922	1921	1922	1921
Jan.	15,357	6,485	7,479	3,185	143	93
Feb.	19,636	9,986	10,173	7,507	180	99
Mar.	27,753	16,287	16,917	9,939	560	75
April	31,334	20,187	22,381	14,197	2,960	1,619
May	33,416	18,608	28,827	15,193	7,406	2,381
June	34,230	20,269	33,857	18,834	7,737	3,947
July	*28,412	19,514	*28,022	15,533	*6,855	3,726

*Partly estimated.

The reports of the Chamber indicate a total from all factories of 28,412 carloads, 20,022 driveaways and 6,855 "boats." Comparing these figures with those for the past seven months it is found that the driveaways for the first time this year closely approximated carload shipments, in numerical value, although the actual number of automobiles driven away actually represents less than 12 per cent of the total.

That this rise in percentage value of driveaways would indicate the adverse effects of the railroad strike is not borne out by the reports reaching AUTOMOBILE TOPICS, which, as pointed out in the issue of August 12, generally concur in finding the walkout without great impression so far. Rather it is to be attributed to the great impetus given sales in the last three months, draining dealers of their stocks.

Shipments by boat took a decided slump even discounting the total falling off in output. Whereas shipments by other methods dropped an average of 5,000 items, "boats" recorded nearly 9,000 less.

Maryland Frowns on Green Visors

Automobile Commissioner E. Austin Baughman of Baltimore, Md., is framing an action to prohibit use of green opaque visors on headlights. He maintains they throw a glaring light on the road surface, the reflection of which tends to blind the oncoming driver.

Buick Makes Big Shipments

Fifty-one flat cars carrying 196 Buicks of miscellaneous models, arrived in Philadelphia on August 15 consigned to the local distributer. Last week Buick shipped a special of 51 cars to Charlotte, N. C., and next week plans to despatch Boston-ward a train of about 50 cars.

Ask Higher Freight Rates

Transcontinental and other railroads connecting with the Kansas City, Mexico & Orient Line have been ordered to increase that railroad's proportion of joint freight rates. The amount of increase ranges from 15 to 30 per cent.

Another Railroad Takes to Motors

Management of the Tennessee, Alabama & Georgia railroad announced this week that gasoline-propelled cars will be placed in service on the system. The first one will be in operation about September 1, to be followed by others if proven satisfactory. Evidence of a still wider use of motors on railroads is reported throughout the industry.

U. S. RULINGS ON FUEL ROUSE MOTOR MAKERS

Macauley Plans Conference to Fight Priority Decision—Coal Situation Still Critical, Despite Resumption of Mining—Detroit Is in a Quandary.

Settlement of the coal strike is gratefully received by the Country's industries. But for the automobile makers, the walkout seems to have lasted just long enough to plunge them from the frying-pan of no coal into the fire of adverse priority rulings. The aforesaid fire broke out early this week when Henry B. Spencer, Federal Fuel Administrator at Washington, found in his "wisdom" that the automobile industry is non-essential. Without moralizing on the fatuousness of the decision, the extremely disastrous nature of the resultant restrictions at once became apparent to the manufacturers.

The facts are these. The strike is settled. It is estimated that the Country's output of bituminous will increase 20 per cent weekly. This means about 6,000,000 tons as soon as the miners get into good operation as against 4,900,000 now. If all the strikers went back to work 10,000,000 tons could be produced. The Country's average consumption of soft coal at this time of year is about 8,000,000 tons, it is estimated. This means that some concerns are going to lose the 2,000,000 tons difference between operation and consumption.

The ruling against the automobile industry makes it almost a foregone conclusion that the trade will stand part of the loss. Whatever may be the situation in the coal yards of the automobile makers, the fact that a great deal of Detroit power is supplied by public service and semi-public service companies should not be lost sight of. In fact, many

(Continued on page 20, third column)

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BOULDEN NAMED HEAD OF INDUSTRIAL MOTORS SALES

Vice-President of Selden Truck Corp. to Have Full Charge for Combine

H. T. Boulden, vice-president of the Selden Truck Corp., has been appointed sales director for the Industrial Motors Corp. He will be in full charge of that department for both Selden and the Atlas Truck Corp. interests. Allan Cosgrove will continue in charge of manufacturing for the Atlas Corporation.

In addition to announcing the Boulden appointment, the Industrial Motors made plain that policies of the consolidation would be directed by a centralized committee. Frederick M. Small of the Martin-Parry Corp., Cosgrove of Atlas, George C. Gordon and Boulden of Selden will serve on this body, it is announced.

Chapin Sees Better Foreign Market

Increasing foreign demand for American automotive vehicles is seen by Roy D. Chapin, president of the Hudson Motor Car Co. Chapin, who has sailed for a two months' trip through European countries, believes that Spain, Denmark, Norway and Sweden are increasing their use of American-made cars. No automobiles are being produced in Scandinavia, he adds. Whereas the demand for American products in Great Britain is rapidly increasing he finds the Continental market, particularly in France and Germany, not improving.

Rutherford Sails for Europe

W. O. Rutherford, vice-president of the B. F. Goodrich Co., accompanied by L. D. Brown, treasurer, sailed this week for Europe aboard the *Mauretania*. They will spend six weeks touring Europe, studying the tire and rubber business. Before sailing, Rutherford asserted he looked for a rise in tire prices soon.

Radoye Heads Haynes Sales

Gilbert U. Radoye has been appointed director of sales and advertising for the Haynes Automobile Co. For the past three and a half years Radoye has had the title of director of advertising and sales promotion. He will continue to direct this work in addition to his new duties.

Moehn Promoted by Martin-Parry

R. H. Moehn has been promoted to direction of the Buffalo assembling plant of the Martin-Parry Corp. He was formerly connected with the Detroit assembling plant.

Maxwell Transfers Vandersall

Leonard Vandersall, for several years special representative of the Maxwell-Chalmers companies in South Africa, has been transferred to Brazil. He will complete a survey of that territory begun some time ago. Vandersall, from Rio de Janeiro, reports that the Centennial exposition there this Fall is expected to give considerable impetus to the sale in Brazil of American motor cars.

Brenner Now Keystone Director

At the annual meeting of the Keystone Tire & Rubber Co., Isadore Brenner was elected a director. He succeeds to the chair of Sydney Bernheim, resigned.

BRANDT HEADS LINE-UP OF BRUNSWICK TIRE OFFICIALS

Realignment of District Managers Strengthens Field Force

Preparations for increasing the scope of its business by the Brunswick Balke Collendar Co., Chicago, place supervision of the Company's 23 branch houses throughout the Country in the hands of Earnest H. Brandt, assistant general manager. Brandt, a real old-timer and thoroughly familiar with the tire trade in all its phases, has been with the Company several years.

Shifts in the personnel lineup move Walter F. Higgins from Baltimore to Atlanta. A. I. Butler adds Philadelphia and Baltimore districts to his present managership at New York. D. Burnett Tower is transferred from Kansas City to Buffalo. Richard E. Cameron, lately with the Ajax Rubber Co., takes over the Brunswick Cincinnati district, while James K. Beach, formerly with the Federal Rubber Co., goes to Dallas for Brunswick. Finally, Howard Makley, formerly of Ajax, gets the district managership at St. Louis.

Hall Joins Packard Truck Sales

B. M. Hall, wholesale manager for the Packard Motor Car Co. of Missouri, has been appointed truck sales manager for that concern with headquarters at St. Louis. He succeeds C. A. Bothell.

SHARON PRESSED STEEL ELECTS NEW DIRECTORS

Four Names Added to Roster to Fill Vacancies Caused by Resignations

Four new names were added to the directorate of the Sharon Pressed Steel Co., at the annual meeting of the directors, held on August 7. The new members, only one of whom had been connected hitherto with the active management of the Company, succeed W. L. Ulmer, W. H. Watkins, L. L. Knox and W. J. Parker, whose resignations had been accepted.

The official of the Company elevated to the directorate was A. E. Swan who has been and continues to be first vice-president. The others elected were L. B. LeBel and Edward O. Peck, vice-president and secretary respectively of the Cleveland Discount Co.; and Harold G. Mosier, an attorney of Cleveland. The other directors were re-elected to the board, which numbers 15 members.

ROBB MADE VICE-PRESIDENT OF STEPHENS MOTOR CO.

New Board of Directors Includes Several Moline Plow Officials

Appointment of O. P. Robb as vice-president and sales manager of the Stephens Motor Car Co., Inc., was announced this week. For a number of years Robb has been a successful sales executive for the Moline Plow Co. and his intimate knowledge of field conditions and dealers' selling problems fits him particularly well for his new post.

At various times Robb has served as manager of the Moline Plow company's branch houses at Winnipeg, Kansas City, Dallas, Omaha and Los Angeles. More recently he has been assistant general sales manager of Moline Plow. The Stephens sales offices are now located at Moline. W. A. Biss, Jr., will continue as assistant sales manager of the Stephens, with headquarters also at Moline.

Parker Promoted by Grant

D. K. Parker has been promoted to the position of purchasing agent for the Grant Motor Car Corp. He was formerly assistant to G. C. Starkweather, whose position he succeeds to on the resignation of the former. Starkweather is now assistant to the president of the Buffalo Pressed Steel Co., thus joining an old friend and associate, R. J. McKenzie, president of the Buffalo company, and renewing a relationship begun in 1909, when both were with the E. R. Thomas Motor Car Co.

Burnett Leaves LaFayette

Leo N. Burnett has resigned as advertising manager of the LaFayette Motors Corp. He will join the copy and planning department of the Homer McKee Co., Inc., Indianapolis early in September. Burnett has directed Lafayette advertising for the past three years and was formerly advertising manager of the Cadillac Motor Car Co.

Gracey Advanced by Martin-Parry

C. W. Gracey has been appointed manager of the new Minneapolis assembling plant of the Martin-Parry Corp., construction of which is well under way. Gracey has been directing sales at the Detroit assembling plant of the Corporation.

Tracy Hopping Around

W. R. Tracy, assistant sales manager of the Oakland Motor Car Co., spend a busy day last week. Wednesday he planned two engagements with dealers due to arrive by train that day. Then it became necessary that he go to Cleveland from Pontiac to sign a document. He met the dealers and still went to Cleveland and back all between 8 a.m. and 5.30 p.m. The explanation lies in meeting one dealer, flying to Cleveland, then back for the third appointment.

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NEW OFFERINGS MAY OFFSET PRICE CUTS

Changes in Specification a Possible Foil for Advantage Gained by Lowering Prices—Trade Confident—Senses Underlying Weakness in Line-Up.

Newspaper predictions of a price war, following the reductions of the past few weeks are thus far entirely unjustified. New prices were announced on three additional lines this week, while several makers introduced additional models. The trade continues confident of the immediate future, but senses a certain underlying weakness in prices, owing to the indeterminate status of the parts makers as a group.

Price revisions brought the Auburn touring down to $1,475 from $1,575 and the sedan from $2,395 to $2,345. The Gardner sedan was reduced $250 to $1,345 and the coupe $200 to $1,095. Touring car and roadster prices remain unchanged at $895.

Stutz, under the Schwab influence, dropped $200 to $500, bringing the touring car down to $2,640, the sport to $2,790, the roadster to $2,450 and the coupe to $3,490.

THE WEEK'S PRICE CHANGES

Body Type	Old	New	Change
AUBURN			
Touring	$1,575	$1,475	$100
Sport	1,895	1,895	...
Sedan	2,395	2,345	50
GARDNER			
Touring	895	895	...
Roadster	895	895	...
Coupe	1,295	1,095	200
Sedan	1,595	1,345	250
STUTZ			
Touring (6)	2,990	2,640	350
Roadster	2,950	2,450	500
Sport (4)	2,990	2,790	200
Coupe	3,990	3,490	500

New models were introduced by Nordyke & Marmon in the form of a phaeton with permanent "Panorama" top, selling at $3,185, the same price as the touring car; by the Liberty Motor Car Co., which is bringing out a "Commander" coupe at $1,695; by Templar Motors Co., which has a four-passenger coupe, and by H. C. S., which has a brand new line, revised and improved in a number of respects, and selling at somewhat higher prices than the line it displaces. A new line of Buick delivery cars was announced also.

This being the season in which new models usually appear, there is some possibility that the price flurry may prove short-lived and of small direct effect outside the lines where competition is keenest. Since the general purpose of the readjustment is to stimulate the late Summer and Fall markets, it is pointed out that in many instances a more attractive offering may prove as effectual a stimulant as a lower price. Those who hold this view refer to general signs of returning confidence as evidence that buyers should be in a mood to be swayed by the quality argument quite as readily as by the price argument alone.

There is also the often repeated suggestion that prices are near the bottom in relation to actual manufacturing costs. It is known, besides, that few makers care to risk lower operating margins unless pretty well assured of a compensating increase in turnover.

But when this point has been reached in analyzing the price question a somewhat confused condition in the parts field is uncovered. Here there is a good deal of uncertainty. The automobile makers have been buying on price to a considerable extent during the year, with the result that quotations have been worked down to levels which, in some instances, have been really astonishing. Some of the parts people profess entire inability to see how they can go lower without material sacrifice of quality. From this point of view it would appear that the bottom had really been reached.

This argument, however, applies princi-

(Continued on page 20, second column)

Dodge Brothers Driveaways Few

Dodge Brothers report that, so far as it is concerned, driveaways have not increased abnormally because of the strike on the railroads. Driveaways for May increased five per cent over April, for June about 40 per cent over May, but for July a decrease was noted.

Dorris 17 Years Old

Dorris distributers and dealers are cooperating with the Dorris Motor Car Co. in celebrating this week the seventeenth anniversary of organization. August 15, 1905, was the precise date of the launching of the concern under the leadership of George P. Dorris. The first car appeared for a maiden trip on Thanksgiving Day, 1905.

New Peerless to Be an Eight

Vigorous denial of the rumor that the new Peerless line will abandon the eight-cylinder principle in favor of the six was forthcoming from R. H. Collins this week, according to MacManus, Inc. The new cars will be built around an "eight," Collins asserted, the Peerless Motor Car Co. declining to change, he said, until "something that can surpass it is made." Announcement of the new line will appear simultaneously throughout the Country at the end of the coming week.

Marmon Brings Out New Model

With straighter, lower and longer body lines, a new seven-passenger phæton has been introduced by Nordyke & Marmon Co., Indianapolis. Save for these refinements, the engine and chassis remain practically unchanged. The Panorama, a permanent top, has been installed on the new car and enables the passenger to view all sides regardless of seating. The new phæton is listed at the same price as that of the seven-passenger touring, $3,185.

MAXWELL SHIPS TO NEW YORK BY BOAT

Strike Conditions Not Affecting Either Production or Shipments, Corporation Reports—Water Route Used for First Time—Use Lakes to West.

For what is said to be the first time in automobile history, a consignment of automobiles was shipped to New York from Detroit by an all-water route the other day. Steamships carried the cars to Buffalo where barge canal transportation continued the journey to Gotham. The shipment was sent by the Maxwell Motor Corporation to the New York distributer, the Colt-Stewell Corporation. The Corporation reports that Chicago and other lake ports are being supplied by boat.

While the strike conditions are not affecting the Corporation's production or shipments, an increased number of dealers are taking delivery by driveaway. This is being done to relieve the immediate possibility of congestion at the factory, it is said. The difficulty of obtaining prompt inspection of cars in the Detroit railroad yards has led to a slight extension of delivery time.

Shipments of the materials of production are being received regularly, and in only a few cases has it been necessary to utilize trucking facilities for long hauls. The factory is maintaining a fleet of trucks to carry parts from the Newcastle, Ind., and Dayton, O., plants to the Detroit point of assembly, and is in position to throw an additional number of trucks into similar service between Detroit and far and near points, should it be necessary.

In the New Castle factory, where a coal shortage could effect serious consequences regarding car production, four of the six boilers employed have been equipped with oil burners and can be operated regardless of the fuel situation. Other emergency steps are being planned that will insure the maintenance of normal production schedules.

Meanwhile the Corporation reports a slight slackening in demand, attributable to the uncertainty over price reductions. Maxwell is among those who have not cut prices recently and it is asserted that changes in the schedule are not contemplated. The Corporation has a comfortable supply of raw materials and accessories but depends on the Detroit Edison Co. for power. The latter concern has fuel enough to operate at normal into September.

Chandler-Cleveland Ships Trainload

In response to an urgent demand, a trainload of Chandler and Cleveland cars was shipped this week to Los Angeles to the W. P. Herbert Co., distributers. The train consists of 35 freight cars.

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U. S. CHAMBER TO HELP GATHER STATISTICS

National Body Sees Need for Accurate Data—Would Encourage Trade Bodies to Establish Bureaus—Offers to Aid in Advisory Capacity.

As a means of furthering its ambition to encourage a more general employment of statistics, the Fabricated Production Department of the Chamber of Commerce of the United States announced this week that it is preparing to set up a service for chambers of commerce and trade associations for the purpose of informing them how statistical bureaus may be established and operated. Lack of accurate figures has proven a very real setback in former times of business stress, the Department asserts.

"The lack of accurate figures on production, consumption and stocks of goods on hand relating to most of our commodity lines, during our last period of inflation, was the prime cause for the runaway markets of that time," the Department points out. "The hue and cry of shortage in many lines was not founded on facts, but the lack of facts and later the release of large volumes of goods brought demoralization and loss.

"As long as there is a dearth of essential data in commerce, just so long will speculation and profiteering be possible. The Secretary of Commerce, alive to the needs of business at home and abroad, has persistently urged trade associations to equip themselves to furnish him figures concerning matters vital to their industries, which would enable him to render the service so vital to their own interest. Notwithstanding this, however, and notwithstanding the further fact that the handling of statistics is an important and constructive function for a trade association, comparatively few are today performing it. The primary cause of this failure is the hesitancy and disinclination of the average business man to furnish his quota of data, fearing that in some way,—he does not know just what way,—he will be affording competitors an opportunity to take advantage of him. By this very act, he deprives himself of information of value in the intelligent control of his business.

"We have come to know that business travels in cycles and that there is an ebb and flow of sufficient regularity to make it possible for management to pursue a course which will avoid much of the loss occurring during depressions, and will secure the largest measure of prosperity. Such management must provide itself with facts, as to the past and present, and the trends as to the future, to back its judgments—this again emphasizes the great need of dependable facts and figures.

"In business, as in affairs of our Nation, we have been too prone to disregard danger, relying on our initiative to get us out of trouble when it comes upon us. We have been fairly successful thus far, but generally at a tremendous and unnecessary cost. Today we are in the world's markets more prominently than ever before and we shall be kept there by our capacity to produce more than we can use at home, but this surplus production will inevitably affect the prices in our home markets and must be handled on the basis of what it is and not what it is supposed to be if we are to avoid demoralizing effects.

"We shall not set up and operate a statistical bureau in the Department, but will encourage such bureaus being made a part of the service equipment of trade associations and chambers of commerce. We shall also undertake to gather and hold available for the calls of our organization members, information as to how such bureaus may be set up and operated. We are assured of the interest of both governmental and general agencies, who know the great value of dependable data, but our success will depend largely upon the cooperation of those who can furnish the figures."

NEW OFFERINGS MAY OFFSET PRICE CUTS

(*Continued from page 19, second column*)

pally to the larger and more proficient manufacturers of component parts. Some of the others, quoting higher prices, must either find a way to bring them down, or prepare to lose some of their customers. So, at least, it is said.

While concerns in this class are watching and waiting for an upward turn in the tide of prices, however, the quantity manufacturers are making the best of their opportunities to simplify designs and cut production costs still further, if possible, in order that they may reap the full advantage of the big volume which they already have, or hope quickly to attain.

The net of it seems to be that in the parts field, as with the manufacturers of complete cars, a struggle for dominance is going on, which might become exceedingly heated and bitter, were demand to fall away seriously. Continued good volume of retail sales, by contrast, would hold up the factory requirements for parts to such an extent as to provide a sustaining demand for all hands in the business. This would serve the purpose of what some regard as spreading out the inevitable consolidation of the industry over a greater length of time, thereby avoiding any sort of crisis, and by the same token rendering the transition less painful.

Erdmann Succeeds Christensen

Ernest T. Erdmann, assistant secretary and treasurer of the Ryan Sales Engineering Co., Detroit, has taken on the territory formerly covered by E. G. Christensen, whose resignation to enter business for himself, was announced in AUTOMOBILE TOPICS under date of July 29. Erdmann shoulders Chicago, Moline and St. Louis territory in addition to his former district, Canada.

U. S. RULING ON FUEL ROUSES MOTOR MAKERS

(*Continued from page 17, third column*)

of the smaller, and even some of the larger factories are without power plants of their own.

Notices to the effect that only two weeks' supply of coal was on hand in the bins of Detroit power companies were sent to the automobile makers on August 11. Unless coal was received in large quantities, these power plants asserted, they would be obliged to curtail their output to lighting only. It was added that even if mining was started on a large scale at that time, a curtailment could not be avoided.

On top of that came the ruling against automobile plants.

"It is disastrous and unfair," Alvan Macauley, president of the Packard Motor Car Co. declared bluntly on August 15, when he learned of the ruling. He added that he would immediately arrange a conference of motor makers to fight the discrimination. "The automobile is just as essential as the railroad," he continued. "While I appreciate that we should not be classed ahead of food, I am sure it is wrong, entirely wrong, to try to classify the automobile industry as 'non-essential.' Not only the obvious reasoning is back of this but it should be remembered that enormous unemployment would result from a shut down."

A further shrinkage of Detroit coal supply is forecast in the strike of 1,000 trainmen on the Cumberland division of the Louisville and Nashville Railroad which serves a coal region from which approximately 15 per cent of Detroit's fuel comes.

Meanwhile at Akron, O., the coal shortage is threatening to close some of the smaller rubber and tire manufacturing plants. On August 14 it was reported that shut-downs were only a few days away unless relief came. The situation is critical. Even public schools face closing soon after they open in September unless more coal is forthcoming. Such commodities as cigars, cigarettes, tobaccos, food stuffs and other items are not being received.

The steel makers, harried by the two strikes, forced to abandon selling, uncertain of the future, are turning their attention to prices. The result is higher costs to automobile makers among others. As was pointed out in these columns last week, the accessory makers are just beginning to be hampered. This week the steel situation is worse. While their furnaces are banked for want of fuel, their rolling stock schedule shooting holes in shipments, and while buyers stand frantically knocking at the doors and skurrying around for a few crumbs they hope will fall beneath the table, sales managers predict higher quotation will continue long after the present emergency is a thing of the past.

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FORMER SAXON PLANT LEASED BY COLUMBIA

Additional Space Means 200 More Cars Produced Daily — Announce New "Elite" Models—New Series Comprises Five Types of Bodies.

Additional production of 200 cars daily is given the Columbia Motors Co. through the occupation this week of the Saxon Motor Car Co.'s former plant at Detroit. The acquirement of more space was made necessary in order to take care of the greater demand, the Columbia company found, so the new quarters were leased.

The new plant unit gives 130,000 square feet of floor space. It is in Beaufort avenue, a block north of the present Columbia plant, and is equipped with a conveyor system so that few changes will be needed in order to fit it for Columbia production. General offices will continue to be in the home plant.

With orders booked ahead until 1923 at capacity output, the Company this week announced its new Elite models. Many refinements are offered in the new line, which comprises five body types. All are powered with the new model "8R Red Seal" Continental motor which develops 58 brake horsepower. Improved springs make for better riding quality and paint work is of superior excellence.

The touring and sport models are finished in Suburban blue with ivory stripe, the roadster in Murphy red and the sedan and coupe in Columbia blue. Standard units are used throughout the new series, including Timken axles, Durston transmission with Timken bearings, Harrison radiator with thermostatically controlled shutters, Atwater-Kent ignition and Auto-Lite starting and lighting. Cantilever springs are standard. Cowl ventilator and wood or wire wheels are optional in the touring and closed types.

Production of the new Columbia light six touring and sedan has been increased. It is expected that these popular cars will be turned out at a rate of 50 daily throughout this month.

Pullman to Increase Body Output

Planning to increase its business in automobile bodies, the Pullman Co. announced this week that it will establish a permanent department for the trade and seek orders from manufacturers. The Company has been serving the Packard Motor Car Co. for some time in this regard. It has discontinued making phonographic boxes.

Olds Celebrates Anniversary

Olds Motor Works is holding a nation-wide celebration of its silver anniversary as a manufacturer of automobiles next week, beginning August 21. Congratulatory telegrams have been pouring in on A. B. C. Hardy, president, during the past week. Among them is one from C. S. Mott, vice-president of the General Motors Corp., in which particularly warm felicitations are extended to "the oldest manufacturing division in point of continuous operation" in the huge consolidation.

Templar Adds New Coupe

Designed for four-passengers, the Templar Motors Co., has just added a new coupe to its line. Upholstering is of blue Spanish leather at present, though gray cloth will supercede later. The car is built on the standard chassis, wheelbase 118 inches. The finish is Brewster green or Coach Painter's blue with full crown die stamped fenders. The price is $2,650, F. O. B. Cleveland.

CONSULT THE TABLE

AUTOMOBILE TOPICS' table of passenger car selling points appears on pages 59-61 of this issue. It is revised to August 15 and contains information concerning new prices and new models as of that date.

As prices are being readjusted by a number of manufacturers the unique arrangement of this table according to the list price, will be found exceedingly convenient. Frequent changes make it advisable to consult the latest issue invariably.

Periodic rechecking of the information by the manufacturers themselves is the principal assurance of its accuracy. The table has been made a standard feature of this newspaper.

Late news of new prices or new models may appear in the text pages only. Invariably, however, the facts will be embodied in the next succeeding issue of the table.

Hupp July Sales High

Hupp Motor Car Corp. sales in July were 60 per cent greater than in any previous July. The Corporation reports no immediate decrease in production in sight or anticipated.

LIBERTY INTRODUCES NEW MODEL COMMANDER COUPE

Embodies Striking Ideas in Closed Car Body Design at $1,695

Liberty Motor Car Co. this week announced its latest development, the Commander coupe. The Company claims it is an entirely original design. The upper part of the body is a substantial steel-covered unit with two doors, 22 inches wide. Door pillars are of wood, steel covered. A large glass rear light, 13 inches high and 22 wide is provided.

The top is soft type over wood framing. Upholstery is leather with cloth headlining. Cowl ventilators, one-piece windshield, disc wheels, water indicator, radiator filler cap, visor clock, courtesy lights and windshield wiper are standard equipment. The coupe is priced at $1[illegible] mounted on the standard Liber[illegible]

H. C. S. BRINGS OUT NEW SERIES 4 MODEL

Enlarged Bore Gives Added Horsepower to Harry Stutz' Latest—Claims Numerous Refinements in Motor, Chassis and Body—Low Gas Consumption.

Distributors of the H. C. S. Motor Car Co. this week received Harry C. Stutz' latest model of the Series IV line. A touring car, the new model is priced at $2,475. This is an advance of $75 over the old price. Decided increase in power, amounting to from seven to ten horsepower, and low gas consumption—18 to 20 miles to the gallon—are among the claims made for the most recent addition.

The bore has been enlarged from 3⅝ to 3¾ and the gear ratio has been lowered. Pistons have been lightened and connecting rods improved. The generator has been made more accessible and greater accuracy of ignition, through an automatic spark advance, is provided.

Chassis improvements include a larger steering wheel and gear, a new spark and throttle control and an all-wood spider. A new muffler is part of the latest design. The radiator has been raised and other improvements effected. New wire wheel construction, a change of springs, and the addition of other items are claimed by the maker to have greatly added to the car's value.

Distinction Small but Important

With small distinctions there are sometimes involved considerable differences. This is illustrated in the case of the Electric Auto-Lite Co., which is by no means to be confused with the Electric Auto-Lite Corporation, its immediate predecessor. The latter, it will be recalled, was a subsidiary of the Willys Corp., but was purchased on June 9 by C. O. Mininger and his associates, and is now being operated as an independent concern. The final "Co." marks the distinction.

Packard Increases Exports

Its allotment of single and twin-six passenger cars for export has been oversold by the Packard Motor Car Co. for three months. The export division of the Company could have used four times as many machines as were allowed it, according to report. Heaviest demand came from Australia, with Cuba a close second.

Farmers Like Beautiful Designs

That farmers do appreciate beauty and smartness in the design of their automobiles, is attested by Willys-Overland, Inc. The Company asserts registrations of Willys-Knight cars shows greatly increased percentage of that make of automobile in 1921 over 1920 in rural communities of Illinois and that the ratio is growing this year throughout the Country.

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PACKARD TRIES NEW SYSTEM OF BONUSES

Pay Increases Based on Record of Departments Proves Popular—Each Per Cent in Division Output Matched in Salary Envelope—Plan Successful.

As a reward for accuracy and pride of workmanship and to stimulate production, the Packard Motor Car Co. has inaugurated a new system of bonuses for its employes that is bringing about all the results sought. The new plan, instead of awarding a bonus to the individual worker, adds a certain per cent to the pay envelop of every man in a department when the record of that department's output shows an increase.

Thus, for each one per cent in increased efficiency in the department, one per cent is added to the salary of each worker in that division. It has been found that inasmuch as any greater efficiency displayed by an individual tends to raise the combined standard of all the employes in a department, the new bonus system creates a spirit of cooperation which, it may be, could be obtained in no other way. The saving in accounting, when the new system is compared with the individual bonus plan, is at once obvious.

"Each worker in a department has a personal interest in the entire work of his department," the Company finds. "Laxness, loafing or carelessness in workmanship for that reason are frowned upon by the men themselves. A laggard workman is considered by his fellows to be an obstacle in the path to a bonus and they themselves insist that he do his part or get out.

"The first department in which the new plan was tried increased its efficiency four per cent in the first two weeks. Stimulated by the increased pay which resulted, the department increased its efforts still further until in the last two weeks the increase amounted to 19 per cent, with a resulting 19 per cent increase in pay.

"In this department a common laborer had been employed as a trucker. It has been his habit to sit down and rest while waiting for a load for his truck. One of the skilled workers explained the bonus plan to him and pointed out what it meant to him personally to utilize every minute of his working time. As a result the skilled worker became a teacher with an eager pupil and the trucker has taken a step up in his work and has doubled his wages."

Selden-Atlas Men Confer

Selden and Atlas truck corporation field men held a three-day conference with executives of the Industrial Motors Corp., in which concern the two truck makers are merged, at Richester, N. Y., July 20, 21 and 22. All phases of the truck business were discussed and reports from various sections of the Country were in consonance that business is on the "up-grade everywhere." Manufacture of the Atlas continues, as heretofore, at York, Pa., its sales, however, will be handled by the Selden organization.

Olds Wins European Contest

According to despatches from Belgium, an Oldsmobile standard four-cylinder touring car was winner of the Brussels-Ostend, Grand Touring Contest in the 4.5 litre class. The driver defeated an Austro-Daimler, Panhard, Chenard-Walcker, Metallurgique and American entries.

Autocar Offers Owners' Service

In a public letter, David S. Ludlum, president of the Autocar Co., offers the sales and service stations' facilities to owners of its trucks, that every fleet may be in good shape to care for the increased hauling of all commodities which is seen in the near future because of the disrupted railroad conditions. It is suggested that truck owners throughout the country prepare for this influx of business by early overhauling and repair of their machines.

Portugal Revises Import Laws

By a decree of July 10, Portuguese manufacturers of automobile bodies are permitted to import chassis of any origin without payment of duty. There is a string attached to the decree in that the chassis with the body must be exported within a year from importation.

AMERICAN WELDING CO. IS NOW REORGANIZED

Stockholders Approve Plan: Klaus and Meyer Now Interested

At their last annual meeting, stockholders of The American Welding & Manufacturing Co., Warren, O., approved a reorganization plan, which has recently been completed and fully carried out. Under this plan the old $100 par value common has been exchanged for 8 per cent cumulative preferred stock and 2½ shares of the new no par common stock.

This reorganization, furthermore, made it possible to interest F. R. Klaus and F. H. Meyer in taking an active part in the affairs of the Company. Having, for many years, been connected with the Standard Welding Co. and later with others, organized the Cleveland Welding & Manufacturing Co., it is hoped that, even though this Company has been very successful, more rapid expansion will be possible. Both Klaus and Meyer have had wide experience in manufacturing and marketing automobile rims, S. A. E. felloe bands for motor truck wheels, base bands for solid tires, steel rings of every description, as well as tubular parts. J. C. Manternach, formerly with the Standard Welding Co., is president.

NEW BUICK DELIVERY CARS ARE ANNOUNCED

1923 Line Includes Many Changes in Construction — Entirely New List of Prices—Six Body Types Provided Built on Four-Cylinder Chassis.

Six body types are announced by the Buick Motor Co. as its 1923 line of Special Delivery cars. Many changes mechanically and an entirely new list of prices are the outstanding features of the latest addition to Buick productions.

Not only have the Buick engineers greatly improved the appearance of the car but they have incorporated changes which will tend to make the vehicle practically complete as a delivery job. Crowned fenders have been added, together with drum type headlights, a redesigned radiator standing much higher, rubber bumpers on the rear axle, special anti-rattle hood catches, silent overrunning generator clutch and a new glass switch face are also some of the changes.

The following is a tabulation of the new line:

Type	Price
Open Express with cab	$840
Panel body with cab	860
Canopy top, rolled curtains and cab	855
Canopy top, side screens and cab	875
De Luxe panel body with cab	960
Com. Pass. and Exp. body with cab	935

In addition to the aforementioned changes, a transmission speedometer drive, a lengthened gearshift lever and a transmission lock add to the values offered. Felts have been placed around the valve stems to carry oil to the stem and guides and a new system of generator brushes and brush arms has been installed to prevent squeaks. The clutch has been further refined, the hub being changed from malleable iron to drop-forged steel.

Another distinct feature of the new delivery models is the brake improvements. Twelve bolts have been used in each wheel hub, giving a separate bolt for each spoke and a much stronger construction. Installation of a drip bowl under the carbureter, extra clips on the gasoline lines and tail lamp wires and the use of flexible steel coverings on three wires leading from the generator to the switch have resulted in enabling the models to be placed in the Class "A" fire insurance rating schedule.

20 Roads Use Mack Trucks

Mack Trucks, Inc., reports that more than 20 railroads are now using its motor truck car for branch lines. Probably 100 of these cars are thus in use, the Corporation asserts, but adds that the figure is not indicative of ultimate use, since the development is virtually emerging from the experimental stage. It is believed street car companies will eventually adopt some form of gasoline-propelled vehicle.

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SCHWAB'S MAGIC WAND TO WAVE FOR STUTZ

Price Cut Starts Ball Rolling in Direction of Expansion — Thompson Promised Realization of His Plans—Additional Funds for Expansion to Come.

With Charles M. Schwab in the tonneau and William N. Thompson at the wheel, the Stutz is destined for considerable touring towards greater expansion in the near future. This is the assurance forthcoming this week from both Schwab and Thompson, following the return of the former to Indianapolis after buying control of the Company from the Guaranty Trust Co. in New York city last week, as recorded at the time in these columns.

The first move, revealed coincident with the appearance of Schwab in the Indiana metropolis, was a cut in the price of the car. Although made without warning to the dealer organization, Thompson made it plain that all distributers and dealers would be protected against the decline in prices on all models on hand at the time the changes were authorized.

The following table contains the news:

Model	New	Old	Change
Coupe	$3,490	$3,990	$500
Sport, 4-passenger	2,790	2,990	200
Touring, 6-passenger	2,640	2,990	350
Roadster	2,450	2,950	500

Schwab's association with the Stutz and the election of Eugene R. V. Thayer and Willard A. Mitchell to the directorate of the organization to fill two existing vacancies, assures that the new controlling interests intend to carry forward the institution on a sound, substantial basis under a strictly business administration. The policies and ideals of Thompson have met with the hearty accord of the new financial interests and he will continue in charge of the operation as president and general manager.

Thompson has been a prominent figure in the affairs of the Company since he became identified with it some eight years ago. His rise in the organization from purchasing agent to president in that brief period has been picturesque, and to his domination of the affairs of the Company and his careful management and conservative policies, its consistent development and progress are attributed.

In commenting on the present situation at Stutz and his identification with its control, Schwab gave this statement this week:

"I want to state emphatically that the Stutz will be conducted as a separate and individual enterprise, while its destinies will remain in the hands of Thompson and the men associated with him who have guided the affairs of the Company in the past. Though in other ways my associates and I have been interested in automotive properties, the Stutz company is the first with whose management I have been personally identified. However, it is not as if my associates and I were acquiring a new automotive property with which to make a debut in the automotive field. For a long time we have had a substantial interest in the Stutz. What is more natural under the circumstances than that we should desire and secure control of the property just as we control all other enterprises with which we have become identified.

"Our plans for the conduct of the affairs of the Stutz simply embrace an extension of the activities of the institution and its development to the point which we believe it deserves to attain. We regard the Stutz as a valuable industrial property with potential possibilities that recommend it for the best thought and effort that can be put forward in its behalf. We want to see it developed along sound, substantial, enterprising lines in accord with the times and general conditions in the industry, so that the Stutz franchise will continue to increase in its attraction for the dealer trade in the automotive field just as its product will become more and more attractive to the motoring public."

Schwab stated in addition that although at no time had the Company experienced any difficulties in a financial way and despite the fact that at present its conditions was excellent, additional funds of substantial proportions are to be added to the Company's working capital to permit the realization of certain aims which Thompson and his associates have had in contemplation for some time. More extensive sales and advertising activities, under the direction of Fred Wilson, sales manager, are anticipated. This activity is to be paralleled in all other branches of the business.

Locomobile Creditors Favor Offer

Plans for the liquidation of the indebtedness of the old Locomobile Co., have received the formal consent of the creditors. The plan contemplates terms of net to creditors of 17½ per cent in bonds and 18½ per cent in cash. W. C. Durant's offer for the assets was $1,170,000 in cash and $1,500,000 in bonds of the new company which he formed, and $266,000 by surrender of underlying first mortgage bonds at par and accrued interest.

MARLIN-ROCKWELL CORP. EARNINGS SET AT $883,818

Six Months' Report Shows Net Sales in Excess of $2,200,000

Net earnings of the Marlin-Rockwell Corp. are set at $883,818 in the report as of June 30, 1922, issued this week. Net sales amounted to $2,223,012 and other net income brought the final gross income of the Corporation to $938,968.

Manufacturing costs and extraordinary charges before deducting idle plant expenses are listed at $1,339,194. Deductions from the gross income account totaled $973,448 and losses are set at $34,480. Finally, earned surplus at June 30 amounted to $2,279,382.

WILLYS-OVERLAND CO. REPORTS LARGE SALES

Net Sales Were $28,281,981 as of May 31 —Wilson Foundry Earns $264,131— Five Months' Business Results in Loss of $1,661,262 Statement Shows.

Net sales of the Willys-Overland Co. for the five months ended May 31 last, reached $28,281,981, according to a consolidated income account issued this week. This figure does not include the record of the Wilson Foundry & Machine Co., although it embodies that of other subsidiary companies. The Wilson company for the same period showed gross sales of $2,368,586 and surplus after expenses of $264,131.

Cost of conducting the business, however, reduced the net from sales of the Overland company to $847,714 with the result that the deficit after maintenance, deposits, interest, etc., was $1,661,262. Of the several items making up the costs, $27,434,267 is given as the charges made against making sales. Interest accounted for $508,027.

The balance sheet reveals quick assets of $9,995,356. Current liabilities are set at $24,611,116. Plant and equipment are listed at $43,900,835; goodwill, trademark, etc., $14,059,932; inventories $15,263,753; profit and loss deficit $9,594,027. Capital stock is now $76,049,106.

Larger Quarters for Corduroy Cords

Business having forced an expansion, the Grand Rapids Tire & Rubber Corp., has begun work on a new factory unit to cost in the neighborhood of $250,000. The Corporation's products are marketed by more than 600 dealers in Michigan alone and it has distribution in the important jobbing centers throughout the Country.

U. S. Rubber Buys Anglo-Dutch Output

By virtue of a contract entered into this week, the General Rubber Co., crude rubber operator for the United States Rubber Co., will take the entire output of the Anglo-Dutch Plantations from October 1 to the close of 1924, after provision is made for existing contracts. The agreement is automatically renewable for a further period of two years. London quotations are the agreed prices with a minimum of eight pence and a maximum of one shilling, four pence per pound.

Run Shows Oakland's Economy

Economy in operation was illustrated by the record established by an Oakland car in the tour of the Michigan Pike association around Lake Michigan this year. The total 2,111 miles was covered on 97 gallons of gasoline, or an average of 21.76 miles a gallon.

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U. S. RUBBER PROFITS GROW BY MILLIONS

First Six Months of Year Result in Net After All Charges of Over Three Millions Dollars—Total Quick Assets Now Set at $132,745,000.

Once again the wisdom of the United States Rubber Co. and its contemporaries, in swallowing the bitter pill of readjustments in 1921, has been demonstrated. In the half-year's statement, issued this week, the Company reports net profits after all charges of $3,052,918.

This sum is more than 700 per cent greater than the net profits registered after a whole year's operation at the close of 1921. It may be compared with a deficit of $4,875,000 at the end of the first half-year of 1921. But it must be borne in mind that these lesser sums represent huge adjustment losses. Particularly does this apply to the June 30, 1921, statement. The final balance sheet of 1921 revealed the first rewards for fearless readjustment—the present statement convincingly proves the wisdom of the management's course.

Net sales for the first six months of this year were $73,933,771. While this is not quite half the $164,000,000 net sales for all of 1921, it should be considered very satisfactory in view of the lower level of selling prices compared with previous years and the changes resulting from varying business conditions.

Net income for the six months amounted to $6,305,113; interest on funded debt was $2,445,610 and all other interest came to $806,585. These sums total $3,252,195.

In connection with interest charges it is notable that the Company will reduce the annual aggregate of these items by $70,000 through the arrangements made for retiring on December 1 its five year, 7 per cent secured gold notes in the sum of $6,000,000 due on the same date in 1923. To anticipate the payment of these notes, arrangements have been completed for the sale of a $7,000,000 par value first and refunding mortgage 5 per cent gold bond series "A," the issue to be due January 1, 1947.

Total current assets as of June 30, 1922, were $132,745,000, of which $56,752,000 is in cash. Current liabilities amounted to $46,352,000 on the same date. Of this, $11,362,000 is in current accounts payable including acceptances for importation of crude rubber.

Patent Injunction Enforced

Injunction against infringement of the Hudson Motor Specialties Co.'s crank case repair arm patents, granted May 11 against the Lake Erie Accessories Co., the Simmons Mfg. Co., the M. & M. Signal Co., and the American Signal Co., is now in force. Under the agreement the Lake Erie Company has paid the plaintiff a substantial sum of money, turned over its dies and consented along with the other defendants to the present permanent injunction. The repair arm is an attachment for mending broken Ford cars.

General Tire Reports Big Business

Both in units produced and in dollars, the present year has proven the best in the history of the General Tire & Rubber Co., according to a statement issued this week by the management. The entire output of the Company is sold through dealers to the public, there being no manufacturers' equipment business undertaken.

FRONTENAC CO. CLEARS SKIRTS OF RYAN TANGLE

Old Corporation Dissolved; New Concern To Be Formed Soon

Dissolution of the old Delaware corporation of the Frontenac Motors Co. was made necessary in order to clear up its connection with the lately bankrupt Allan A. Ryan, it was explained this week. As reported in AUTOMOBILE TOPICS under date of August 12, the charter has been cancelled by Delaware and trading in the stocks barred by the New York Curb Exchange. It is pointed out by Louis Chevrolet, directing the affairs of the new concern, that the Delaware corporation was organized primarily to list the stocks on the Curb.

At present Ryan is in no way connected with the new company. William N. Thompson, president of the Stutz Motor Car Co. of America, has announced that a new Frontenac Company will be formed. He further declared that present plans do not include any New York men in the financial scheme. He and his associates are not prepared at this time to divulge the identity of those interested in forming the new industry. Dissolution of the old Company will not affect the work being done.

India Tire's Business Increases

Net earnings from January 1 to June 30 of the India Tire & Rubber Co., Akron, totalled $214,419. Net volume of sales during the past seven months is set at $1,088,000, an increase of 46 per cent in cash and 80 per cent in units over the figures for the similar period of 1921.

DIVIDENDS DECLARED

B. F. Goodrich Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

International Harvester Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 1, 1922, to stockholders of record August 10, 1922.

Lee Rubber & Tire Co.—Regular, quarterly dividend of 50 cents; payable September 1, 1922, to stockholders of record August 15, 1922.

Martin-Parry Corp.—Regular, quarterly dividend of 50 cents; payable September 1, 1922, to stockholders of record August 15, 1922.

White Motor Co.—Regular, quarterly dividend of $1; payable September 30, 1922, to stockholders of record September 20, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended August 16. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	22¾	18¾
*Advance Rumely, preferred	57⅛	48½
Ajax Rubber	11⅜	11⅜
Allis-Chalmers	54¼	52¾
Allis-Chalmers, preferred	98½	98½
American Bosch Magneto	39	38
Case (J. I.) Plow	7⅞	6⅜
Chandler Motor	60¾	56¾
Chicago Pneumatic Tool	69⅞	68½
Cleveland Motors	26	25
Continental Motors, common	7⅛	7
Daniels Motor	11½	11
Durant Motors	39¾	38¼
Durant Motors of Indiana	15⅛	13¼
Fisher Body	113	113
Fisher Ohio Body, preferred	88	87½
Fisk Rubber, common	13⅛	12½
General Motors, common	13¼	12⅞
General Motors, preferred	81	79⅞
General Motors, 6% deb.	81½	81
General Motors, 7% deb.	94¾	94½
B. F. Goodrich, common	36	33⅞
B. F. Goodrich, preferred	86	85⅛
Goodyear, common	10½	8¼
Goodyear, preferred	31	31
Goodyear, pr. pf.	60	60
Grant Motors	76c	75c
Gray & Davis	16	13¾
Hayes Wheel, w. i.	30	29¾
Hupp Motor Car, common	18½	16½
International Harvester, new	115⅞	107
*Kelly-Springfield Tire, common	45½	42½
Keystone Tire	8⅞	8
Lee Rubber	27¾	26½
Lincoln Motors	2½	1¾
Mack Trucks, Inc.	57¾	54½
Martin-Parry	29½	28½
Maxwell Motors, Class A	60¾	54¼
Maxwell Motors, Class B	20	18¼
Mercer Motors	3	2½
Moon Motors	10½	10⅛
Mullins Body	22	22
Parish & Bingham	11¼	10¼
Pierce-Arrow, common	13¾	9⅝
Pierce-Arrow, preferred	35	23½
Reo Motors	13¾	13⅛
Republic Motor Truck	4¾	3
Saxon Motors	4¼	3⅞
Stewart-Warner Speedometer	43¾	42⅜
Stromberg Carburetor	49	44⅛
Studebaker, common	126½	123
Studebaker, preferred	114½	114¼
U. S. Light & Heat	1¾	1¾
U. S. Rubber, common	57¾	55¾
U. S. Rubber, 1st preferred	105	104
Westinghouse Air Brake	94	94
Westinghouse Electric & Mfg.	62½	61
White Motors	48¾	47
Willys-Overland, common	7	5¾
Willys-Overland, preferred	40⅞	35½

*Par $50.

Prices for automobile securities quoted in Detroit during the week ended August 15 are as follows:

	High	Low
Auto Body	4½	3½
Charcoal Iron, common	2	1½
Charcoal Iron, preferred	3	2
Columbia Motors	4⅛	3⅞
Continental Motor	7⅜	7
Edmund & Jones, common	22	18
Federal Truck	22	20
Ford of Canada	373	365
General Al. & Brass	12	12
Motor Products	80	77
Motor Wheel, common	13¾	13½
Packard Motor, common	13⅞	13¾
Packard Motor, preferred	86	84
Paige-Detroit Motor Car, common	22	18
Reo Motor	26½	25¾
Timken Axle, common	30	25½
Timken Axle, preferred	92	90
Truscon Steel, common	18½	15
Truscon Steel, preferred	9¾	9⅝

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AJAX PROFITS FOR SIX MONTHS $191,536

Large Gain in Business Shown in Comparison with Large Deficit in 1921—Quick Assets Exceed Current Liabilities Three to One.

Business of the Ajax Rubber Co. for the six months ending June 30 resulted in a remarkable recovery over last year. Net profits of $191,536 are reported for the period, in a statement issued this week by the Company. When this is compared with a deficit of $5,205,577 for 1921, the growth is easily discerned.

The balance sheet indicates quick assets as in excess of current liabilities by a ratio of approximately three to one. The former items total $3,946,228 while the latter are $1,362,479. Cash on hand totals $603,355.

President Joseph C. Weston, referring to the condition of the Company some time ago, predicted that profit on sales for the current year would be high and his estimates are seemingly being demonstrated. Through working agreements with car makers, the Company has received a good share of equipment business, it is reported.

AJAX RUBBER CO.

Balance Sheet, June 30, 1922

Assets	
Cash	$603,355
Accounts and notes receivable	3,211,420
Inventories	2,875,261
Misc. accts. rec. and advances	131,453
Lands, buildings, mchy. and equip.	4,351,611
Deferred charges	513,303
Good will and patents	1,874,875
Total	$13,561,278
Liabilities	
Capital stock	$425,000
Shares of no par value	9,373,798
Notes payable	800,000
Accounts payable	341,914
Accrued liabilities	120,565
First mortgage bonds	2,925,000
Total	$13,561,278

Mid-West Gets Charter

Pursuant to its refinancing plans, the Mid-West Engine Corp., was chartered in Delaware during July. Capitalization is set at $17,500,000.

REPUBLIC REORGANIZATION PLAN REPORTED APPROVED

Bankers' and Noteholders' Committees State Ample Capital Is Assured

C. H. Poppenhusen, representing the bankers' committee and M. N. Buckner, as representative of the noteholders' committee, reported this week that an agreement had been reached whereby the Republic Motor Truck Co.'s reorganization plans have been accepted. Under the scheme, details of which are withheld for the present, ample working capital is assured, the spokesmen declared.

"The Republic company is to be put in a strong financial position," Buckner states. "It is assured that safe and continuous operation will be maintained. The Company's capitalization and indebtedness will be readjusted. Lawyers are now at work on the details which will be announced in due time.

Delaware Incorporates 17

Seventeen corporations to deal in automotive products and conduct various businesses in connection with the automobile industry were incorporated in Delaware during July. Total capitalization of the 17 was $125,540,000. There were one financing concern, a gear manufacturer, two tire concerns, two body builders, a foreign acceptance company and nine miscellaneous corporations.

Standard Oil Cuts "Gas" Price

Price of gasoline has again been reduced by the Standard Oil Co. of Louisiana one cent a gallon, bringing down the price at filling stations to 21 cents a gallon and tank wagon price to 19 cents. Other distributers in this territory have followed the lead of the Standard.

Fisher St. Louis Co. Chartered

Delaware issued a charter in July to the Fisher Body St. Louis Co., with a capitalization of $1,000,000. Plans of the new St. Louis division have not been announced as yet.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended August 16 are as follows:

	High	Low
Firestone	80	76
Fisher, Ohio	40	40
Fisher Body, Ohio, preferred	91¼	90
Goodyear	11½	8
Grant	⅞	¾
Grant, preferred	8½	6
Jordan, common	230	200
Jordan, preferred	87	80
Peerless	57¾	54½
Standard Parts	5	3¼
Standard Parts, preferred	21	16
F. B. Stearns	23½	20
Torbensen Axle	27	25¾
W-S-M, common	45	45
W-S-M, preferred	73	68
Winton, preferred	45	40

Prices for rubber securities quoted in Akron during the week ended August 15 are as follows:

	High	Low
American R. & T., common	30	20
Amazon Rubber	5	5
Firestone, common	78	75
Firestone, 6% preferred	91	90
Firestone, 7% preferred	87	84½
General Tire, common	250	250
General Tire, preferred	98	92
B. F. Goodrich, common	37	33
B. F. Goodrich, preferred	87	84
Goodyear, common	11	8½
Goodyear, preferred	36	27½
India, common	80	74
Marathon, common	3	2
Mason, common	12½	11
Mason, preferred	56	54
Miller Rubber, common	70	63
Miller Rubber, preferred	96	93
Mohawk Rubber	20	20
Mohawk Rubber, preferred	100	100

STEWART-WARNER SEES BIG BUSINESS AHEAD

Satisfactory Experience During First Half-Year Leads to Prediction—Current Assets Now Exceed Liabilities by Ratio of Eighteen to One.

Continuance of very satisfactory business throughout July and August leads Stewart-Warner Speedometer Corp. to predict big business for the remaining months of 1922. Advance orders justify the belief, according to the half-yearly statement of the Corporation, appearing this week.

The balance sheet shows quick assets in excess of current liabilities by a ratio of 18 to one. Furthermore, it is pointed out, after the Company calls in its notes due in 1926, there will remain no debts in excess of current liabilities.

Income account of the Corporation is equally satisfactory. For the six months ended June 30, profits were $1,856,523 after expenses, Federal taxes and depreciation. This may be compared with a profit of not quite one-half that sum in the 1921 period.

STEWART-WARNER SPEEDOMETER CORP.

Consolidated Balance Sheet, June 30, 1922

Assets	
Cash	$927,341
U. S. Bonds, etc.	3,005,286
Securities (cost)	755,898
Accounts and notes rec., less res.	2,439,029
Inventories	2,177,880
Deferred charges	177,843
Land, building (leases)	5,664,718
Patents, good will, etc.	10,731,724
Total assets	$24,952,381
Liabilities	
Current	$749,829
Tax provisions	265,526
Deferred	424,752
Bonds	1,667,000
Capital	12,915,922
Surplus	8,929,351
Total	$24,952,381

STEWART-WARNER SPEEDOMETER CORP.

Comparative Income Account, June 30, 1922

	1922	1921
Profit*	$2,122,049	$652,873
Federal taxes	265,526	
Net profit	1,856,523	652,873
Dividends	579,372	600,000
Surplus	1,277,151	52,873
Profit and loss surplus	8,929,351	7,591,938

*After all manufacturing, selling and administration expense and depreciation.

Receiver for Hydro United Tire

Receivers have been appointed for the Hydro United Tire Co. They are John P. Hill and Ephraim Lederer of Philadelphia. Bonds were placed at $75,000. The receivership came on August 15 on complaint of the William N. Albee Co.

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CONTEST BRINGS OUT CHAMP TIRE FIGHTERS

Philadelphia Automotive Service Assn. Holds Outing—Records Hung Up for Changing Casings and Tubes—Give Silver Trophy Cup as Prize.

Nearly two hundred members of the Automotive Service Assn. of Philadelphia witnessed a tire changing contest that is said to have set up new records last week at the first annual outing of the body. One contestant, whose name is withheld, jacked up a wheel of a Cadillac, let the air out of the tire, removed the casing, inserted another tube, applied the tire to the wheel again, removed the jack—all in three minutes flat.

Five other records were established for the winning of the trophy and other prizes in the shape of medals. They were: (No. 1) Car jacked up, valve cap removed and the air let out of a 30 x 3½ in. clincher tire—removed tire with bare hands. Insert new tube in a new fabric tire and apply tire to the wheel with bare hands. Pump to 65 lbs. pressure, attach the valve cap and remove the jack. One trial. Time—Three minutes 28 1/5 seconds. (No. 2) Apply allweather tread to the wheel. Valve stem to be through hole of wheel, beads not being seated. Three trials if desired. Must be done with bare hands. Time—3 2/5 seconds. (No. 3) Mounting a 35 x 5 in. tire on a 34 x 4½ split rim and apply pressure to 70 lbs. with compressed air. Time—One minute flat. (No. 4) Mounting a 37 x 5 in. tire on a 36 x 4½ in. split rim and remove the same. Time—One minute 31 seconds. (No. 5) Mounting 35 x 5 in. tire on a 34 x 4 in. tire one-piece rim with bead fillers, and remove the tire. Time—One minute 55 3/5 seconds.

More Stutz Stock Sold

Sales of 3,605 shares of Stutz Motor Car Co. of America stock were made at auction on August 16 in New York city. One thousand shares were taken by Low Brothers, brokers. A. A. Houseman & Co. took 2,000 shares. Prices follow: 2,000 at $23.50; 1,000 at $23, and 605 at $23.25.

REPUBLIC RUBBER SALES CONTINUE TO INCREASE

First Two Weeks in August Prove to Be Best This Year

Gross sales of the Republic Rubber Corp., Youngstown, Ohio, from August 1 to 11 exceeded gross receipts of any previous half-month this year. They also topped gross sales from July 1 to 17.

Production of casings is running from 1,600 to 1,800 daily at the Canton plant, while the production of inner tubes ranges from 75,000 to 100,000 a month. Particularly significant is this record of tire sales, in view of the fact that the Company has not followed the recent price reductions made by other manufacturers. There are 2,200 dealers selling Republic tires and 1,800 handling Canton-Blackstone.

Corduroy Cords Lower

Prices of Corduroy cord tires have been reduced by the Grand Rapids Tire & Rubber Co., Grand Rapids, Mich. The new price of its 30x3½ Universal Tread is $15.95, and of its 32x4, $29.15.

The Traffic Problem

THE Speeder is the automobile industry's worst enemy. This week near New York city, a rich man, racing a Rolls-Royce against a Stutz through a thickly populated stretch of country, crashed into two automobiles traveling in the same direction, overturning them, then fortunately lost control of his own machine, hurtled into a telegraph pole and killed himself and one of his passengers. Four persons riding in the cars the rich man struck were injured, two perhaps fatally.

The big problem back of the outrage is—what is wrong with traffic laws that such things are allowed to happen, that such men are permitted to use the highways? On the solving of this problem—which is of course not confined to the one case—depends the future of selling automobiles.

He who believes this idea is visionary but deludes himself. The majority of humankind is of timid temperament. Few are adventurous enough to take their lives boldly in their hands for the mere pleasure of riding in a car or to expedite business.

What, then, can be done about it?

The first thought is rigid examination of applicants for driver's license for mental fitness and rejection of the unfit. But such a plan faces the high wall of the human equation. It would not work. And a traffic scheme that doesn't work is a foolish expedient. No, as always, the wise must protect the unwise against themselves or lose their own lives.

Some other safeguard must be devised. Mechanism to limit speeds sounds promising but may prove useless. Many have been killed in automobile accidents brought about at very low speeds. Then, too, bursts of speed are sometimes justifiable.

Laws against passing a car traveling in the same direction have been advocated. Such a plan is not desirable unless certain speeds are obligatory on all. That is evidently wrong and impracticable.

Strict enforcement of speed laws with extremely heavy penalties attached is indicated. Make speeding dangerous to the liberty of the speeder. If a man convicted of speeding can afford a fine, put him in jail for a more or less lengthy term. If a fine means even bankruptcy for a wilful, careless speeder, fine him nevertheless. Nothing is gained by mercy in such cases. It is noticeable that communities heralded for rigid enforcement of traffic laws seldom are called upon to invoke them. "Joy riders" avoid them.

Automobile manufacturers must realize that one shameful happening like the one here cited may have lost the sale of dozens of cars. As traffic becomes more congested such accidents will multiply. It follows clearly that in just that proportion new sales will grow fewer.

One mind studying the question "What can be done about it?" will not accomplish much. The many keen brains of the industry turned on the question "How could that accident have been prevented?" will accomplish much.

This is perhaps the most serious question that has arisen so far in these discussions. If only motor makers would admit to themselves that a day is coming when the accumulated weight of all these abuses of present feeble traffic laws will deliver a crushing blow to the industry, something will happen.

You cannot sell cars when people fear to ride in them. People will fear to ride as long as death waits at the steering wheel some fool is holding. In the particular, accidents are having a poignant effect on sales. In general, business is so good this hesitancy to buy is unnoticed by the manufacturer, now.

Yet it would seem to be an inane waste of opportunity on the part of the manufacturers, not to grapple with the knotty problems of traffic while there is still a chance to build for the perhaps distant but no less vital future of the industry.

You Made It—Help Solve It

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JUNE EXPORTS SHOW BETTER CONDITIONS

Total of Automotive Products Shipped Registers Gain of 25 Per Cent Over May—Increase Shown in Passenger Cars—Canada Again Heads Markets.

Total of passenger cars, trucks, and parts of automotive vehicles exclusive of engines and tires shipped to foreign countries during June were worth $10,683,277. This represents an increase of $1,786,525 over the total of $8,896,752 of shipments during the month preceding. As compared with June, 1921, it represents an increase of $5,883,025.

Automotive products in their entirety, shipped during June, totaled $15,063,717 in value, registering a gain of 25 per cent over May, when all products having to do with the automotive industry were priced at $11,967,614. Moreover, June exports amounted to approximately three times the shipments during the first month of the current year, January's figure being $5,058,409, which, however, does not include engines.

JUNE FOREIGN COMMERCE

Condensed

Exports:		
Cars	7,818	$5,807,226
Trucks	1,121	786,279
Parts		4,089,772
	8,939	$10,683,277
Imports:		
Cars	33	$ 39,656
Rubber		7,607,945

In contrast to the increase of truck shipments during May as compared with April, the increase during June, as recorded in statistics compiled by the Automotive Division of the Department of Commerce, was manifested in passenger car shipments. These numbered 7,818, and represented a total value of $5,807,226, an increase of 15 per cent in number and 17 per cent in value.

Exports of trucks decreased 6.9 per cent in number and 3.2 per cent in value as compared with May shipments. The number shipped during June was 1,121, valued at $786,279. Compared with a year ago, however, truck shipments as well as those of passenger cars show a decided improvement. In June, 1921, truck shipments totaled 418, valued at $531,234, while passenger car shipments for the same month totaled 1,964, which totaled in value $2,057,490.

Unit values of both passenger cars and trucks increased slightly—the former increasing $18 and the latter $26. The average value of passenger cars exported was $742 and that of trucks $701.

Shipments of automobile engines totaled 8,852 in number, valued at $831,401. This represents an increase over May shipments of 58 per cent in number and 34 per cent in value. Engine shipments during June, 1921, numbered 542 and totaled in value $125,992.

Parts exported during the month, exclusive of engines and tires, totaled $4,089,772, this representing an increase of 29 per cent over May shipments. Tires exported numbered 125,353, totaling in value $1,626,861. This compares with tire shipments a year ago amounting to $758,518.

The four leading passenger car markets of the United States during June took increased shipments as compared with May. Canada imported 1,807 cars, valued at $1,801,822, which was the largest amount shipped to that country during any one month in 1922. Sweden held second place with 961 machines to its credit, valued at $422,820. In May shipments to that country were 802.

Mexico took 563 passenger cars valued at $369,531 during June as compared with 634 valued at $357,550 during May. Spain took 239 passenger cars as compared to 141, and Japan dropped from 176 in May to only ten in June.

In the field of commercial vehicles Canada also heads the list with 156 machines, valued at $250,626. In May Canada's truck imports numbered 136, valued at $245,249. Mexico likewise increased its imports, re-

(Continued on page 28, first column)

Hewitt Tire Prices Lower

Effective August 10, prices on its tires have been reduced by the Hewitt Rubber Co., Buffalo. Typical of the changes are the 32x4 Hewitt cord which is selling at $29.15, marking a reduction of $3.25; the 32x4 Hewitt fabric, formerly $25.45, now lists at $22.45; the 30x3½ Hewitt cord has been reduced $2.80 to $15.95; and the 30x3½ clincher fabric casing, formerly $13.75, now sells at $13. The company has introduced a new line of cord tires termed the White Seal, the 30x3½ selling at $14.95 and 32x4 at $26.25.

FRENCH CUT COSTS OF OPERATING MOTOR CARS

One Machine Runs 60 Miles to a Gallon of Gasoline in Test, Is Claim

Costs of gasoline in France having become fixed at the almost prohibitive figure of 60 cents a gallon, intense study is being made of the possibilities of lowering consumption of fuel in that country. Using lighter and smaller cars than the American average the French recently made tests which are said to have resulted in averages of sixty miles to a gallon. The winner in one of the competitions made 61 miles.

The same carbureters have been applied to American cars of the light type with the result of obtaining from 35 to 40 miles to a gallon of fuel. It is pointed out that American cars are speedier, stand higher from the ground and employ much larger motors turning over at slower speeds than the French machines selected for the tests.

JULY RUBBER IMPORTS BOUND UP 9,000 TONS

Reach New High for the Year of 25,245 Long Tons—Nearly Twice Figure of 1921—Even Africans Join Rush to Swamp U. S. Markets.

While governments of Europe interested in Far Eastern and African rubber plantations seek a solution of the problem of overproduction, the United States market continues to be flooded with crude imports. After four months of somewhat curtailed shipments but still far in excess of last year, July comes to the fore as the banner month with imports totaling 25,245. The figures are sent out by the Rubber Association of America.

Without exception, this year's imports of crude rubber have excelled in volume those of last year. Month by month, despite variations, the normal has been exceeded, until the total for the seven months up to July 31, 1922, has reached the huge amount of 155,603 tons, something more than 310,000,000 pounds. In 1921, the total for the same seven months was only 90,404 tons.

Importation of Brazilian rubbers fell off somewhat from those of June. Paras in the latter month reached 861 tons. In April they were 462 tons. July's figure is 575 tons.

As usual, Singapore led the list in plantations. More than 12,000 tons were received in United States ports, which figure may be compared with 7,462 in June, 10,592 in May and 7,895 in April. Penang imports came to the front for a close second to Colombo, both having sent in the neighborhood of 2,500 tons.

Singapore's shipments for July this year thus were more than the entire sum of importations from all sources in July, 1921. This as clearly as anything illustrates the parlous condition of the market. The total for July, 1921, was 11,692 tons. For the seven months ended July 31, 1921, the total was 90,404.

Amazon Rubber Reduces Prices

Reductions on its tires have been made by the Amazon Rubber Co., Akron, effective August 7. Representative of the new prices are the 30x3½ heavy duty cord which lists at $15.95; the 30x3½ fabric air-bag cured, $10.50; and the 30x3½ standard cord, $14.50. The 32x4 heavy duty cord sells at $29.15, and the 32x4 standard cord at $26.

Victor Tire Sales Greater

That tire sales for six months ended June 30 were 18 per cent larger than for the same period last year is the experience of the Victor Rubber Co. The Company is gradually liquidating bank loans and setting up appropriate reserves, H. F. Berlin, president, reports.

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JUNE EXPORTS SHOW BETTER CONDITIONS

(*Continued from page 27, second column*)

ceiving 135 machines valued at $65,546 in June as compared with 125, valued at $62,393, in May.

Sweden, on the other hand, received no American trucks in June as compared with 307 during the month preceding. Japan also shows a falling-off with 86 machines to its credit, a decrease of 42 from the number that country imported during the preceding month.

Imports of passenger cars fell very slightly below the number received during May, 1922, and June, 1921. These totaled 33, valued at $39,656, while in May car imports were 34, valued at $79,105. A year ago in June passenger cars received in this Country numbered 34, the valuation being $63,029.

Crude India rubber imported during the month was valued at $7,607,945. This represents an increase of $1,997,072 over the amount reported for May. A year ago in June, rubber imports into the United States were $5,951,089.

FOREIGN COMMERCE OF THE UNITED STATES FOR JUNE

	June				Twelve Months Ending June			
	1921		1922		1921		1922	
	Quantity	Value *Dollars*	Quantity	Value *Dollars*	Quantity	Value *Dollars*	Quantity	Value *Dollars*
AUTOMOBILES AND PARTS OF—								
Commercial:								
EXPORTED TO—								
Denmark	1	1,711	.....	.....	74	140,664	5	6,909
Netherlands	35	18,076	2	891	415	392,023	268	166,431
Norway	1	1,862	33	13,810	349	571,656	222	89,982
Spain	.....	.....	62	15,428	201	406,461	112	39,690
Sweden	5	3,225	.....	.....	488	851,721	382	134,950
United Kingdom	10	12,900	35	44,409	1,560	2,118,157	241	319,316
Canada	55	97,313	155	250,626	1,466	2,630,359	1,099	1,620,355
Mexico	120	131,584	135	65,546	1,629	2,440,897	1,149	692,595
Cuba	22	41,368	11	8,735	1,136	2,951,703	157	102,073
Argentina	.....	.....	5	9,218	139	403,727	21	44,285
Brazil	.....	.....	.....	.....	537	566,985	82	296,595
Peru	.....	.....	7	5,280	577	531,034	26	15,051
British East Indies	11	27,512	17	23,153	1,293	2,772,052	96	122,313
China	3	3,765	13	6,220	228	371,724	66	73,587
Dutch East Indies	10	29,390	.....	.....	1,163	2,986,463	25	65,282
Japan	68	58,760	86	45,880	770	1,131,320	854	573,966
Philippine Islands	1	200	.....	.....	888	1,324,852	29	39,380
Australia	3	9,939	39	62,765	967	1,659,055	542	748,828
British Africa	6	17,354	19	23,003	586	918,064	111	149,311
Other countries	67	76,275	501	211,315	3,132	4,343,038	1,942	1,222,318
Total motor trucks and buses	418	531,234	1,121	786,279	17,598	29,511,955	7,429	6,523,217
Passenger—								
EXPORTED TO—								
Belgium	11	17,792	699	257,766	1,051	1,355,376	2,448	1,100,223
Denmark	12	24,670	90	79,331	326	543,385	298	268,685
Netherlands	58	54,285	83	81,485	1,807	2,258,260	571	515,009
Norway	4	3,675	285	124,544	1,462	2,020,176	1,027	412,525
Spain	19	31,066	239	194,238	2,393	3,959,363	778	786,923
Sweden	58	53,347	961	422,820	3,192	4,155,897	2,604	1,461,752
Switzerland	8	13,438	43	52,302	937	1,331,195	325	281,121
United Kingdom	26	37,295	775	576,770	8,205	9,245,837	2,666	2,042,258
Canada	507	703,191	1,807	1,801,822	5,394	7,984,508	8,512	9,137,735
Mexico	600	465,718	563	369,531	6,164	5,140,236	6,573	4,597,273
Cuba	56	59,181	81	106,844	4,559	5,182,786	1,066	982,555
Argentina	4	11,393	113	96,128	2,838	3,985,604	889	925,653
Brazil	.....	.....	90	91,507	2,645	3,683,990	477	499,365
Chile	1	1,800	.....	.....	329	549,928	26	20,353
Colombia	3	3,354	20	11,189	476	655,536	116	87,158
Peru	3	12,214	2	2,761	665	797,126	40	39,603
Uruguay	.....	.....	42	26,583	2,262	2,432,981	168	111,905
British India	40	72,065	92	65,748	6,281	7,693,895	767	699,579
Straits Settlements	1	2,089	.....	.....	1,484	1,791,801	24	24,572
China	50	51,516	86	70,766	1,431	1,867,619	408	385,034
Dutch East Indies	3	4,500	43	45,455	3,597	5,309,470	485	585,480
Japan	135	85,879	10	13,178	1,488	1,853,755	1,280	736,307
Philippine Islands	1	600	41	31,010	2,444	3,007,168	271	239,683
Australia	45	59,225	816	658,853	6,260	7,170,657	6,880	5,199,708
New Zealand	11	13,268	59	50,431	3,804	5,017,603	663	632,476
British South Africa	17	13,080	203	177,956	3,227	3,890,365	1,183	1,151,887
Other British Africa	5	6,510	7	10,816	674	836,701	122	120,778
Egypt	23	10,500	2	1,905	836	801,177	321	156,159
Other countries	263	245,839	566	385,457	8,199	9,264,575	3,859	2,940,319
Total passenger cars	1,964	2,057,490	7,818	5,307,226	84,430	103,786,970	44,747	36,142,078
Parts of, except engines and tires	.....	2,211,528	18,561,601	4,089,772	.....	67,409,570	.....	33,921,737
Total automobiles and parts of	.....	4,800,252	.....	10,683,277	.....	200,708,495	.....	76,587,032
Tires	.....	758,518	125,353	1,626,861	.....	28,308,166	.....	15,673,092
Automobile engines	542	125,992	8,852	831,401	14,173	2,662,803	33,602	3,955,569
AUTOMOBILES AND PARTS OF—								
IMPORTS:								
Automobiles	34	63,029	33	39,656	1,051	1,264,108	450	757,269
Parts of (except tires)	.....	120,325	.....	45,596	.....	1,376,325	.....	646,189
INDIA RUBBER, CRUDE—								
IMPORTED FROM:								
France	.....	.....	25	5	219,634	76,623	995,282	100,973
Netherlands	941,378	174,884	417,991	57,387	4,609,186	1,243,023	21,652,700	3,607,397
Portugal	.....	.....	.....	.....	1,761,672	321,912	1,396,078	77,652
United Kingdom	1,357,917	211,549	2,330,730	367,132	16,193,253	4,335,175	62,728,626	10,405,327
Canada	.....	.....	.....	.....	250,545	107,460	51,335	6,179
Central America	.....	.....	3,875	804	91,753	27,626	36,706	4,975
Mexico	.....	.....	.....	.....	365,337	74,092	349,471	69,392
Brazil	2,215,989	242,286	1,646,065	195,793	26,473,094	5,025,081	21,125,055	2,519,159
Peru	22,594	2,431	330	40	1,400,154	398,647	286,177	48,517
Other South America	409,236	46,867	51,710	7,468	1,756,490	442,688	743,925	160,295
British East Indies	25,546,836	4,379,361	41,377,918	5,947,399	247,569,610	82,687,051	378,810,088	57,138,544
Dutch East Indies	3,793,568	732,174	5,041,231	835,079	52,374,163	18,427,510	72,924,828	11,873,035
Other countries	337,230	42,265	82,149	11,007	3,910,332	1,472,771	7,281,157	739,774
India rubber scrap or refuse, fit only for remanufacture	298,941	5,507	40,812	2,285	6,042,568	421,092	4,012,665	152,042
Total unmanufactured	35,514,988	5,951,089	51,986,138	7,607,945	377,342,485	118,400,109	582,809,768	88,839,362

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BODY BUILDERS PLAN SECOND ANNUAL SHOW

National Event Will Be Held from January 8 to 13, 1923, in New York City Armory—Expect Record Attendance —New Exhibits Promise Interest.

Every effort to obtain a record attendance at the Second National Automobile Body Builders' Show, to be held in New York city January 8 to 13, 1923, will be made by the Automobile Body Builders' Assn., under whose auspices the event will be staged. More than 75,000 admission tickets will be distributed and it is expected that a greater number of exhibitors will take part this year than last.

Exhibits will include dump and other heavy duty bodies, omnibuses, sight-seeing buses, ambulances, light commercial, closed and open passenger bodies and materials and parts entering into body construction, trimming and finishing. The large bodies will be shown in one section, the lighter in another and the passenger bodies in a third. The parts exhibits will be placed on three sides of the 12th Regiment Armory, in which the show will be held.

It is reported that 96 per cent of those who exhibited in 1922 have voted to show their lines again in addition to newcomers. Several changes have been made in the 1922 plans to conform to the suggestions of those who took part. Reviving financial and business conditions, it is believed, will make for more than the usual success the show might be expected to accomplish.

Rolls-Royce Prospers

Satisfactory increases in sales during the second quarter of 1922 as compared with the first three-months' period are reported by Rolls-Royce, Inc., Springfield, Mass. Additions to the working forces made during the year have resulted in doubling the average monthly shipments. The organization of its own coach works, under the management of George W. Kerr, is about completed and, it is believed, will offer many advantages to both the Company and its clients.

Show Special Haynes in R. R. Station

Mounted on a velvet-draped pedestal, a special Haynes "55" touring car was displayed this week in the main entrance of the Pennsylvania railroad station at New York city. The car is to be given away as a door prize by the Woman's Aid of the "Pennsy" system in connection with its annual entertainment and dance to be held October 12.

Ford Settles Hotel Bill

Aetna Casualty & Surety Co., of Hartford, Conn., received Henry Ford's check for $744,292 on August 11, thus closing a prolonged legal controversy just one day before the Casualty company would have been entitled to attach the Ford Motor Building and land at Broadway and 54th street, New York city. The action grew out of a contract which Ford made with the Woodward Hotel Co., of New York, several years ago for the erection of a 13-story hotel in 54th street. Ford failed to live up to an agreement, it was charged, suit was brought, Ford won, the hotel appealed and got a $600,000 verdict. The Casualty company paid, and Ford paid them.

Organize New Cord Tire Co.

Harry C. Hower, president of the Falls Rubber Co., announced on August 16 that he and his associates have formed the Vogue Rubber Co. to market a new tire to be known as the Vogue. Temporary location has been obtained in Chicago at 24th street and Indiana avenue. The new tire will be a cord, hand-built and considerably over-size designed to "occupy a place in the tire business now occupied by the custom-built motor car," according to the announcement.

URGE GREATER CARE IN SHIPMENTS TO CANADA

Express Company Finds Matter Held Up For Lack of Proper Specifications

Unless shippers' export declarations are made out correctly and completely, the United States customs authorities, at points of export, refuse to permit express shipments to Canada to pass through. Efforts to improve the service on this traffic have been handicapped accordingly, and the cooperation of shippers in eliminating this trouble is being solicited by the American Railway Express Co. It is explained that these declarations are required by the Government for the purpose of securing definite information as to what goods are sent from this Country to Canada, and also to serve to identify shipments returned from the Dominion free of duty.

The customs authorities require that the declarations, which are made out by shippers themselves, be specific and complete. Generalities such as, "one box of merchandise" or "one bale of cotton goods," are not permissible. The information required must indicate clearly the nature of the commodity and the actual quantity contained in the shipment. According to regulations, the value quoted should be the actual cost or selling price. If shipped on consignment, before a sale has been made, the market value at the time of export in the American port, at point of entry into Canada, should be made. Where the quantity of the goods is expressed in terms of weight, the net weight must be indicated in the proper column.

London Ships Buses to Spain

Two hundred motor buses have been put into operation in Barcelona, Spain, by a company affiliated with Vickers, Ltd., London. There will also be a new service of 100 buses in Madrid soon.

LIGHT TRUCK FOUND FAVORITE OF BUYERS

Federal Company Studies Market—Finds One-Ton Job Constitutes 65 Per Cent of Those in Use—80 Per Cent Are Farmers' Best Bet for Crops.

Investigating the Country's requirements for lighter capacity trucks, the Federal Motor Truck Co. finds that 65 per cent of all those in use are of one-ton size. In many instances, this popular job forms a greater percentage. Among farmers it was found that 80 per cent of their trucks are one-ton and speedy.

Gauging the ultimate market, the Federal Company's statisticians list 6,448,343 farms in the United States. Of this total 2,673,331 are of one hundred acres or more. The Company believes that eventually at least one light truck for each two farms in the latter category will be required. In other words, 1,330,000 is the capacity of the present generation of farmers who each till 100 acres or more.

Aside from the foregoing, it is pointed out that there are thousands of smaller farms and truck gardens, given over to fruit, poultry and the like. All these products, being relatively high in value and rather perishable, will ultimately be hauled to market in light trucks. It will be more economical. In view of these statistics, the Federal company believes it is conservative in declaring that at least one truck will be needed by every four farms in the United States. This would bring the total close to 1,500,000.

Richardson Heads Maxwell in Cleveland

F. Earl Richardson, for ten years a well-known figure in Cleveland retail and wholesale automobile circles, has been elected president and general manager of the Avenue Motor Co., Maxwell-Chalmers dealers in that city. He had been general sales manager for the Barnes Motor Co., Dodge Brothers representatives.

Christopher Gets No Assistant

Dayton Engineering Laboratories Co., Dayton, O., will probably not appoint a successor to the position of assistant superintendent, left vacant by the promotion of George T. Christopher to superintendent, as reported in these columns under date of July 29. G. B. McCann, treasurer of the Company, explains that a group of five supervisors as the heads of the important departments now report directly to Christopher.

Noma Perfects Chicago Organization

E. E. Glatt has been appointed president of the Noma Motors of Chicago, latest division of the Tivoli Motors, Ltd. Other Chicago appointees are H. Bartholemew, general manager and H. Crume, sales manager.

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WORLD ROAD CONGRESS ANNOUNCES PROGRAM

Six Questions Will Be Considered When Experts of Many Countries Gather at Seville in 1923—Many Inventions and Experiences to Be Exchanged.

Six major questions concerning construction, maintenance, traffic and development of highways will form the basis of the discussions and resolutions which are expected to make the Fourth International Road Congress at Seville, Spain, in May, 1923, one of the most notable events on the calendar of the year. As noted in AUTOMOBILE TOPICS under date of July 29, the Congress has not met since 1913 and it is believed that profound effects will result from this meeting of the World's greatest highway scientists.

The program has been divided into two sections. The first matter to be considered in construction and maintenance has to do with the surfacing of roads with concrete. Materials, proportions, ordinary and reinforced, expansion joints and their advantages and disadvantages will be discussed. The second question will consider the use of bitumen and asphalt and will review the various methods now in use and new ideas.

The third part of the first section will arouse considerable interest, especially in America. It will embrace all methods of laying rails for street cars and railroads on the various kinds of road surfaces. This matter has caused perhaps as much anxiety and as great a loss in money as any one phase of the highway problem in the United States.

The first section will close with a consideration of the various mechanical appliances used in the construction and maintenance of roads. All improvements introduced since the Third Congress, in London, will be considered and a conclusion reached as to their relative values.

The second section, devoted to traffic and development, will cover the ground of the growth of motor transport, general traffic regulations and the problem of traffic on congested roads and streets of towns. Here again the United States' delegates will find intense interest since the problem of traffic is the greatest of all the highway's related troubles and on it depends not only the solution of road construction and maintenance but the future of the automobile business itself.

Peerless Going Good in Maine

W. E. Soule Co., distributers of Peerless automobiles, at Portland, Me., report sales considerably ahead of those of last year at this time. Stocks of new cars are very low and used cars still less in number.

A. A. A. to Blaze Trail For Shriners

Daniel J. Nee, official transcontinental road marker and logger for the American Automobile Assn., will blaze a trail across the Country for the Shriners who wish to make the trip to the great convention at Washington, D. C., next year. Nee will leave San Francisco a month or more before the convention opens. His car will be a special body mounted on a standard truck chassis.

Martin-Parry Starts Flint Plant

Martin-Parry Corp.'s new Flint assembling plant will be under way within the next two weeks, a site having been obtained in the Dort properties, near the Chevrolet and Buick plants. Frank G. Haling, branch supervisor temporarily, is directing completion of the unit.

Ford Canvasses Mexico

Two representatives of Henry Ford have been canvassing the possibilities of Mexico for the establishment of a factory. While hunting iron ore and coal supplies, the political uncertainties of the country are holding up final decisions.

Germans Have New Farm Machines

W. G. Kummer, a director of the firm of Heinrich Lanz, Mannheim, Germany, has arrived in America with an agricultural machine, called the Lanz motor tiller, which is claimed to greatly cheapen the costs of farming. The "tiller" is said to plow the soil, thoroughly harrow it, mark the furrows, plant the seeds and then cover the furrows all in one operation. It is propelled by a 60 to 80 horsepower motor. Kummer has already introduced the machine in South America, where it is said to have proven a popular seller.

MICHIGAN LEADS IN U. S. CENSUS OF GAS ENGINES

Automobile Motors Form But 35 Per Cent of Internal Combustion Types

Three years late but nevertheless the most recent official governmental tabulation, the United States Census of manufacturers came to hand this week with the information that in 1919 automobiles accounted for but 35 per cent of the internal combustion engines made in that year. The Government's segregation of types is interesting in view of the fact that 1919 saw considerable agitation against the industry as a consumer of raw materials.

The tables show 223,385 engines, with indicated horsepower of 6,382,975, valued at more than $60,000,000, accounted for by the automobile industry. Michigan led with 133,719 motors. Wisconsin was a poor second with 37,819. There followed Illinois with 21,130, Pennsylvania with 15,392, then New York and Indiana. All other States hardly equalled Indiana with 4,534. Aviation engines, for which statistics were obtained for the first time, accounted for 19.4 per cent with 6,747 made. Stationary and Portable engines made totalled 32 per cent. Marine engines were 11.8 per cent of the grand total of all types of 836,251.

WORLD REGISTRATION REACHES 13,000,000

Akron Statistics Show Growth of 1,000,000 in Three Years—After America, Canada and Britain Lead, Neck and Neck —Denmark Highest in Percentage.

World automobile registration has reached 13,000,000, according to the Akron Chamber of Commerce, which has been compiling figures up to June 30 of this year. Next to the United States, which naturally is far in the lead, Canada and Great Britain show the largest numbers of cars in use. And contrary to popular belief, Canada does not lead her Mother country by any appreciable number, the difference in favor of the Dominion being only 248.

An examination of the table compiled by the Akron men reveals that every country save only Austria and Russia registered an increase in cars during the three years, 1919 to 1922. Russia's motors in use dropped from 15,000 to 10,000, while statistics for Austria record a growth from 19,300 to 10,474.

The little country of Denmark led all others in the percentage increase in registrations though not, of course, in numbers. The increase from 7,000 to 22,000, being more than 200 per cent, is nearly matched by the growth in Argentina where something less than 200 per cent was reported in the figures 26,500 to 72,206. Australia came third with 150 per cent more cars in 1922 than in 1919. In numbers of increase, Great Britain led, saving the United States, with 208,600 more cars now than three years ago.

The following table compares the registration December 31, 1919, with June 30, 1922:

	1922	1919
England	463,600	255,000
France	235,948	202,000
Germany	91,390	75,000
Canada	463,848	336,854
Algeria	12,000	9,000
Argentina	72,206	26,500
Australia	84,900	27,000
Austria	10,474	19,300
Belgium	36,000	12,000
Brazil	18,500	12,500
British Africa	36,500	16,300
Cuba	32,000	22,000
Denmark	22,000	7,000
Dutch E. I.	18,000	12,500
Hawaii	12,500	6,500
India	45,680	18,680
Italy	53,600	35,500
Japan	12,260	5,000
Mexico	25,500	16,500
Netherlands	20,000	20,000
New Zealand	37,500	25,000
Norway	11,122	5,013
Philippines	13,341	5,067
Russia (in use)	10,000	15,000
Spain	30,000	14,850
Switzerland	18,011	14,000
Uruguay	12,500	5,800
Venezuela	3,500	2,000

The exact total of the above is 12,945,528 for 1922 and about 11,200,000 in 1919, an increase of something over a million cars. Commenting on the tabulation, the tire makers see a 1923 market for their products of about 50,000,000 units, at least, in consideration of the world trade.

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MANY FACTORS CLEAR SOUTH'S SALES SKY

Dealers Report Business Holding Up With Bright Prospects for the Future —Better Roads Have Buoyant Effect on Trade—Fall Full of Promise.

Retail dealers and distributers in the South are beginning to see larger business on the horizon. Pulling itself out of a long battle against adverse conditions, the southern trade, in reports made to AUTOMOBILE TOPICS this week finds Fall prospects exceedingly bright with a comfortable amount of business on hand.

Among the more enthusiastic advices is that of the Overland Perry-Curtis Co., Inc., Willys-Overland dealers at Huntington, W. Va. Bruce Perry, vice-president and general manager, finds orders 200 to 300 cars ahead of deliveries.

"Business is very good," Perry states. "We had a little better than 20 per cent increase in April, May, June and July over the same period in 1921. If we had been able to get cars, the year so far would have been even better than it was —the best in our history. The outlook is very bright in West Virginia for continued success in the automobile business. The people have the money to buy if we get the good roads—and a large amount of money is now being spent to get them.

"The used car business is very unsatisfactory. People seem to want the light new cars rather than the heavy used ones. Heavy new cars are not selling, either."

"Automobile business in our section has been good since February 1," reports Kingman Moore, of Kingman Moore-Steve Solomon, Jr., Dodge Brothers dealers at Macon, Ga. "We have been oversold for six months and we expect business to continue good through October. Our present rate of sales is about 20 per cent higher than it was last year."

Sales of Simon Auto Co., Greenville, S. C., have increased steadily, although the present market, to use the phrase of H. H. Simon, president, is "very nervous." Volume of business, he declares, is nearly double that of a year ago at this time. No new cars are on hand and orders are a month and a half ahead of deliveries. Like others, Simon anticipates a "very satisfactory" Fall business.

The Roddey Motor Co., Buick dealer at Columbia, S. C., also finds business growing better. Sales are high and stocks of cars lower than at any time in the past two years.

Wins Studebaker Sales Banner

Studebaker's banner for the best sales records in July was awarded last week to the Grand River branch, operated by E. B. Finch. This branch is located in Detroit. Henry Levy, the Chicago distributer; A. R. Erskine, president of the Studebaker Corp.; H. A. Biggs, vice-president in charge of sales, and Harry B. Harper, sales manager, visited the Grand River branch to inspect the methods employed by Finch in boosting sales.

Alden Heads 'Frisco Overland

John W. Alden has been appointed sales manager of the Willys-Overland Pacific Co., San Francisco distributers. Alden dates his connection with the Overland organization at the factory in 1910. The appointment came as an agreeable surprise to the "row" in San Francisco.

CLUB BUYERS OF PARTS HEARD FROM ONCE MORE

Indianapolis Reveals Itself Latest City to Add Organization to Black List

Reputable parts manufacturers and dealers have been somewhat exercised to learn of the burgeoning of another "club" of dealers denominating themselves the Ford Dealers' Supply Co., of Indianapolis. The idea is not new. Moves of this kind have been started hitherto in Chicago, Denver, Kansas City, Minneapolis and other cities.

The prime objective of the "organizations" is the purchase of parts in lots of a size devised to result in lower prices. Tom, Dick and Harry, joining hands, allow Tom to buy three times as much as he wants in order to obtain a discount which, in the subsequent division of items, enables all three to make more profits. The Indianapolis concern is said to be composed of Ford service and selling agencies.

Transfer Jordan Dealership

Announcement was made this week of the transfer of the Jordan dealership in Indianapolis from the Peterson-Keyes Co. to the Charles E. Stutz Sales Co. The former concern is now handling the Davis line.

Drew Joins Zell Company

H. W. Drew, eastern district manager of the Packard Motor Car Co. for the past two years, has resigned to accept the position of general manager of the Zell Motor Car Co., new Packard distributer at Baltimore. Drew was formerly general service manager for the Nordyke-Marmon Co.

Ford's Railroad Absorbs Toledo Line

Negotiations were completed on August 15 whereby Henry Ford's Detroit Toledo & Ironton railroad acquires the Toledo & Detroit railway, formerly known as the Toledo, Ann Arbor & Jackson. The line runs between the two larger cities mentioned through Petersburg, Mich.

Open Baltimore Martin-Parry Plant

This week saw the opening of Martin-Parry Corp.'s new Baltimore assembling plant on the Fallsway on part of what was the Fleischmann property. H. D. Coulson is in charge.

TAXI OWNERS STUDY ETHICS OF MORALITY

Operators in Convention Resolve to Test Every Transaction by "Truth and Justice"—Will "Mix Freely With Honorable Members of Industry."

From more than 200 communities, big and little, throughout the Country, taxicab operators met in convention at Chicago last week. Before they finished, a code of ethics, expressed in a series of resolutions, had been subscribed to and an energetic campaign to instill the virtue of truth and justice into their employes decided upon.

In the language of the printed form of the resolutions (which will be used as advertising and pasted up on garage bulletin boards) they "will test every transaction by the standards of truth and justice." Furthermore, it was decided to "mix freely with intelligent and honorable members of the industry, study their ways and methods, and endeavor to maintain a reputation for intelligence and integrity as high-class operators whom everyone may trust."

Among other items, it is agreed that the members will "esteem it a duty and a pleasure to impart to our less experienced competitors the knowledge we possess, so long as we are convinced that the information generously given will be honorably used. And we believe we may thereby eliminate that ignorant competition which destroys the business of another and does not build up its own."

The operators, in discussing their duty to the public, agreed that they "will take advantage of no man's ignorance or condition." Aside from constantly striving to elevate the moral character and the financial condition of the men employed by them, the operators will insist on courteous treatment of everyone by their drivers and safe driving on all occasions.

New Distributer for Stephens

Stephens New York Motor Car Co., Inc., 1853 Broadway, has been appointed distributer for the Stephens cars in New York city. R. S. Cole is president of the local corporation. Their territory embraces all of New York city, Brooklyn, Long Island, Staten Island, all of Connecticut, save the counties of Windham, New London and Tolland; all of New Jersey as far south as Atlantic City and all of New York State as far north and including Columbia county. In addition, the Corporation will handle all export business of the Stephens Motor Car Co.

Starkweather Gets Locomobile

Starkweather Corp., Detroit, has been appointed Michigan distributer for the Locomobile. The Corporation also will continue handling Durant cars.

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Standard of the World

Craftsmanship a Creed, and Accuracy a Law

To the craftsmen building it, the Cadillac car is no less a work of care and zeal and devotion than his masterpiece is to any artist.

A peculiar quality of this one organization is that its efforts are characterized throughout by love as well as labor, ardor as well as ability, pride as well as progressiveness.

Every Cadillac artisan is convinced that he is working upon the finest piece of automotive mechanism that present engineering has produced.

He realizes that building the Cadillac not only affords every individual the opportunity to exercise his skill to the uttermost, *but that it demands exactly that.*

He is proud to be a Cadillac craftsman. He is proud of the Cadillac organization, the Cadillac car, and Cadillac leadership.

He is determined to help protect and perpetuate that leadership by bending every ounce of skill and effort to his particular task.

He looks around him and sees Cadillac craftsmen who have dedicated head and heart and hand to Cadillac manufacture for twenty years.

He knows that thousands of skilled artisans have been associated constantly with Cadillac over a long period of time.

Inspired by the same traditions, bound together by the same ideals, and instinct with the same purpose, these veteran Cadillac craftsmen build the Cadillac car each day with the same scrupulous and painstaking care.

The standards of the Cadillac are fixed clearly and definitely in their minds. These standards are at once splendid inspiration and inexorable law.

To depart from them ever so little, save in the way of eagerly-sought improvement, were impossible and indeed unthinkable.

Every Cadillac operation is held to the last scrupulous fraction of accuracy—that every Cadillac car may serve as a Cadillac should to the last possible day of its life.

Every Cadillac part and process must be maintained at the supreme standard. Because the Cadillac car itself must be maintained the Standard of the World.

And every Cadillac craftsman pledges himself to that high endeavor, dedicates himself anew to the ideal and the spirit of the Cadillac plant: "Craftsmanship a Creed, and Accuracy a Law."

C A D I L L A C

CADILLAC MOTOR CAR COMPANY, DETROIT, MICH.
Division of General Motors Corporation



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Automobile Topics
THE TRADE AUTHORITY

Established 1900

MOTOR TRADES PUBLISHING CO.

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Cause and Effect

Unsettlement of the automobile price market just now, strange as it may seem, is in some degree the aftermath of the madness of 1920. Prices were on the toboggan, then, it will be recalled, with the public clamoring for further reductions. Manufacturers desired to stem the tide before all profits went into the discard. As a last, and somewhat unfortunate resort, the price guarantee was invented. But when guarantees failed to bring more business, manufacturers who could no longer make reductions began offering extra inducements to dealers. Hence the special trading allowance came into being, which, in turn, accentuated the used-car problem and brought it to a head about a year ago.

Price reductions now are being made to the public, ostensibly because the return of volume production has rendered manufacturing economies possible and so brought down costs; actually on that account in several of the more conspicuous instances. Let none conceive the idea that this is universally so, however, or that all manufacturers can afford important price concessions. It is not even certain how far lower prices will stimulate sales this Fall. Therefore, ill-considered action by makers who are not sure of their ground, might work more harm than good. Despite a few newspaper stories to the contrary, there is no price war now, but only a very much delayed reaction from the war with Germany.

It Has Come

That the expected has happened where used cars are concerned is indicated by a dealer's statement that the sale of exchange stock is "very unsatisfactory." He is by no means the first retailer to discover that "the people seem to prefer the light new cars rather than the heavy used cars. The heavy used cars are not selling."

Since the war there has been a marked improvement in the stability of cars in the lower price ranges. In some noteworthy instances there has been added the grace of much improved appearance. Caste has been broken down so far as the average buyer is concerned, and it is no longer a social error to buy a machine that does not completely empty the purse.

Consequently there has been relative overproduction of more expensive cars. As far as the market is concerned, there is today a heavy oversupply of them.

This is a condition that must endure until a new balance has been reached. In the meantime, dealers will be wise in discounting the trend while offering allowances on trades. Proportionately, the allowance on a used-car in first-class condition should be lower for a higher-priced car and higher for a lower-priced car.

Buyers wanting to trade will roar at such discrimination, of course. But some of them already have learned their lesson. For example, a three- or four-year-old limousine, of fine make and in good condition, is now worth just about what the body will bring for hacking purposes. Somewhat the same thing happens to a perfectly good car of moderate cost when the market swings away from its class, temporarily or otherwise. In fact, offerings of used cars in trade afford a very good index of demand, as far as types are concerned.

Golden Chariots

Sight of a dusky belle rolling majestically down the village street in a glittering roadster much affected by the sporting classes provokes comment and inquiry. The local dealer handling another line, it seems, allowed a thousand dollars for it last Spring, but here a few weeks ago let the colored man, her spouse, have it for five hundred.

Throughout the South are many splendid cars of former days, contributing to the dignity and splendor of the transplanted race—veritable golden chariots. The market is large and prices are good—provided the payments are small—and it is said buyers who specialize in that line go into northern territories for their stocks every year, with considerable profit to themselves.

Ford Says—

Thirty million automobiles, instead of ten million. That is Henry Ford's idea of the ultimate extent of automobilism in this Country, if the papers correctly quote him. Also, and subject to the same hypothesis, muzzling the "money kings" of Wall Street would put a stop to industrial disputes.

That is true. There must be two sides to every argument, and if one side suddenly becomes mute the other soon talks itself out. And if the "money kings" of Detroit were muzzled, who would talk for Ford?

But having got thus far, the interviewer permits the inveterate publicist to run on unchecked. The unions, he quotes, "are all engineered by capitalists."

Well, Debs ran for president once. But if Ford ever heads toward the Whitehouse, what a chase he will lead his sponsors!

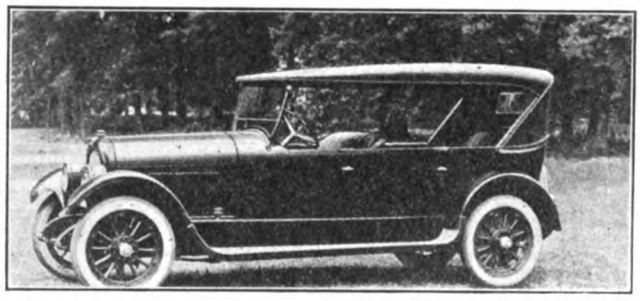
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Doings in Industry Prove It Can "Tell The World"

Olds Celebrates; New Marmon Announced; Atlas-Selden Confer



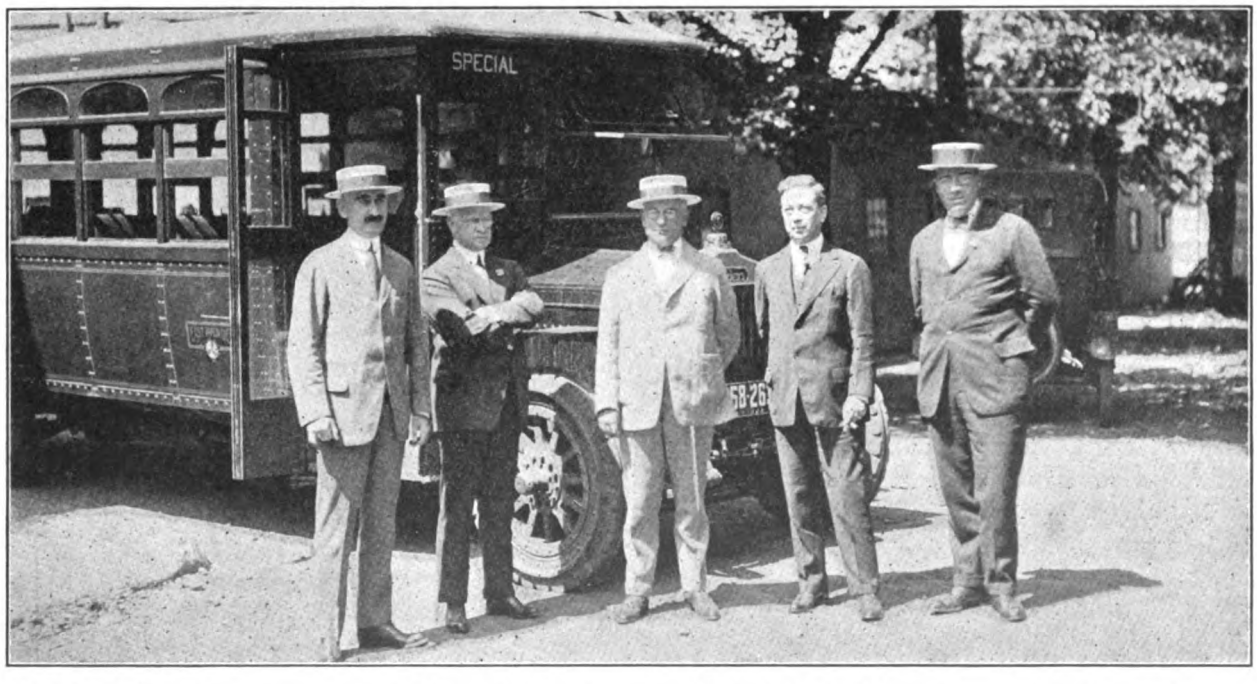
ON August 21 the Olds Motor Works will celebrate its twenty-fifth anniversary of the manufacture of this curved-dash runabout, pictured in the rather quaint advertisement run at that time



A NEW seven-passenger phaeton, selling at $3,185, has been introduced by the Nordyke & Marmon Co., Indianapolis. One of the features of this new car is the Panorama top, a stationary affair, braced at the corners



AN International truck, equipped with an auxiliary engine, employed by the City of Tremonton as a street flusher, recently acted as fire extinguisher when flames broke out



FOLLOWING the recent merger of Selden and Atlas interests with the Industrial Motors Corp., a three-day conference was held at Rochester, N. Y., where the field men of the two truck corporations met with the executives of the latter concern to go over certain details connected with the new combination

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Tractors Pull the Farmer Through

Heavy Planting in Late and Rainy Spring Made Possible by Machinery—The Change Important

DISCUSSING the subject of "Crops and Confidence," a financial observer remarks that "Mother Nature is very much on the job. She proposes to bestow upon the American people this year a bounteous yield of food from the soil—a yield much better than the average."

"The promise now is for a crop of 3,017,000,000 bushels of corn—worth, at 58 cents, no less than $1,750,000,000, and 805,000,000 bushels of Spring and Winter wheat worth $845,000,000—a combined total over two and a half billions, even at the relatively low prices now quoted," this authority continues. "Both grains give promise of surpassing the average of the preceding five years. If all of 17 crops come up to expectations they will be worth, on the basis of August prices, over $7,000,000,000. The same crops a year ago were worth $5,936,000,000.

"We need in this Country annually about 500,000,000 bushels of wheat for our bread; 100,000,000 bushels must be saved for seed and we should have a carry-over of at least 75,000,000. Here is a total of 675,000,000 bushels, so that with a harvest of 805,000,000 bushels we will have over 200,000,000 bushels for export, and perhaps Russia, despite reports of favorable crops there, may yet need some of it."

Government figures, prepared by the Department of Agriculture, are the basis of this forecast and its interpretation. The figures have received considerable publicity, and merit even more than they have been granted.

It is probable that the condition which is epitomized by these estimates has gone further toward preventing a panicky tendency as a result of the coal and railroad strikes than has the seeming apathy of the public toward those two potential causes of apprehension.

As the authority just quoted takes occasion to remark, "A crop failure is a national disaster. Its ramifications reach into every nook and cranny of our existence. Conversely, a harvest such as Uncle Sam now predicts, bespeaks good times, good tonnages for the railroads, enhanced purchasing power throughout the 'golden West' and plenty of 'eats' in the American home with something to spare for the rest of the world, if in need."

Thus a tremendous tide of confidence is rising, which the most industrious mischiefmakers seem powerless to stem, despite the very effective means at their command, and their persistent and undeniably consistent scheming. Two factors are confidence begetting: There is promised an abundance of basic foodstuffs; and the farmer is fast regaining his financial balance and his importance as a buyer.

But has anyone stopped to inquire how the farmer has contrived to produce these bumper crops? Perhaps the general tendency is to regard bumper crops rather too much as "gifts" of Nature, but to ignore the human foresight and industry that go before.

It is worthy of note that this has been a season of abundant rain. This, in part, accounts for the fruitful harvest, it goes without saying. It is a fact that the city-dweller will have entirely overlooked, however, that in spite of its providential character, rain has at times been rather too abundant. This applies particularly to weather conditions prevailing in many sections during the Spring.

Thereby is developed the fact that the tractor business is in the way of following the farmer back to prosperity. Not only that, there is much strong testimony going to prove that the tractor has played a most important part in bringing to pass the big harvest of 1922—a bigger part, by all odds, than it has played in any previous harvest.

Testimonial letters, gathered by the International Harvester Co., emphasize this point. Also, in their simple and straight-forward language, they aptly portray something of the tense drama that underlies the farmer's life, but which, unfortunately, seems never to have been given proper emphasis through the dramatic art.

Enthusiasts have repeatedly claimed that tractors were especially well adapted for speeding up work on the farm in wet Springs, thus overcoming serious delays and assuring full crops by proper and timely seed-bed preparation. This year was a remarkable year to substantiate the claim. The entire corn belt was veritably deluged. Operations everywhere were delayed. Planting time came and most farms were lakes of mud.

As delay piled on delay, farmers became frantic. Most of them were from three to six weeks behind in their work. In numerous cases it looked like no crops at all or greatly decreased yields, due to sheer inability to plant the seed. It was then that the tractor made its greatest appeal.

Never in the history of power farming was there such a last-minute rush for tractors. Lowered prices, of course, stimulated the demand, but without a doubt, many a farmer

THE FARMER IS COMING BACK

MID-SUMMER, with a big harvest in sight, witnesses the long-promised return of the farmer to the financial power that is really his. The prospect is assuring, and it promises more than a temporary improvement in trade exchanges between farming and manufacturing districts.

For it is a fact that this year, more than ever before, the farmer has availed himself of the advantages of power-driven equipment in carrying on his business. The less he becomes a laborer and the more he becomes an operator, the better businessman he will become. Here, then, is eloquent testimony of a change about which little has been said.

The farmer is speeding up, thanks to the motor car, the truck, and the tractor. This augers a more permanent and substantial kind of prosperity than the Country has ever known

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bought a tractor simply because he had to in order to pull himself out of a very serious situation.

That the tractor accomplished its purpose and assured a crop, has been proved by the investigation mentioned before. This was carried on among farmers who had bought tractors this Spring.

Here, for instance, is R. M. Gillespie, of Rockwood, Ill., who on May 14, because of continual rains, literally became mired with his horses and faced the prospect of greatly curtailed crops. He made a quick, and what might be called a last resort, purchase of a tractor; then by day-and-night operation, as Gillespie expresses it, "I got my crop in the best shape I ever planted a crop."

Gust Peterson, of Oneida, Ill., like a great many of his neighbors, was a good two weeks behind this Spring in his plowing. A new 15-30 tractor made possible a crop for him. With this machine he plowed 40 acres in 18 hours. "In turning out this amount of work in that length of time," says Peterson, truthfully, "you sure do not stay behind in your work for any length of time."

The Greatest Gambling Game

That farming is the greatest gambling game in the world has become quite a commonplace saying. The farmer plants seed and then waits to see what will turn up. If the seed is good, the soil conditions right to germinate it, sufficient moisture falls to grow the crop, the weather is not too hot nor too cold, not excessively wet nor too dry, and no hail nor windstorms destroy the ripened crop, the return will probably be satisfactory—*always provided* that the seed was planted in time and the harvest was not delayed too much.

And right there we have the most influential factor affecting crop yields—timeliness in seed-bed preparation, planting and harvesting. This has a greater influence on the farmer's profits than any other item. Control this one factor and you have taken a long step toward reducing the gambling element connected with farming.

But timeliness in performing the various operations is influenced by the weather—dry, hot weather delays Fall plowing; late snows or heavy Spring rains frequently prevent getting at the Spring work when it should be done. Such was the case this Spring. Conditions were so extremely adverse that inability to till and plant *on time* threatened disaster for many farmers. But the tractor played its trump card—its capacity to crowd the work intensively day and night, taking advantage of favorable breaks in the weather, doing in hours work that ordinarily required days.

Let us see what Joseph Mullikin, of Terre Haute, Ind., has to say on this subject. "This Spring," says Mr. Mullikin, "the rains retarded our plowing to such an extent that even though we had all our mules and horses at work, we could not have finished in time to plant if it had not been for the 8-16 tractor. We had the tractor equipped with a light, and ran it day and night."

Now, when it comes to intensive effort either in Summer, when it is burning hot, or in wet Springs, when pulling is the hardest, the tractor shows up at its best. What W. C. Behringer, of Wataga, Ill., another last-resort purchaser, has to say on this subject is particularly pertinent.

"We have a 10-20 tractor," says Mr. Behringer, "and had 70 acres to plow and 110 acres to disk. Fifty acres of the plowing was heavy sod which had a big green growth on it and last year's hay crop on part of it. I tried it with six horses on a gang and, believe me, they had to pull, and still the meat dropped off them without much being accomplished. With the tractor, I plowed 50 acres of heavy sod and 25 acres of old ground, double-disked 60 acres of old ground and 50 acres of sod in 12 days. The biggest plowing I did was 20 acres of old ground in one and a half days. Of course, maybe you won't call it a day from 6 A. M. to 8 P. M. and no dinner hour. I pushed on the lines with all my might, but still the old iron horse didn't get hot or tired."

S. J. Busha, of Buford, Ga., backs previous arguments on the efficiency of the tractor in wet Spring weather as follows: "Owing to conditions this year, with rain and moisture in the ground, we were very much behind with our plowing, and by the time we got into the fields, we had more plowing to do than we could have done with our teams. However, we had our 10-20 tractor, and, by pushing this machine and working overtime, we did our plowing in half the time that it would have taken had we had to depend on teams. We believe that if we had not had our tractor we would not have been able to get in any crops at all on our grain land this year."

A properly prepared seed bed naturally will conserve moisture and therefore provides better crops. Busha drives this truth home in the following forceful words: "Another thing that we observed this year was that, on account of so much rain, there was an unusually large crop of weeds and grass, and a tractor plow was the only way in which we could plow these under, and then, too, we now have a seed bed which will withstand a long dry spell, which we are almost sure to have after this rainy season."

An advantage of speeding up the Spring work is brought out by J. W. Haynes, of Senyay Dairy Farms, Asheville, N. C.: "The tractor enables us to devote so much more time to the care and yearly test work of our pure-bred herd of Holsteins that we would not think of going back to horses and mules. We think that the tractor can be used anywhere for any purpose, much more economically than either horses or mules, and it adds new life to a dairy farm, and relieves such a farm of many of its unpleasant features."

Eliminating Many Unpleasant Features

That last statement, "relieves a farm of many of its unpleasant features," is impressive. Haynes also tells how at Senyay Farms they were from 30 days to six weeks behind this year and how an 8-16 tractor was used to speed up things.

"We had accumulated 200 spreader loads of manure," he says, "at our dairy barn on account of the wet weather and inability to drive over the land. With the tractor to operate the manure spreader, we easily did as much work in one day as we had formerly done with horses in six days and with greater ease. The manure was spread over a growing crop of crimson clover and rye, ranging in height from 20 inches for the clover to six feet for the rye. The traction cleats on the tractor, in pulling a double-disk plow, cut the rye and clover in passing over it and gave us a much better seed bed. In short, we attached a smoothing harrow to the double-disk plow, and plowed, harrowed, compacted and made a perfect seed bed all in one operation. We completed planting earlier than usual; plowed in every nook and corner, including the garden, and at this time the corn crop has had three cultivations, and there is not a weed to be seen. We have sawed up our Summer's wood, dragged the gravel road up to the present, and will use the tractor to harvest the silage corn and furnish the motive power to

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fill the silos. We are now keeping only one light team of combination horses for cultivation purposes, and these horses spend most of their time playing in the pasture."

More testimony, in the same vein, follows. Each letter, in its own way, reveals the urgency of the season and the speedy results obtained by the use of farm machinery:

Maquoketa, Iowa, R. F. D. 5,
July 10, 1922.

I had 90 acres to plow and had to drag six miles of road after each rain. I know we could not do that with four horses. So we bought a tractor. We plowed 40 acres for our neighbor, 130 acres in all, and did it easy.

We can cut grain in one eight-hour day that would take two eight-hour days with the same binder and four horses.

We could in no other way have plowed 130 acres and disked 50 acres and dragged 60 miles of road this Spring than with a tractor. I am milking four extra cows. It means $40 a month instead of feeding eight horses.

(Signed) HENRY KORNER.

Gosport, Ind.,
July 8, 1922.

Flooded bottom land delayed my plowing for corn so long that it became necessary for me to buy a tractor. I therefore bought a 10-20 tractor. I broke 150 acres in 150 hours working time. We operated many days for 24 hours. The saving in the time over horse-drawn equipment allowed me to get in twice as much corn, which has made the purchase a good one for me.

(Signed) DANIEL V. SMITH.

Rockford, Tenn..
June 12, 1922.

On account of the rains this season I saw I couldn't get my crop in with horses and was forced to buy a tractor about the 14th of May. Then I ran night and day when weather would permit and I got my crop in the best shape I ever planted a crop, also put my brothers crop in with tractor. I disked 25 acres one day with my 8-16 and plowed 4 acres at night.

(Signed) R. M. GILLESPIE.

Des Moines, Iowa, R. 1,
July 25, 1922.

The rainy Spring made me about two weeks late with my work, but the 10-20 tractor not only put my crops in on time, but did a better job of making the seed bed. In addition to that, I saved three extra teams. We put the tractor double-disk into the ground clear to the axle, doing much better disking in less time than could have been done with horses. The results show in the better stand of corn, which beats anything in the neighborhood. I have 140 acres of corn, planted the 6th of May, which averaged waist-high or better June 1. Corn on the same kind of ground over the fence from my field and planted the same day, was only about knee high. For the first time in my farming experience, my corn was laid by on the 25th of June, three times over.

I double-disked 80 acres of oats in three days; plowed 20 acres of sod in two days and plowed 30 acres of cornstalk ground, ends and all, in three and one-half days. I double-disked 110 acres of Fall plowing at the rate of 25 acres a day.

I am getting along with three teams, which is half as many as I would need without the tractor. I would not think of going back to farming with horses only.

Another advantage of the tractor is its steady, dependable power on belt work. It does the threshing and other power work for the neighborhood.

(Signed) W. E. PARMENTER.

Camden, Illinois,
July 3, 1922.

I got my 160 acres of corn in twice as quick with the tractor. I plowed, disked and took the stalks off the ground, and planted 160 acres of corn in 16 days with the tractor and 10 head of horses.

No, I didn't buy it especially for this purpose. I was behind 30 days.

(Signed) JOHN W. GREENLEAF.

Abingdon, Va.
June 12, 1922.

Owing to so much rain this Spring, I was very much delayed in getting my corn planted and having 50 acres of pea ground to prepare I saw I could not get my peas sowed in time with horse power, so the last of April I bought a 10-20 tractor, disk harrow and culti-packer. I have all of my pea land plowed with the exception of one 16-acre field, which was in peas last year and fairly loose. Took the tractor and disked up this field and made a fine seed bed without plowing, by attaching the culti-packer behind the disk. We prepared the 50 acres of pea ground in two and one-half days. By having the tractor we prepared the land as fast as two drills with three horses in each drill could sow the peas. In other words, with the tractor and two teams we prepared land and planted 50 acres of peas in two and one-half days, which I think right good work—(25 hours). With the ground dug, this tractor will go anywhere a two-horse wagon can go.

(Signed) S. A. CARSON.

Blandinsville, Ill.,
June 8, 1922.

The tractor has proved to be a great help to me. Since purchasing it, about the middle of April, I disked something near 240 acres and plowed slightly over 100 acres. We didn't use all of our horses, but what we did use were kept busy harrowing, etc., and the two or three extras were turned out on blue grass pasture. Most farmers around here that didn't have tractors are not through planting and their horses are worn out now, while my horses just had enough to do to put them in the best condition for tending the crop.

(Signed) RAY L. KNOEDLER.

Luana, Iowa, R. R. 2.
June 21, 1922.

It was nearly time to commence plowing for corn when I bought my 8-16 tractor, and I only had my seeding about one-third done and had the ground all to plow yet. It got to raining and bad weather, and the dealer did not deliver the tractor for nearly a week later, so when he did deliver I got busy and finished my seeding. Then for the corn ground, with 50 acres to plow with only four horses, so I put my oldest boy (14 years) on the tractor, tied one section of harrow behind the plows, and I put my 11-year-old boy out with one team and two-section harrow and I started planting. In one week we had 50 acres plowed and planted and only worked eight hours a day.

(Signed) I. S. BALLMAN.

Decorah, Iowa, R. 7,
July 10, 1922.

I bought a tractor to offset the shortage of help. It enables me to get my farm work done in a shorter time with less help. Also can put in longer hours than with horses, which is a great help in the busy season.

It saved me the wages of one man for two months during the planting season, which means about a hundred dollars in this section of the country.

(Signed) SYLVESTER WISE.

Gibson City, Ill.,
June 7, 1922.

In reply to your letter of June 3rd, will say we have relied upon the tractor to do 240 acres of disking and 90 acres of plowing.

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We were at least two or three weeks behind with our work. We started the third day of May to break for corn, and had 90 acres to break. We have 30 acres of corn and all plowed over once. We lay it to the tractor for being so far ahead with our work.

(Signed) GRANT BEDEL.

Over emphasis, by repetition, may have been placed on the value of the tractor in speeding up the work the farmer does to stimulate the processes of nature, or so it might seem. But let not the moment pass without the idea becoming a fixture that speed is an entirely new element to become associated with the farmer's toil. Speed is something he has never had before, and the acceleration of his work is an exceedingly important thing, not only to himself, but to the Country as a whole.

The reason is not far to seek. The gambling element associated with agricultural pursuits has been mentioned previously in this article. In large measure it is determined by weather conditions; these, of course, being largely unforeseen and unforeseeable, as far as season-to-season forecasts are concerned. Delays in planting, such as occurred this year, delayed harvests and spoiled crops in other years, have repeatedly illustrated the point.

A no less potent element of uncertainty, however, is the condition of the market. How is the farmer to know, three to six months ahead of harvest, what his crop is going to bring? How, lacking that knowledge, can he determine wisely what crops to plant, how to diversify his planting, how to run his business along strictly business lines?

Can it be denied that the speeding up of essential operations is capable of shortening the time from planting to harvest, if only by a few days? That it relieves the farmer of the necessity of binding himself down to a set course months ahead of its result, and also makes it possible for him to change his plans, if need be, in mid-season, perhaps planting short crops in place of those which promise either to fail or to become non-remunerative?

It may be a stretch of the imagination to say that the popularization of the tractor will aid the farmer in making a better adjustment of crops to the market, but at least it is obvious that the mechanizing of the farm will tend to put it on a better business basis, from which, in turn, a more businesslike administration may be expected to result.

Forecasting a Revival in Tractor Trade

Thus the big yield of 1922 may be reckoned upon as forecasting a very considerable revival in the tractor and farm implement trades. It presages renewed demand for farm machinery of other kinds also, such as pumps, separators, feed cutters, and domestic appliances, not to mention farm lighting outfits, for which the demand has lagged during the past two or three years.

Finally, there is the renewal of automobile demand in rural districts to be anticipated. But here the surprising fact develops that already the farmer is showing strength as a buyer of motor cars, especially the lower-priced passenger lines, but also, to some extent, trucks.

Admittedly, the farmer has been deeply in debt and in need of the proceeds from this year's harvest to square his accounts at the bank. Superficially, it would seem that that condition would keep him pretty well out of the automobile market until 1923. So it has, to a considerable extent, beyond a doubt.

But, on the other hand, the farmer, like any other man, has his leanings, and one of these, of comparatively recent origin, is for travel. The automobile gives him a wider outlook, evaluates his precious hours of leisure, enables him to get around and see how the other fellow is getting on. If it came down to a choice between a new car and a new tractor, he might buy the car and make the old tractor do.

Perhaps this explains why automobile sales in some of the big agricultural centers have bounded ahead as rapidly as they have during the past two or three months. Certainly the present strength of the automobile market is satisfactorily explained on no other grounds than that of the uplift occasioned by the farmer's improved crop condition, and the better financial condition in which he will find himself as a result of it.

Low-Priced Lines Feel Upturn

Ford, Chevrolet, Maxwell, Overland and other low-priced lines have felt the upturn. Reports from manufacturers and dealers alike indicate that the farmer has again become an active factor in passenger car sales.

As yet, truck sales have responded to the new requirement only to a moderate extent, but favored lines are already registering perceptible improvement, traceable directly to this cause. Here, again, the improvement anticipates to some extent, the cause, but not without financial justification. The farmer needs motor haulage for the handling of these bumper crops. Therefore, a very marked improvement in truck sales would have been warranted by the circumstances. It may well be looked for from this point on.

For it goes without saying that the farmer who has once tasted the advantages of machinery is never satisfied to be without it. Once he has tested and proved to his own satisfaction the influence of machinery in reducing his business to a more orderly condition he will become a more appreciative, as well as a better customer.

The great flood of crops is about to move eastward. Following it the return wave of money will flow westward.

A new distribution of purchasing power for the Country as a whole is in early prospect. It is this, rather more than mere blindness to the possibilities of coal and railroad labor difficulties that has buoyed up eastern financial interests and prevented a mid-Summer slump in stocks. It means a restoration of the true basis of prosperity; that is to say, an abundance of commodities and also a fair market.

Restoration of the basis of prosperity forecasts also a return of real prosperity in its larger sense; but it does not forecast the date of its arrival. For the offset to too optimistic leanings is the continued poverty of Europe, the confusion of international politics, the after-war apathy of the world at large.

The United States is seriously dependent upon foreign trade, so much so that complete restoration of financial and business balance must follow, rather than precede the readjustment of world affairs. This, briefly, is the general belief.

On this account it would be very dangerous to infer too much from the farmer's present improvement, or to draw the hasty conclusion that the change that the use of more and better machinery is working in his status is destined to be completely effective within a few months, or at most another year. But at the same time the change is beginning to be perceptible; it will be more evident as time goes on. That in itself is worthy of record.

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SELLING GOODS AT RETAIL

TWO weeks bring Labor Day at hand. And Labor Day proclaims the formal opening of the Fall season.

Now, if ever, is the time for planning ways and means for pushing closed car sales. Is there going to be a closed car show in your town? If not, all the more necessity for turning the showroom into an exhibition hall and getting out announcements for a private, de luxe showing.

* * *

WHY not omit all negatives from the sales argument and substitute in their stead the far more impressive affirmative? It is what the product does that counts, every time. To relate in detail, therefore, what it does not do, serves merely to create confusion in the mind of the prospective buyer.

The most direct appeal is always the most convincing.

* * *

IT is always interesting to hear how the other fellow has achieved success. It is illuminating as well—for success represents effort, and from the efforts made daily by fellow merchandisers there is much to be learned.

On the following pages appears a story of success—the story of an organization started back in 1905 and in which not more than $5,000 has been invested. Yet its present capital is nearly half a million. In seventeen years this organization has grown from nothing, to a business amounting to more than a million dollars yearly.

President V. S. Darling, of the Darling Automobile Co., Inc., Reo distributer in Auburn, Maine, tells how it was done. He says in part: "I am a great believer in keeping ahead of our work—doing today what the other fellow plans to do tomorrow—and I try to have this practiced throughout all of our departments."

That is just one reason why the company he represents has increased the number of its sales from seventeen jobs the first year to between 500 and 600 at the present time.

* * *

IN Minneapolis lately, Torbert-McGregor, Inc., Durant distributer, attracted crowds to its windows by showing the Gump family of "funny-sheet" fame spending a day in the woods with their Durant.

This ingenious use of faces and names familiar to thousands of newspaper readers promises to inject new life into window displays. It leads up to the following question:

Why not capitalize on the work of newspaper cartoonists and thus bring to life their most popular creations as a means of adding new interest to automobile exhibits?

Incidentally, the Torbert-McGregor, Inc., is a firm believer in attractive windows. This is best illustrated by President J. M. Torbert's own words. "We find," he states, "that a display of this kind attracts more people to our place and our line than any other class of advertising that we have ever tried."

* * *

SOMEONE has compared the growth of a sound business organization to a snowball. It starts small, but, if properly handled, as it rolls along it keeps adding to itself until it assumes large proportions. But it must be carefully guided.

In South Orange, N. J., the Marco Garage, pictures of which are shown on the following pages, has been carefully guided, and, like the snowball, it has rolled itself gradually into sizable proportions.

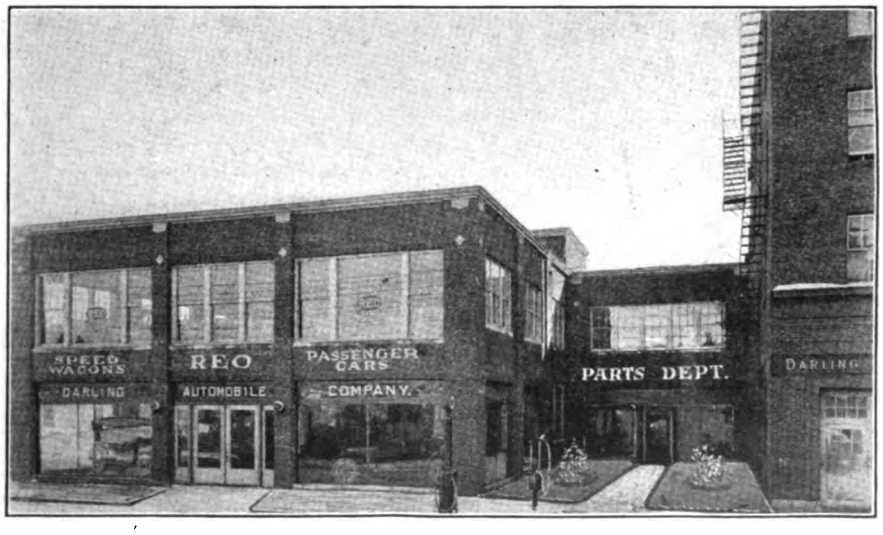
This is borne out by a little paragraph culled from a recent issue of the company's house organ, *The Marco-Gram.*

"Last year," this reads, "we washed an average of 53 cars per month. We are now washing more than 100 cars per month. We know that this is not anything wonderful for Mudville, but it is a step in the right direction, and it is causing the Water Department to sit up and take notice."

Washing a machine may be a small job in itself, but it represents business.

Through the opportunities it affords of keeping careful watch over each machine, the shop man is placed in a position where he can be of real service to the car owner as well as to himself.

Reo's Newest Home in Maine



From practically nothing, to a million dollar's worth of business, is the record achieved in seventeen years by the Darling Automobile Co., of Auburn, Maine

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Full Value Always, Is Darling's Motto

Seventeen Years' Experience Convinces Reo Distributer It Is So—His Record Proves It

FROM working at a shoe bench to acting as head of an organization doing a million dollars' worth of business yearly represents a big jump. Yet that is the accomplishment of V. S. Darling, president of the Darling Automobile Co., Auburn, Maine, distributer of Reo passenger cars and Speed Wagons throughout the state, and jobber of automotive equipment.

It was exactly 20 years ago that Darling resigned his post at the shoe bench to enter the bicycle repairing business. His establishment at that time consisted of a woodshed. It remained his headquarters for a very limited period, however, for the occupant was quick to sense the fact that the bicycle industry was waning and that the real business opportunities of the future were destined to be created by the increasing popularity of the automobile.

In the Fall of 1905, therefore, Darling signed his first contract for the distribution of Reos. This contract called for seven units to be sold between the date of signing the contract and July 31 the year following. Seventeen jobs were delivered that year, however. At the present time actual sales run between 500 and 600 a year.

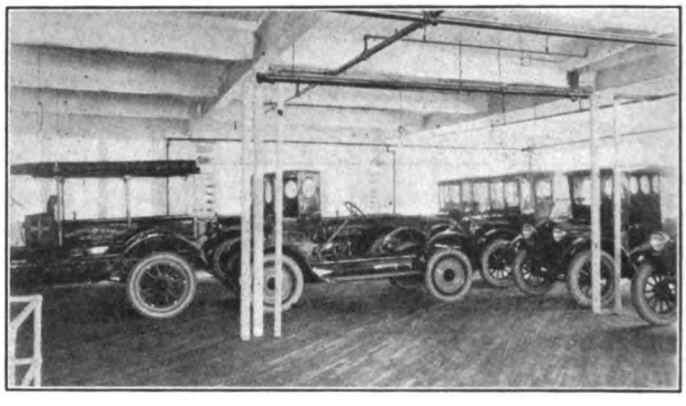
There is still another significant fact about the progress of this enterprise. According to Darling's own words, nothing over $5,000 has been invested in the business since it started. The present capital is nearly half a million.

Some idea of the size of the Darling plant as it stands today may be gained from the fact that it is divided into three parts. There is the new building which houses the salesrooms, with an annex devoted exclusively to the handling of Reo parts; a separate structure in which all service work is done, and a store devoted to the merchandising of accessories.

The sales building measures 55x100 feet deep, consisting of two stories and basement. The annex measures 25x100 feet and likewise consists of two stories and basement.



Passenger car salesroom has windows on four sides



Reo Speed Wagons have their separate salesroom

The first floor of this sales building is divided into a large salesroom, offices, ladies' rest room and delivery room. On the second floor are found the truck salesroom, assembly room and a used car salesroom. Each of these rooms is independent of the other and can be entered without passing through any of the other departments.

The main salesroom on the first floor is finished in mahogany, the floor being constructed of a composition which carries out the same tint. The panelled ceiling is high, ample artificial light being available through the suspension of ornamental globes. In the daytime light pours through large plate glass windows on four sides.

Much the same color scheme is carried out in the ladies' rest room, adjoining. Here the finish and furnishings are also mahogany, with the upper walls and ceiling of pure white. A large mirror, soft lounges and chairs and effective lighting fixtures complete the decorations.

Passing on to the parts department the visitor is confronted with two floors filled with every conceivable part of the Reo car and Speed Wagon, as well as their accessories. On the first floor are long rows of steel cabinets in which are kept the smaller parts. The room is large, with a steel ceiling and a system of automatic sprinkling which extends throughout the entire building.

In the basement are kept the larger parts, such as springs, fenders. Altogether, there is at least $30,000 worth of stock kept in this section of the plant, to say nothing of 10 other stocks maintained in as many Maine cities.

An interesting feature of the parts department is the manner in which the records are kept of the stock on hand. In one corner, catalogued as in a library are three thousand operating or stock cards, each of which represents some part that fits a Reo machine. A year's business may be recorded on one of these cards if necessary, thus affording a simple and effective means of perpetual inventory.

Next of interest is the receiving and delivering room, which measures 50x50 feet, with concrete floor and white pillars and walls. Here the new shipments are received and thence

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taken upstairs, where all necessary assembling and other work is done.

Method of handling this branch of the work is best described in Darling's own words. "With our lay-out as we have it," he states, "I feel confident that we are able to unload, assemble and deliver the cars at the very lowest cost to us, giving our customers the very best service and delivering the cars in the very best condition.

"During our busy seasons we can unload, get ready and deliver as many as 12 cars a day. Of course, our average wouldn't be as great.

"Our operation is as follows: The unloading crew goes to the station, unloads a carload of cars, tows them into our building, places them on an elevator and takes them upstairs to the assembly room. A crew immediately starts to do the necessary work to prepare these cars for delivery.



Accessories are segregated in a special building

"As soon as the cars have been properly inspected and assembled they go to the wash stand and are thoroughly washed; and if they are to be delivered immediately they are tagged for the customer and placed in the delivery room, but if they are going into stock they are placed in either the truck salesroom or passenger car salesroom. In this way every unit is ready for immediate delivery when a customer or dealer comes in for a job."

The truck salesroom is a large room which is so constructed that it can be cleared easily for dancing, banquets or for any social function which the employes may hold. Opening from it is an employes' room, which is equipped with shower baths and washing facilities.

In this connection it is interesting to note the attitude of Darling toward those who make up his organization. "I believe in an honest day's labor for an honest day's pay," he asserts. "Old-fashioned, perhaps, but it is the principle upon which I have built my business. I believe in engaging competent men —I would not have the other kind at any price—paying them living wages, and then demanding they give honestly of their energy and ability.

"They do not give it to me alone—they give it to the public we both serve. I don't want my men to do more than they should; neither do I want them to do less. Competency, experience, hard work—there you have the recipe of success. I do not know any other."

After a tour of inspection of the assembly room outside of which are long rows of steel lockers, one for each employe, the visitor is shown the used car salesroom. This is dignified in appearance and remote from any disturbing influences, the whole atmosphere being such as to appeal to the love of thrift which lies inherent in every New Englander.

Darling believes that best results are obtained through having all service work done separately from the sales departments. Consequently, the service end of the business is handled from another building.

The service department of the Darling establishment might well be described as a miniature Reo factory. Every tool used is identical with those employed in the home plant. Cleaning of parts is quickly accomplished by means of a large tank of boiling water in which some ingredient is placed that removes grease and dirt the minute the part is dropped in. All prices for work done are fixed through use of a "flat-rate" system.

Scientific organization, which is a distinguishing feature of the Darling establishment, is also plainly discernible in the accessory building, where exhibits and arrangement of stock is such as to attract immediate attention. Here again Darling's success is best described by his own words.

"Having started in a small way and with a healthy growth," he states, "at the present time we have a very attractive and very large wholesale accessory business. I have had the same thought in mind regarding the accessory department and have carried out the same idea as I have handling cars."

"I believe in handling national advertised products manufactured by manufacturers of a high standard.

"To make a long story short, my belief is to give every customer full value for the money that he leaves with us."

Seventeen years have brought many changes in the Darling organization. They have witnessed the steady progress that is always the sign of a healthy business carefully guided.

The chances are, too, that the development work will continue—will in fact, never cease. For Darling is a firm advocate of looking ahead.

"I am a great believer of keeping ahead of our work," is the way he expresses his belief—"doing today what the other fellow plans to do tomorrow—and I try to have this practised throughout all our departments."



Proper display means much, as the Darling accessory salesroom shows

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NEW MODELS OF INTEREST TO DEALERS

Westcott Is Making New Larger Six Series

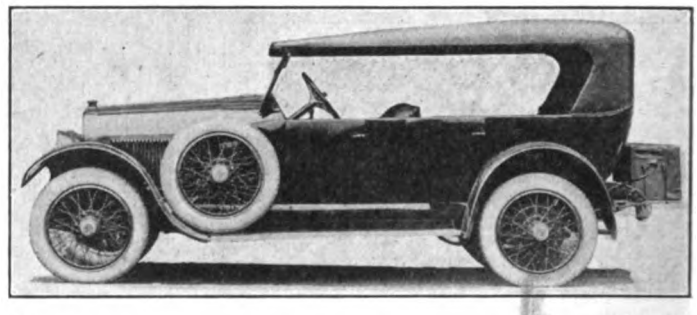
Includes Seven-Passenger Standard and Special Touring Models—Permanent Tops Featured on "D-48" Line—Price Is $1,990

TWO body types are being introduced for the present on the new Westcott larger six "D-48" chassis, which replaces the "C-48" model. These are a seven-passenger touring with permanent top, $1,990, a hundred dollars higher than the former model, and a special touring, $2,190. The additional equipment of the special touring includes six Disteel or wire wheels; tire carriers on side; two extra tires, tubes and covers; trunk rack and guard rails in rear; scuff plates; blue water-crushed leather upholstery, and spring bumper in front.

The permanent, or rigid top, is one of the new car's outstanding features, and in this respect follows the smaller Westcott models. Individually fitted curtains go with this top. Where desired, a rigid frame plate glass Winter enclosure is furnished at only $100 extra. Other high lights include mounting of shorter throttles on top of steering wheel; chassis lubrication by oil cups throughout with a 600-pound pressure gun system; black enamel dash with lighting and ignition switches at extreme left.

Wheelbase remains the same, 125 inches. The engine used is a Continental model "12X" six-cylinder, 3½ x 5¼. Other chassis units are substantially the same as were used in the "C-48." These include: Delco starting, lighting and ignition; Rayfield carbureter, Timken axles, dry-plate disc clutch; semi-elliptic springs, 36 x 2 front and 59 x 2¼ rear, and 32 x 4½ cords.

The Westcott Company advocates the new "D-48" seven-passenger touring with permanent top as an ideal car on two counts. First, it is serviceable in both Summer and Winter. Secondly, the seven-passenger capacity is obtained without excessive weight, so that five passengers have ample room and yet when it is wanted to carry extra passengers the seats are there for them without crowding. This latter feature inspires Westcott to term this model "the car with guest room."

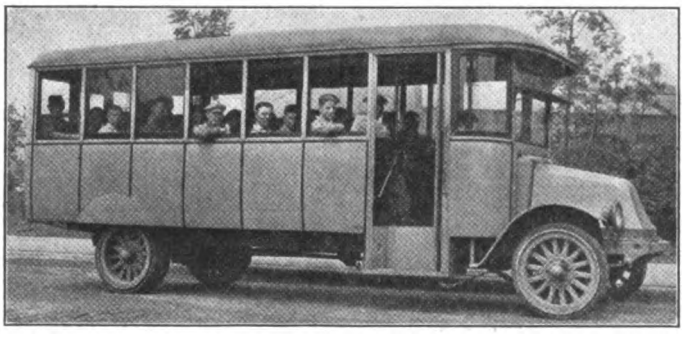


SPECIAL touring model of the new larger Westcott series "D-48" carries either Disteel or wire wheels, trunk, permanent top and the like

International Adds Bus to Its Truck Line

Chassis Model "52" Designed for Passenger Service—Has 190-Inch Wheelbase—Capable of Speeds as High as 35 Miles an Hour

TO its regular line of trucks, International Harvester Co., Chicago, has added a chassis designed for city and interurban bus service. Designated as model "52", this chassis has a capacity of 5,000 pounds with a body allowance of 2,800 pounds. It has a 190-inch wheelbase. With cushion tires, a speed of 25 m.p.h. is attained, and with pneumatics, 35 m.p.h.



DESIGNED especially for bus service is the new model "52" chassis added to the International truck line by the Harvester company. It has a long wheelbase and is low-hung

The chassis is powered by a four-cylinder, block-cast, valve-in-head engine with removable cylinder sleeves, 4¼ x 5-inch bore and stroke. The engine is located ahead of the radiator, as in the case of the heavier International trucks. Lubrication is by combination force feed and splash. Thermo-syphon cooling is employed. Ignition is by magneto located on cross shaft in front of engine. A fly-ball governor limits engine speed to 1,275 r. p. m.

Clutch is a multiple-disc dry-plate type. A selective, sliding gearset provides four forward speeds and a reverse, with direct in third and over-gear in fourth. Drive is through tubular propeller shaft with universals at each end. Rear axle used on this bus chassis is an internal gear type.

Service brake is mounted on the propeller shaft. Brake drum is 10 inches in diameter, with 4½-inch wide brake. Emergency brake is internal expanding. Springs consist of semi-elliptic, front and rear; and cantilever auxiliary springs both front and rear. Disc wheels are furnished with 36 x 6 pneumatic tires, single in front and dual in rear. Cast steel wheels are used with cushion tires.

Chassis measures 274 inches over all; 216 inches from dash to end of frame; frame overhang of rear axle, 53 inches; height to floor loaded, 30 inches. Regular equipment includes, front fenders, electric head and tail lights, dash lamp, clock, oil gauge, gasoline gauge, speedometer, automatic windshield cleaner, and generator on transmission.

Anderson Adds $1,195 Light Aluminum Six to Line

Five-Passenger Touring and Four-Passenger Closed Job to Be Made First

TO its present line the Anderson Motor Co., Rock Hill, S. C., is adding what it terms a light aluminum six, the five-passenger touring model of which is priced at $1,195. Standard units are used and the bodies are described as hand-built, aluminum covered. Tests are said to be completed and the car ready for production.

The car will be shown for the first time at the Anderson dealers' convention at Rock

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Hill, August 24-25. Besides the touring car, a four-passenger closed model which will constitute Fall production, will be shown.

That much of the specifications of the light six given out, includes: Continental "6Y" 3⅛ x 4¼ engine; Borg & Beck clutch; Salisbury axles, front and rear; Westinghouse ignition, starting and lighting; semi-elliptic springs, 37-inch front, 58-inch rear; 17-gallon gasoline tank; 32 x 4 cord tires; weight, fully equipped, 2,450 pounds.

Wheelbase is 114 inches. It is pointed out, however, that construction of cowl and hood brings body forward four inches, giving the equivalent of 118-inch wheelbase in actual body length. Anderson body lines are carried out in the smaller car.

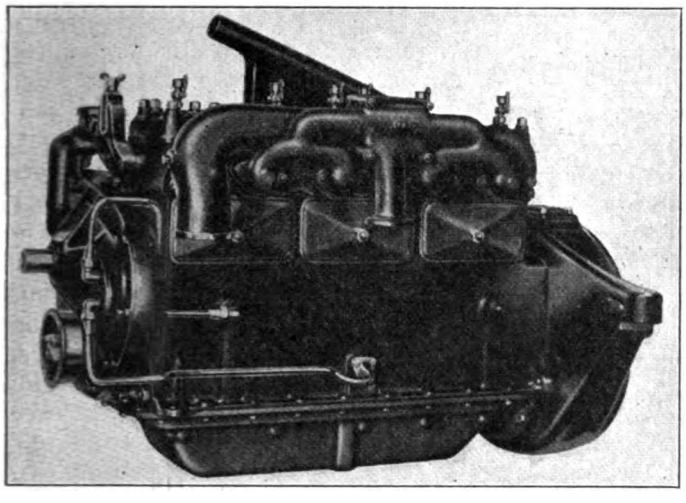
Continental Making Engine for Light Sixes

Model "6Y" Is for Cars Weighing About 2,400 Pounds—Follows in General Design of Larger "8R"—Now Used in Four Cars

FOR the first time in twenty years, Continental Motors Corp., Detroit, is building a six-cylinder engine for cars as light in weight as 2,400 pounds. The light six engine is styled model "6Y," and is designed along the same general lines as the "8R." It is this smaller engine that is contributing much to the success of four comparatively new light sixes—Columbia light six, Moon "6-40," Davis "71" and Anderson light six.

The "6Y" has a bore of 3⅛ inches and stroke of 4¼ inches. This gives a 195.6 cubic inch displacement and an N. A. C. C. rating of 23.4 horsepower. Maximum developed horsepower is 50 at 2,600 r. p. m.; 45 is developed at 2,150 r. p, m. With a minimum of 115 and maximum of 118 foot pounds torque from 400 to 2,200 r. p. m., a reserve of stamina should be available at all operating speeds. While functioning best at medium speeds, with a surplus horsepower so essential to smooth and flexible performance, the engine has nevertheless shown over a mile a minute in a stock car.

The engine is an "L"-head type. Cylinders are cast in one block in unit with crankcase. A four-bearing crankshaft is used. Camshaft and lighting generator are driven by a silent chain, the chain being taken up by adjusting position of the generator.



MANIFOLD side of new Continental "6Y" engine, being made expressly for six-cylinder cars weighing around 2,400 pounds. Its general design follows the "8R" engine. While intake and exhaust manifolds are separate castings, they are arranged so that exhaust heat helps vaporize incoming gases

Cooling is maintained by centrifugal water pump, bolted to flywheel housing. Cooling water completely surrounds each cylinder, valve seat and valve stem. Lubrication is by pressure feed, maintained by a gear type oil pump, which is located in the chain case.

Intake and exhaust manifolds are separate castings, but arranged so heat of exhaust is utilized to assist in the vaporization of inlet gas. All six sets of reciprocating parts are accurately balanced not only with each other but each set is balanced within itself. Valve mechanism is simple. Push rods ride directly on the cams, and are fitted with an adjusting screw and locking device. Valve guides in this engine are removable.

Model "6Y" is designed for three-point suspension, weighs 470 pounds without accessories, and is unit power plant type. It requires a vertical outlet carbureter, takes either a multiple disc or 10-inch plate clutch. All in all it embodies the same proven practices which have earned for Red Seal engines their present enviable position in the automotive field.

Motorbus Lines For Michigan

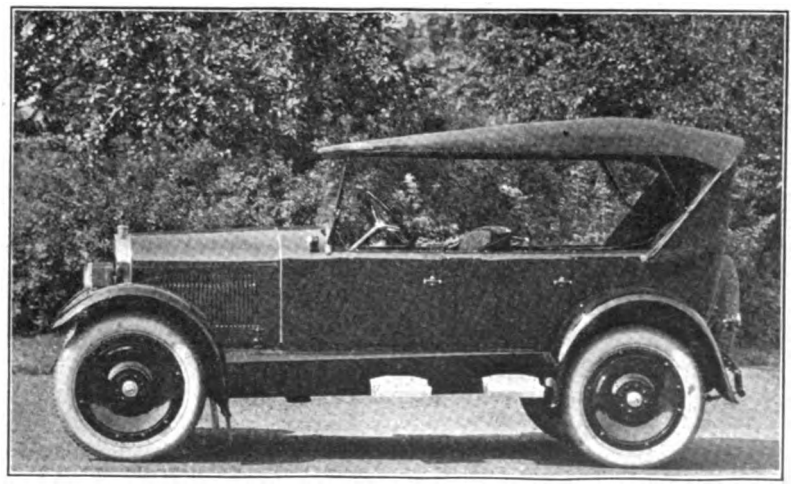
Interurban motorbus freight and passenger lines will be started in Michigan within a year by the Detroit United Railways to supplement its interurban lines, E. J. Burdick, vice-president and general manager, announced this week. More than a score of cities and towns in central and eastern Michigan will be served.

Goodyear Aircraft Production Growing

Lighter-than-air craft production of the Goodyear Tire & Rubber Co., Akron, is exceeding previous records. Work under way or scheduled is estimated to cost over $10,000,000. The Company has just completed a newly designed towing airship which is a combination of an observation balloon and dirigible.

Velie Shows What $60 Will Add to Car

BUYERS take to the sport car because of its good looks. One of the biggest factors that gives this desirable appearance is equipment, assuming, of course, that body lines and finish are in keeping. By adding certain equipment, Velie can offer this attractive new model "58" sport touring for $1,335, or but $60 more than the standard touring. The difference covers individual steps and fenders, disc wheels and metal bars on the back of the body

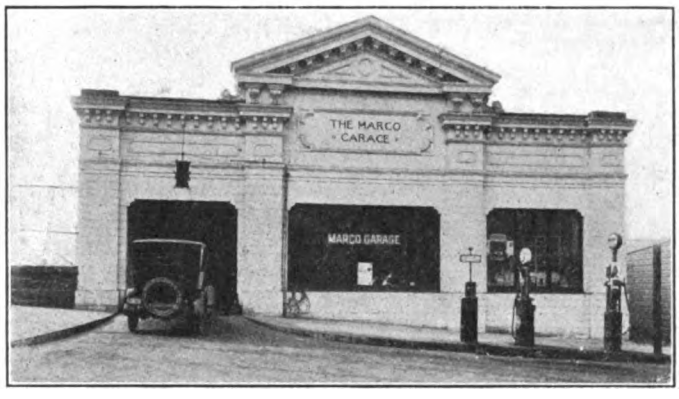


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GREATER PROFITS FOR THE SHOP

"Service First" Is Slogan of Marco Garage

FOR more than fourteen years the Marco Garage of South Orange, N. J., has been making a specialty of "service." That is what it deals in first and foremost. So successfully has it developed its business that car owners throughout that section of the State popularly termed the "Oranges," have reached the point where frequently they are known to entertain their friends and relatives from other parts of the Country by taking them to the Marco establishment, which they point to with pride as "a garage you can absolutely count on."



DESIGN of the Marco building is such as to offer every facility for accomplishing efficient repair work. A spacious entranceway and good-sized show windows combine in making an attractive appearance

When the Marco Co., Inc., first flaunted its slogan "Always at your service" before the public eye back in 1908, it had many obstacles to overcome. It was a member of a trade that had established a bad name. Poor workmanship, unscrupulous methods of conducting the repair business, and broken promises had combined to make the motorist immediately suspicious of anything that was labeled "garage."

Whereas, he was interested in this slogan, which promised much, he assumed a "show me" attitude. Too many times he had had his hopes raised by some such enticing bait only to find it merely a false alarm.

All this had been taken into consideration by the management of the new company, however. It was determined to make a business of educating the public, convincing every motorist in the vicinity that here at last was an organization with a slogan it lived up to.

Therefore, from the very first the confidence of the motorist was solicited. He was urged to give the company a try-out just to let it prove to him that it backed up its claims.

It was slow work at times, but the progress made was steady. Where, for any reason, dissatisfaction was expressed in the work done or service offered, an investigation was started at once. Just as soon as the trouble was detected and smoothed out satisfactorily to all concerned, steps were taken to see that such a mistake could never happen again. In this way, step by step, a system of shop operation was established which possesses a minimum number of kinks that might create dissatisfaction of any sort.

Much of the success of the Marco Co., Inc., may be attributed to the close relationship it has maintained not only with its customers, but the motoring public in general. This is manifested in the company's house organ, *The Marco-Gram,* which carries with it each month the spirit of service which has by this time become synonymous with the Marco name.

ONE of the service cars which the company has always in readiness to send out to the aid of some unfortunate motorist. "Always on the job, ready to go out and help you when in trouble" is the message it broadcasts



Occasionally this attractive little sheet embodies, too, a message to the company's employes. One of these, based on the matter of service, describes so concisely the efforts constantly being made to maintain a certain pride in every member of the organization in his work and the work of the concern he represents that it is quoted here in part.

"Approximately one thousand people now know that our business motto is 'Service First.'" this message reads. "Are we living up to our motto? Service first means that serving our customers comes before all other considerations. If a customer wants gas, we should snap out to the pump before his car is stopped. A customer should never have to blow his horn to let us know that he wants service.

"In some places if you want gas, blowing your horn will not do you any good; you must go into the garage, wake up the proprietor and ask him please to let you have a little gas. We are not quite in that class, but in the office we are busy with our books and out on the floor we are busy with tires and washing, and there is a temptation to finish what we are doing before waiting on a customer.

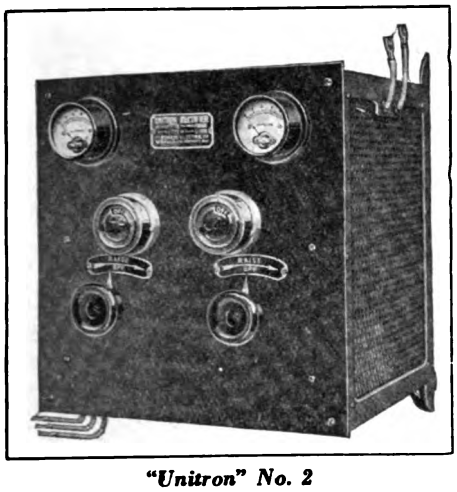
"On these occasions our motto should be 'Service last, we hate to be bothered.' We must realize that there are one or two other places in New Jersey where gas can be bought; there is no law compelling people to come to us. If we keep awake and live up to our motto of 'Service First' we will be truly serving the public and the public will adopt the motto of 'Marco First.'

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PRODUCTS THAT AID IN QUICK REPAIRS

UNITRON RECTIFIER A SIMPLE BATTERY CHARGING OUTFIT

A battery charging outfit which can be mounted on wall or charging bench is being produced by the Forest Electric



"Unitron" No. 2

Co., Newark, N. J. "Unitron" No. 1 has been designed to charge one to 15 six-volt storage batteries at six amperes or less while "Unitron" No. 2, as shown in the accompanying illustration, is a duplex outfit having a capacity of either from one to 15 six-volt batteries at 12 amperes, or one to 30 batteries at six amperes.

Ammeter used in the construction of "Unitron" No. 1 has a range of 0-10 amperes and is of the "De-Arsonval" type. Snap switch is a triple pole type inserted in both A. C. and D. C. circuits. When on the off position the rectifier is completely disconnected.

A double control switch is employed, which is in reality two switches working as a unit. One side controls and regulates the current in ten-volt steps and the other side regulates the current in one volt steps.

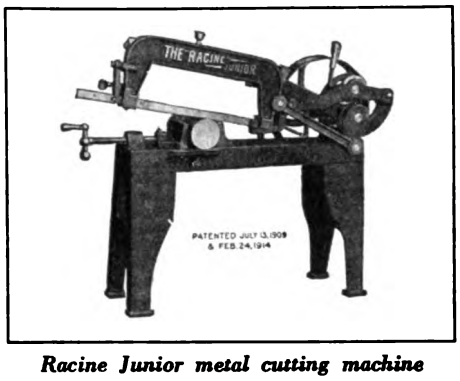
The rectifying bulb is a gas filled tube similar in appearance to an incandescent lamp. A tungsten filament forms a cathode and a carbon target at the top of the lamp forms the anode. This tungsten filament is heated to a given temperature by current from a separate winding in the transformer, and when so heated gives off a stream of negative electrons which bombard the carbon target. This stream of electrons allows the passage of current in but one direction, therefore only an undirectional or direct current can pass through the rectifier.

The case of the instrument consists of a front panel upon which are mounted the snap switch, ammeter and control switches. In the rear of the front panel are the contact points of the control switches mounted on asbestos. Sides of the rectifier are castings fitted with ventilating panels. The bottom is sheet iron on which are mounted the transformer, receptacle and fuses.

"Unitron" No. 2 is constructed along the same general lines as the No. 1 model except that it has two bulbs, two separate controls, two ammeters, and two snap switches. There are three wires coming from the outfit on the direct current side. The center wire is positive and both outside ones negative. Prices range from $130 upward.

"RACINE" JUNIOR IS BUILT LIKE MACHINE TOOL

Requirements of the automobile shop and service station particularly, have been given careful consideration by the Racine Tool & Machine Co., Racine, Wis., in offering the Racine Junior metal cutting machine. The principal feature of this new product is its ability to lift



Racine Junior metal cutting machine

the blade free and clear of the work on the non-cutting stroke.

The Racine Junior will use 21-gauge blades. Construction is such that all moving parts are reduced to a minimum. Gravity feed is employed thus assuring accurate pressure for every class of material. The automatic knockout stops the saw when cut is finished, and the saw frame guide holds itself automatically at any height, which feature is particularly convenient when placing stock in the machine.

All parts of the tool are interchangeable and accurately machined. The simple construction of the saw frame guide provides a quick and easy adjustment for wear. The frame slides on V ways thus affording maximum bearing surface. Provision is also made so that if it is necessary to cut stock larger than 4 x 4 inches, a simple adjustment will increase the capacity of the machine up to 6 x 6 inches.

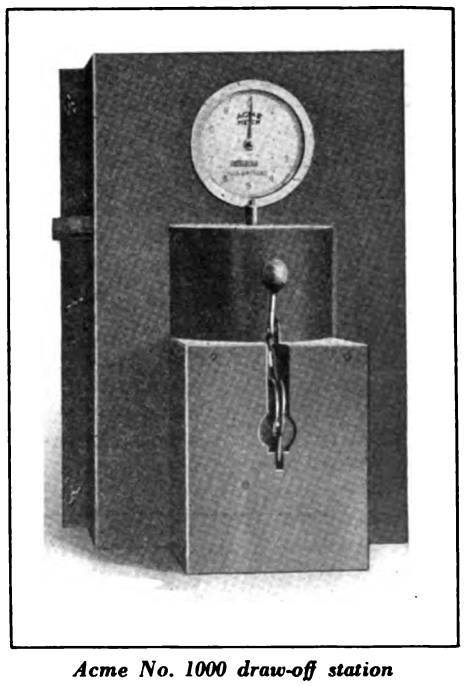
Emphasis also is laid on the high speed at which the machine operates. Belt driven type sells for $65. Price of the motor driven type, furnished with ¼ h.p. motor, adaptable to any electric light socket and with fully enclosed reduction gears running in oil, is $115.

ACME PUMPING SYSTEM RUNS BY ELECTRICITY

An electric pumping system designed for garages and shops is being produced by the Acme Pump and Tank Co., 2 Rector street, New York city, and has proved an efficient means of handling gasoline in shops and service stations. The Acme system consists of a small electric pump and a draw-off station. The station is placed at the point where the liquid is desired to be drawn off and as many stations as required may be connected to one electric pump, each one operating independently of the others.

Pulling the handle of the draw-off station forward automatically starts the electric pump and flow of liquid. When released this handle stops the flow instantaneously. This action is made positive and fool-proof, it being necessary for the operator to hold the handle forward while the liquid is being drawn due to the fact that a heavy spring shuts it off automatically when released. Handle is designed so that the speed of delivery of the liquid can be reduced when desired.

As shown in the accompanying illus-



Acme No. 1000 draw-off station

tration No. 1000, draw-off station consists of a quick action oil switch, a gate valve and a flow meter. The General Electric oil switch operates in a bath of

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oil and prevents sparking. Valve is of the quick-opening, double wedge, gate type and is placed in the main line to insure the instantaneous stop of the flow of liquid. Valve and oil switch work in unison with the control handle.

The flow meter has a six-inch enameled dial under glass with a small set of figures indicating the total amount drawn for the season up to 100,000 gallons. The large hand indicates up to ten gallons reading in pints, quarts and gallons. It repeats automatically.

The hand is reset to zero after each use by a small knob projecting through the glass. An exclusive feature of the meter is found in the adjustment set screw, a few turns of which adjusts the measure accurately without the need for opening the meter case.

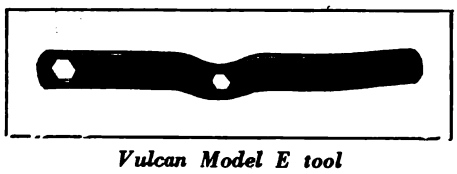
A ten-foot length of metal lined rubber covered gasoline hose is furnished, terminating in a quick, shut-off nozzle with extension tube and strainer inside. An over-head drain valve insures the complete drainage of the hose after each use.

Entire station is of extra heavy construction with a sheet steel cover that can be removed by taking off six winged nuts thus exposing the entire mechanism. Finish is olive green enamel.

Pump used is the Acme standard rotary type driven by a small electric motor all mounted on one base and occupying very little space. A by-pass with air relief valve and air chamber is provided on the pump to insure an even and steady flow. A strainer is also part of the standard equipment.

RIM WRENCH AND TIRE TOOL A POPULAR COMBINATION

A combination rim wrench and tire tool which the Jenkins Vulcan Spring Co.,



Vulcan Model E tool

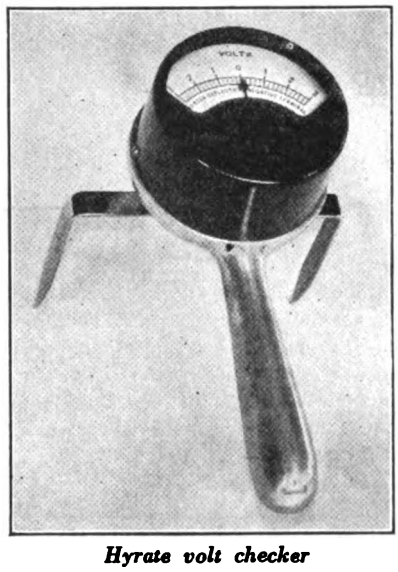
Richmond, Ind., has lately added to its line is proving popular with those looking for real practicability in a device of this kind at moderate cost. Model E, as it is known, is handy for all round use as a tire tool and rim wrench with two sizes spanner holes to take care of at least 95 per cent of all rim nuts in use from the Ford up.

The tool is made of spring steel oil tempered and heat treated. Rough surfaces are removed and it is finished in a bright steel finish with a coat of durable, transparent rustproof lacquer. It is 14 inches long and 1¼ inches wide. Edges are finished round.

A feature of the tool is that it is supplied with the distributer's name and address imprinted on its surface. This advertising feature is proving popular, some dealers making the most of this opportunity by giving the tool away with certain purchases. The tool lists at 25 cents.

HYRATE VOLT CHECKER HAS ZERO CENTER SCALE

As an addition to its extensive line of electrical equipment the Service Station Supply Co., 30-32 East Larned street, Detroit, is offering the Hyrate volt



Hyrate volt checker

checker. This is a volt meter with a zero center scale reading to three volts on either side. It is equipped with two side spikes and a convenient handle.

Due to the construction of this device with its stationary prods and its zero center scale only one hand is necessary to make the reading. This leaves the other hand free to record the readings of the instrument. Furthermore, with the zero center scale there is said to be no danger of reversing the meter as the needle will swing either way.

Still another feature of the Hyrate volt checker upon which emphasis is laid is its ability to find "polarity" promptly. This can be readily determined as the needle swings always to the negative post and instructions are so recorded on the face of the instrument itself. Price of the instrument is $12.50.

ONAN LATHE COMBINED WITH MICA UNDERCUTTER

A combination unit in the form of the Onan lathe and mica undercutter has been placed on the market by David W. Onan, 43 Royalston avenue, Minneapolis, Minn. This tool makes it possible to true up and turn the commutator of any starter or generator armature in the same manner as with a large engine lathe. Without removing the armature from the lathe it is also possible to undercut the mica between the bars quickly and efficiently.

The turning tool is controlled by hand wheel screw feed. Carriage is operated lengthwise by drop forged handle with suitable adjustment for every commutator. Undercut is straight and uniform.

The lathe is built with seven-inch swing, bed 22 inches long, furnished with two Armstrong high speed tool bits, lathe dog, suitable wrenches and so on. It is driven from any available power. Price complete is $38.

ELWOOD GRAVI-METER IS CONTROLLED BY VACUUM

To protect the public from receiving short measure from gasoline pumps there has been placed on the market by the Elwood Gravity Gauge Co., Elwood, Indiana, the Elwood Gravi-Meter Type 100. This device is simple in its construction and enables the motorist to see for himself whether or not he is getting his full money's worth.

It is installed on the standpipe of the pump the correct distance below the air drain valve. When an exhaustion of liquid accrues that will cause short measure, over the amount that is allowed in deficiency by the weights and measures departments of the various states, the liquid leaves the Gravi-Meter automatically.



Elwood Gravi-Meter Type 100

Movement of the device is controlled by vacuum. It is impossible for the operator to refill it until the control screw is taken out and the pump refilled to the level of the top of the standpipe, which is indicated by the liquid being visible in the Gravi-Meter. The control screw is then replaced and the pump is ready to operate.

Each device is furnished with complete fittings and directions so that it can be installed with little trouble on the particular type pump on which it is to be used to operate according to the capacity of that pump. Price complete with fittings is $15.

Brown Safety Hook Easily Handled

A new tire chain hook has made its appearance on the market in the form of the Brown safety hook. As manufactured by W. A. Brown, Lincoln, Maine, this hook is easily attached to the chains and always ready for use. When the hook is closed it draws the chains tight around the wheel. When opened, an operation performed by pressing on the sides to release the lock, the chains loosen, making them easy to unhook. Price is 25 cents, or $1 per set of four.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

CONNECTICUT — HARTFORD.—Distribution for the Republic line of trucks has been taken on by the Dell Motor Co., at 266 Wethersfield avenue.

NEW YORK — BINGHAMTON.—A garage, sales and service building will soon be built for the Franklin Sales Co. The structure will have a frontage of 79 feet and a depth of 145 running through to Prospect avenue, and will consist of two stories and a basement. The space immediately above the salesroom on the second floor will be used as a service station, the remainder of the floor being devoted to the storage of automobiles, while the basement will be used for delivery wagons and trucks.

NEW YORK.—A four-story and basement garage at 147-151 West 83rd street, between Columbus and Amsterdam avenues, has been leased to Francis J. Sheridan. The lessee intends to make extensive alterations.—The property at 595 West 207th street, near Broadway, has been leased by Harry S. Houpt, president of the Hudson Motor Car Co. of New York. It is to be used as a salesroom in the Inwood district for Hudson and Essex cars, and will be opened on August 15, under the management of George Wood.—Frederick H. Allen and James E. Barry leased for Abraham Ruth the three-story and basement garage recently completed at 506-510 West 181st street for twenty-one years, at an aggregate rental of about $350,000.

ROCHESTER.—A fire in the building owned by the Cunningham Garage and Storage Co., 25 Hamilton street, caused a loss of $40,000.

PENNSYLVANIA—CARBONDALE.—A loss of about $52,000 was incurred when the garage of Earl Williams was severely damaged by fire.

DELAWARE — WILMINGTON.—A fire of undetermined origin practically destroyed the automobile painting shop of R. H. Lewis, resulting in a loss of $30,000.

MIDDLE WEST

ILLINOIS—CANTON.—A fire of unknown origin damaged Gavenvas garage to the extent of $5,000.

MICHIGAN — DETROIT.—At 11327 Conant avenue the Conant garage has been opened.

WISCONSIN—CHIPPEWA FALLS.—A new garage will soon be opened by the Pangborn Auto Co.

DARIEN.—Clapmeyer has purchased the interest of Walter Christensen in the Darien garage. The new firm will conduct its business under the name of Locke & Clapmeyer.

HARTFORD.—Albert G. Lotsch has again purchased the North Side garage which he recently sold to E. Stern.

KENOSHA.—An addition, estimated to cost $25,000, will soon be erected for the Roblicki Garage Co.

MADISON.—A garage has been opened by John T. Horstmeier at 1956 Railroad street.

MONROE. — An automobile repair shop at 636 North Jefferson street has been opened by Roy E. Moon.

MOUNT CALVARY.—A garage has been opened here by Abhold & Wagner.

NEENAH.—P. J. Jaeger and William Dowling will erect a garage at North Commercial street.

NELSON.—Matson Waiker has purchased the garage of John Scharr.

PLYMOUTH.—John Ter Maat, doing business as the Auto Supply Co., filed a petition in bankruptcy. Liabilities are listed as $65,840.33; assets as $39,224.31.

SPENCER.—A tire and battery shop will soon be opened by M. G. Martin.

MISSOURI — BETHANY.—A battery and electric shop has been installed in the garage of the Crossan Motor Co.

BROOKFIELD. — Wesley Love and H. E. Glenn have purchased the Suits Motor Co.

CALLAO.—Harry Mathis has purchased the garage interests of Paul C. Mathis.

CANTON.—In order to take care of its increasing business, the Service garage has moved from the Stork building, corner of Fifth and Clark streets, to larger quarters in the Clay building on the south side of Lewis street, between Third and Fourth avenues. The garage has added equipment in its new home.

CLARENCE. — New quarters have been leased in the Culver building in the opera house block by the Clarence Auto Co., for a period of five years. A new work shop, 35 x 70, modernly equipped in every particular, will be built on the north end. The company expects to move about September 1.

LEES SUMMITT.—Dell Spurr having discontinued his automobile repair shop on Third street, is now in charge of the repair department of the Shore & Shore garage on Douglas street.

MADISON.—A new garage will be opened by Tapp and Dickerson at their light plant building.

MARSHALL. — Orrison-McArthur Motor Car Co., has purchased the H. P. Bryant garage as a new home for the Studebaker car.

MOBERLY.—Within a few days the new Studebaker building located on West Coats street will be complete. Roy R. Quinn, the local agent, will assume the management.

MONETT.—A new garage, owned by the Terry-Johnson Motor Co., at the corner of Seventh avenue and Broadway, is now open for business. Vulcanizing and repairing will be done and a complete line of Racine tires and tubes carried.

MONTICELLO.—Thos. Maggard has purchased the interest of Charles Maggard in the Maggard Brothers Motor Co. of Canton, the Ford agency for the eastern part of the county. The Dodge Brothers car will be distributed by Charles Maggard in a new salesroom in the Stork blacksmith shop.

ODESSA.—A fire, confined to the inside of the building, damaged the tire and battery station of Oscar Wallace at Second and Cobb avenues to the extent of $2,000, which was covered by an insurance of $1,000.

OSCEOLA.—B. F. Waddle has sold the Mumma garage to the Hamby Motor Co., who has contracted for the sale of Ford cars, trucks, tractors and parts.

PIEDMONT.—Equipment and good will of the Louis Jobe Motor Co. of Piedmont, authorized dealer and distributer of Ford cars, Fordson tractors and other Ford products, has been sold to the Stivers Motor Co.

ROCHESTER.—On the site of the garage, recently destroyed by fire, Henry Martin will erect a new garage building.

SAVANNAH. — Improvements, consisting of the remodeling of the office and stockrooms, are being done for the Schrier Auto Co.

ST. LOUIS. — Distribution of the Haynes car for St. Louis will be carried on by the Delmar Academy Garage Co., Delmar and Academy avenues, in conjunction with the Wilson Motor Car Co.

SPRINGFIELD.—Cadillac-Hoyle Co., Cadillac dealer, has secured quarters at 455-57 St. Louis street for the display of the car. F. F. Heyley has been named head of the company.

THAYER.—J. S. and J. F. Johnson have leased the Thayer garage from Sanders Brothers. Charles Sanders will devote all his time to the management of the plant in this city of the Standard Oil Co.

TRENTON.—Herbert Bads has purchased the brick building at 1211 Tinsman avenue from Wooderson and Hamilton in which he plans to open a store handling automobile accessories and oils.

VILLA RIDGE. — Skornia Brothers, whose garage was totally destroyed by a fire two weeks ago, are now occupying temporary quarters until a new garage is completed.

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WEBB CITY.—Fred Herron and M. E. Mann have reopened the old Skating Rink garage under the name of the Frisco Auto Co.

KANSAS—ARKANSAS CITY.—New quarters at 112 South First street have been opened by the Coats-Corlett Battery Electric Co.

BONNER SPRINGS.—C. G. Jones, of Lake Forest, has purchased the tire shop of F. Kaiser.

BURLINGTON.—E. E. Ligett has recently purchased and taken charge of the City garage.

CANEY.—H. O. Miller and Everet Truskett have purchased the Ford agency from the N. B. Wall Motor Co.

CLEARWATER.—E. A. Smith has purchased the garage of Lee Race.

COFFEYVILLE.—Building operations will soon be completed on the structure in the 200-block on West Eighth street to be occupied by the Exner-Morgan Motor Co.

DEERFIELD.—A garage has been opened in the Motor Company building by George Buell and Ray Melton.

DODGE CITY.—T. E. Young has formed a partnership with Carl Fay. The new firm will distribute the Overland, Durant and Willys-Knight motor cars and will do a general garage business as well as conduct an authorized service station for the cars handled.

ELDORADO.—New quarters at 415 South Main street have been opened by the Osburn Tire Shop, formerly at 110 West First street.

FREDONIA.—A building formerly occupied by the Oil Belt garage on North Sixth street will be the new home of the Fredonia garage and machine shop, formerly located on Seventh street.

HERNDON.—Selling rights for the Durant car have been secured by the East Front garage.

HOWARD.—I. L. Olmstead has leased the shop of the Standard garage, east of the filling station.

HUTCHINSON.—Exclusive franchise for the operation of an Associated Tire Store in this territory has been obtained by Ryan and Shaggs.—Clark Motor Co., dealers in Studebaker cars, have moved into their new quarters on West Second street.—Following a transaction closed on July 31, whereby Walter W. Smith transferred his store to J. Connelly, the name of the Walter W. Smith Tire & Supply Co., has been changed to the Connelly Motor Supply Co.

LAWRENCE.—A. Friedman has sold his interest in the Lawrence Produce & Junk Co., to M. Cohen. As a result the name of the company has been changed to the Auto Wrecking and Junk Co.

OAKLEY.—Active management of the Close garage has been taken over by D. L. Staatz, of Wakeeney.

OZAWKIE.—Oscar Marker has purchased the garage business of N. F. Marker.

TOPEKA.—A new automobile tire and accessory shop will be opened at 218 West Sixth avenue by H. H. Clark.—Distribution of the Chandler car has been obtained by Don. Stark. His salesroom will be located at 524 Van Buren street.

WICHITA.—Ray Battery Service Co. has opened its quarters at 221 North Lawrence street.

NEBRASKA — BEATRICE. — A new tire repair shop will be opened soon by R. M. Lenhart.

FAIRFIELD.—M. L. Hart traded his garage business for the W. L. Miner building where he expects to open a battery shop. The owner of the structure, W. L. Miner, has disposed of the garage to the Fairfield garage and machine shop.

LINCOLN. — New quarters of the Master Tire Service Co., at 1625 O street, are now open for business with W. E. Jennings in charge.

UNADILLA.—W. J. Bro has sold his interest in the Syracuse Auto Co., to the Petring Brothers.

WAHOO.—Dissolution of the partnership operated as the Wahoo Tire & Repair Shop has taken place because of the retirement of Eric Samuelson. Tracie Lungerhausen will continue the business as sole owner.

NORTHWEST

MINNESOTA — ALBERT LEA.—Arthur and Alfred Jensen plan to erect a service garage.

HIBBING.—A garage will be opened on Howard street by Harry Warren.

LAKE CITY.—A building has been leased by F. B. Anding & Son in which they will open a garage and salesroom.

LITTLE MARAIS.—A garage and service station will soon be erected for E. B. Fenstad and J. A. Buckley.

ROCHESTER. — Robert Swinnerton will erect a garage at Third street and Second avenue.

NORTH DAKOTA—WILLISTON.—Monroe Brothers have let the contract for the erection of a brick garage, 100 x 150, upon the former Bruegger lumber yard site, which they recently purchased for $5,000.

SOUTH DAKOTA—SIOUX FALLS.—An automobile repair shop and storage department will be installed in the Tornberg garage on Main avenue and Seventh street, recently purchased by Iver and Chris. Wangsness.

SOUTHWEST

ARKANSAS—AUGUSTA.—Construction of an addition, 24 x 50, has been begun for the W. B. Conner Motor Co. The present brick building occupied by the company is 50 x 150 and has a storage space of 50 x 150 in which it carries its stock of Ford cars. The addition will form a part of the main building and will give a total floor space for parts and service of 8,700 square feet.

CAMDEN.—A portion of the O'Connor garage on East Washington street has been leased by the Camden Motor Co. Erection of a new garage on a lot on Madison street recently purchased by the company will probably take place within the next few months.

DE QUEEN.—Tobin Motor Co. has been sold to the Stringfellow Motor Co., who will carry in stock a complete line of Ford parts and accessories.

LITTLE ROCK.—Distribution of Diamond tires and tubes will be carried on by W. L. Tedford.—Arthur E. Smith and Ray A. Robinson have organized the Robinson-Smith Auto Co., and purchased the property and business of G. Bilheimer & Son, at 916-918 West Fourteenth street, on which a building will soon be erected. The new firm will operate a general garage and carry a complete line of carbureters, tires and accessories, with day and night service.

PIGGOTT.—A Ford agency has been secured by a new firm consisting of Grover C. Myers and J. R. Myers, and operating under the name of the Myers Motor Co. A regular Ford garage is to be opened in connection with the sales department.

PINE BLUFF.—W. C. and J. F. Hemmert have opened their automobile repair and welding shop at 1119 State street, under the firm name of Hemmert Brothers.—E. Verrett has purchased the garage of J. A. West.—John Baldridge and R. E. Cash have opened the Pines Auto Laundry at 205 Walnut street.

OKLAHOMA—BARNSDALL.—J. R. McCoy has sold the Ford garage building on two lots on Main street to Andrew and J. G. Siggins, for $15,000.

ELK CITY.—R. O. Ward has been appointed local agent for the Magnolia Oil Co. He will conduct the agency in connection with his accessory business.

NEWKIRK.—Roy Bain has purchased the interest of J. J. Cronan in the Nelson Motor Co., and has taken charge.

TEXAS—AUSTIN.—Hughes Brothers Tire Service has opened for business, carrying a full line of Michelin tires.

BEAUMONT.—New quarters of the Burge garage at 439-55 Fannin street are now open for business.

CAMERON. — A contract with the Chevrolet Motor Co., has been signed by the White-House Motor Co., composed of G. C. White and John W. House, to handle Chevrolet cars in Milam county. They plan to occupy larger and better equipped quarters and to carry a complete stock of parts.

COMMERCE.—A garage four doors west of the Commerce Journal office has been opened by U. G. Willis who has severed his connection with the service station of J. B. Heath. The new concern will be known as the Union garage.

CORSICANA.—Boynton-Calkins, Ford agents, are to occupy the recently completed Clarkson building on Fourth avenue and also the one just adjoining on the east, formerly occupied by Williamson and Harris.

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THE U. S. Tire Dealer enjoys a pretty comfortable state of mind in not being subject to the local fluctuations of tire opinion toward this or that new product.

His *confidence* is naturally in exact proportion to the *public's confidence* in Royal Cords.

United States Tires are *good* tires.

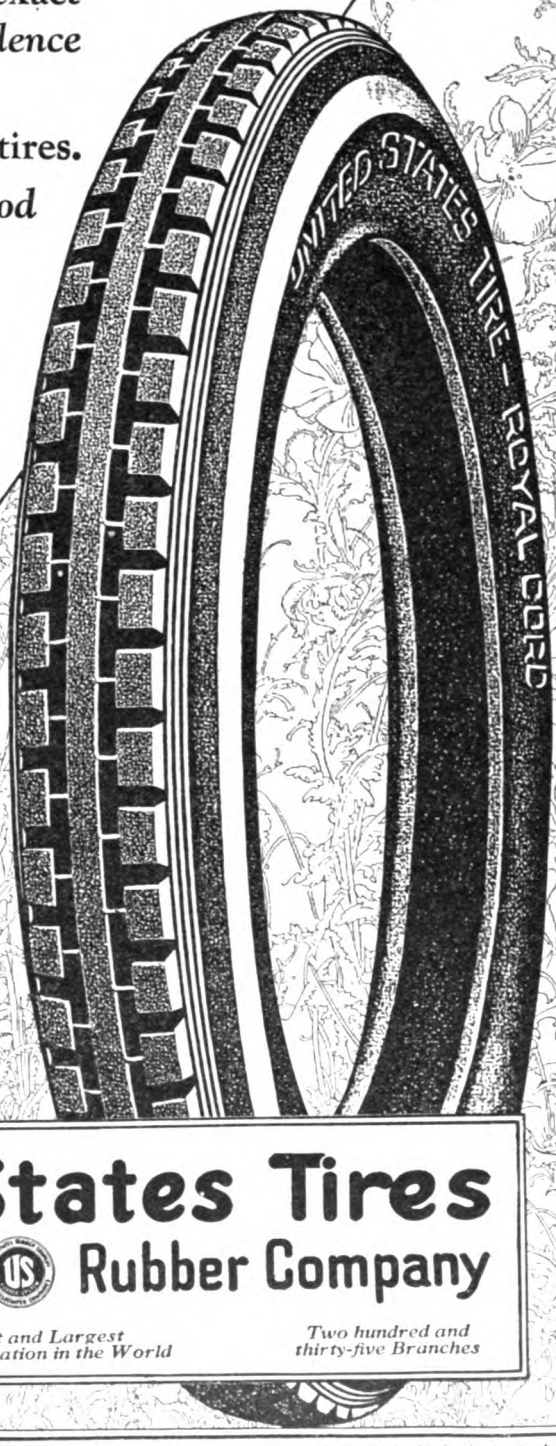
U. S. Sales Relationship is a *good* relationship.

The U. S. Sales Relationship brings to the dealer's store the greatest and most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

It is the most sought after Franchise in the whole tire trade.



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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DECATUR.—Henry Askey has sold the Meridian garage to Earl Douglass and A. Burton.

TERRELL.—A service station in the new building on West Moore avenue has been opened by the Smith Motor Co.

SAN ANTONIO.—A tire store will be opened at 202-4 Avenue C by the Uneeda Tire Co. The present quarters at 204 Avenue C have been enlarged.

ARIZONA — DOUGLAS. — Douglas Auto Supply Co., 531 Ninth street, has taken over the agency for Michelin tires. —Franchises for Paige and Jewett cars, Savage tires and Monogram oils have been secured by the Southwestern Auto Exchange, headed by C. F. McCord, at Ninth street and F avenue.

ROCKY MOUNTAINS

NEVADA—FALLON.—An automobile painting and finishing department has been added to the business of J. C. Taylor of the Fallon Motors Sales Co.

WINNEMUCCA.—W. L. Brackett has purchased the Winnemucca Battery & Tire station. He will operate the newly acquired business under the name of the Humboldt Motor Sales Co.

UTAH—OGDEN.—W. H. Wattis has purchased the Binford interest in the Binford-Kimball Motor Co., and will continue to operate the business under the name of the Wattis-Kimball Motor Co.

PACIFIC COAST

WASHINGTON — CENTRALIA.—A fire in the garage and automobile accessory store of the Skillings Motor Co., caused a loss of $10,000 which was partially covered by insurance.

RENTON.—A new concrete garage has been built on Renton Way for F. A. Robertson.

VANCOUVER.—Distribution of the Samson truck and tractor will be handled by the Lineham Motor Co., on Washington street.

OREGON—BOARDMAN.—A $10,000 garage will be erected on Eighth street for C. H. LaTourelle, Ford dealer, conducting his business under the name of Boardman garage.

PORTLAND.—A large store has been opened by the General Auto Supply Co., on Broadway and Couch street.—J. A. Le Fevre and A. B. Jordan, operating as the Mac-Dry Battery Co., located at Broadway and Hoyt streets, will distribute Mac-Dry batteries.

CALIFORNIA — AUBURN. — V. L. Rockwell and G. A. Lee have formed a partnership known as Lee & Rockwell and have opened the New Service garage.

CALEXICO.—Distribution of the Hudson and Essex cars for Imperial county will be handled by W. H. Lewis in the Big Four garage.

CHICO.—J. H. Vaughan, of Vaughan & Fordyce, a Willard battery agency, has purchased the interest of E. F. Fordyce. He intends to add an accessory department.—County agency for Mac-Dry batteries has been taken over by Moore Brothers, Fifth and Wall streets.

COALINGA.—Having leased the repair and storage department of the Prough Chevrolet agency, Frank Bowden will conduct it as a separate business.

COLUMBUS.—A general sales and repair business is now being conducted by the Columbus Motor Co., with A. J. Evans as manager.

DINUBA. — An automobile accessory store will be opened in a building now being erected on East Tulare street by H. H. Harness.

ESCONDIDO.—John Baker has sold the Baker garage at Grand and Juniper streets to Charles Smith.—Oscar Hall & Co. have opened the Ford Lincoln garage in the H. T. Lyon building.

FULLERTON.—A branch store has been opened in Nicholas Block by the Western Auto Supply Co.

IMPERIAL.—B. B. McChristy and A. R. Anderson have opened the B. B. garage with the Maxwell and Chalmers agencies.

KING CITY.—Ross N. Hollinbery has purchased the Highway garage here to operate it as a branch of a garage in Fresno.

LA HABRA.—A Ford car and Fordson tractor agency has been opened by J. C. Howard.

LOMPOC.—G. A. Wickersham has sold the Pioneer garage to N. L. Spanne.

LONG BEACH.—A Chevrolet agency has been opened on East Anaheim street by Johnson & McGuire.—A service station for Long Beach Tire & Rubber Co., has been opened by William E. Garner and C. I. Dockstader.

LOS ANGELES.—A sub-agency for Oldsmobile and Columbia cars has been opened at 7156 Hollywood boulevard by Beatty & Schuessler.—Tom. R. Johnson has opened a Chevrolet agency at 5518 Hollywood Boulevard.

LOS BANOS.—D. R. Wedgewood, former manager of Maino Motor Sales Co., has taken over the business of the Buick garage, agency for Buick and Cadillac cars and White trucks.

MARYSVILLE.—As a result of taking over the Hupmobile agency for Yuba county, Fred S. Moore has located in the Travelers' garage.

NEWPORT BEACH. — Andrew Wilson has purchased the East Newport garage from E. Epperly.

ORANGE.—Sisson Brothers have purchased the Martin garage on Chapman avenue.

OROVILLE.—Alva E. Hatch Auto agency, dealer for Nash, Reo, Overland, Willys-Knight and Lafayette motor cars, has added the Hupmobile for Butte county.

PASADENA.—A. J. Mayer has sold the Oldsmobile agency to H. E. Thompson.

RIVERSIDE.—C. A. Chamberlain has purchased the Maxwell agency, from the Grace Motor Co., and has also added the Chalmers agency, on Main street, purchased from C. L. Hussey.

ROSEVILLE.—Hombre's Auto Trimming & Body Shop has been opened by W. F. Hombre at 139 Riverside street.

RYDE.—G. J. Picard has opened an automobile repair business in the newly completed Ryde garage, which he has leased.

SAN DIEGO.—C. A. Canfield has purchased the repair shop of Brown & Young.

SAN FRANCISCO.—Herbert Kayser has sold his interest in the Ford agency, operating as Kayser & Hannay. He has joined the sales organization of Chester N. Weaver Co., Studebaker dealer in this territory, with whom he was formerly associated.

SAN JUAN.—An automobile agency and accessory store will be operated by E. P. Giacomazzi in the new garage now in process of construction on Starr avenue.

SAN PEDRO.—Harry Phillips, a Dodge Brothers dealer, has moved into a new building on Seventh street.—A store has been opened in a new building on Pacific avenue, near Fourth street, by the Western Auto Supply Co.

SANTA ANA. — A one-story brick building is to be erected for the White Garage, Inc., of Long Beach and Santa Ana. The new branch will distribute Haynes cars for Orange county.—Extensive additions have doubled the floor space of the branch on North Main street of Forsythe Brothers, retail accessory dealers.—New quarters at Broadway and Sixth street of Edgar & Hays allow three times the former space for Paige, Oakland, and Jewett sales.

SANTA CLARA.—A. E. F. garage, of which F. E. Granger is proprietor, has been appointed direct factory dealer for the distribution of the Kissel car. It will act as sub-dealer to Gilbert Woodill, western representative of the Kissel factory.

SANTA MARIE.—Distribution of the White truck for northern Santa Barbara county will be handled by the Crescent garage.

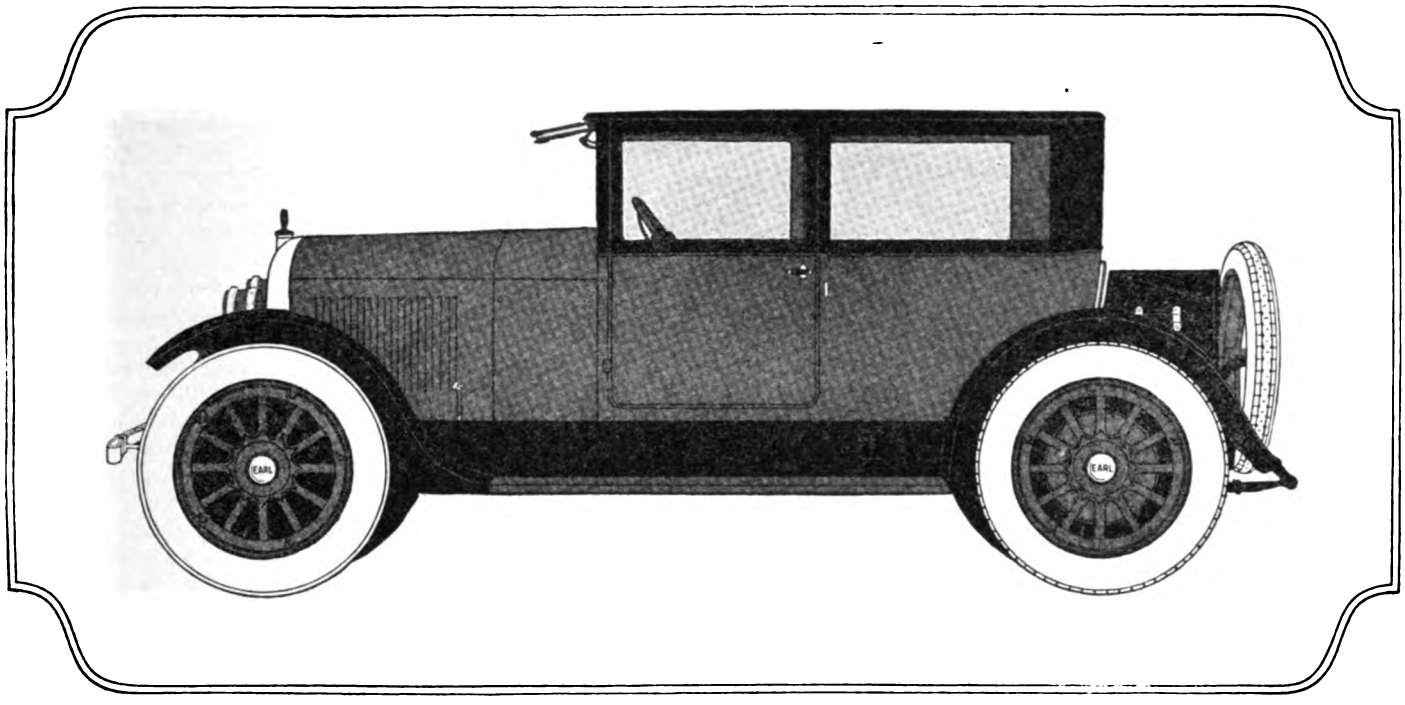
TULARE.—W. C. Cantrell has purchased the Ford sales and service agency and repair shop from Roy Templeton, by whom he was formerly employed.

VALLEJO. — Hupmobile and Wills Sainte Claire car agencies have been secured by A. B. Coronado of Coronado garage.

VENTURA.—M. H. Wolff has secured the Service truck agency for Ventura county.—Hill & Hill have sold the Mercer garage to Ralph Current.—F. Cordez of Ventura garage has purchased the interest of R. C. Coleman in the California street garage.

YUBA CITY.—Paul Demmer, F. E. Water and Clyde Taylor have purchased the Guarantee Auto & Ignition Works on E street, and will operate it under the new name of the Electric Hospital.

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COMPLETE EQUIPMENT INCLUDED IN CABRIOLE PRICE, $1395—TRUNK, BUMPER, MOTOMETER, SUN VISOR, ETC.

Two Big Markets for EARL *Cabriole*

Distinction and equipment strike business and professional men as well as women

JUDGED by retail sales, the Earl *Cabriole*—completely equipped for $1395—is proving almost as popular among business and professional men who need a *personal utility car* as among women drivers, to whom its distinction and ease of handling appeal so strongly.

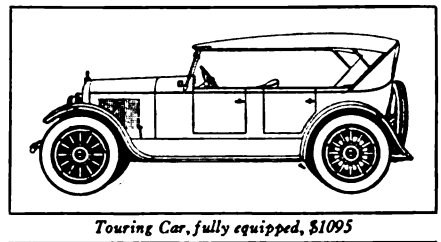
The fact is physicians, architects, realtors and business executives have learned that the seating capacity of a coupe is too limited to meet the necessities of many important business and social occasions.

Here the Earl *Cabriole* serves as *two cars in one.* It seats four big men in comfort, with plenty of leg room. Yet its compact, close-coupled design, its sweeping lines and contours, make it *look right* when the owner is driving alone. And driving the *Cabriole* for either man or woman, is so easy that it's no task at all.

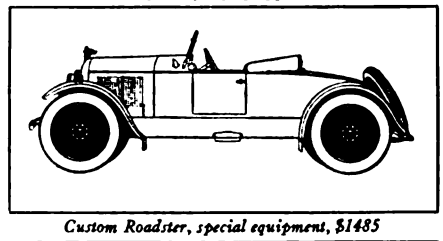
Cabriole buyers appreciate, too, its *complete equipment.* No other closed car embodying so much comfort, beauty, convenience, economy and all-weather utility includes so many high-grade features and accessories for $1395. Touring trunk, for instance, with cover, two suit cases and hat box; bumper; motometer; sun visor; one-piece windshield with wiper; Sparton horn and really complete equipment.

The *Cabriole* rounds out the great Earl line. If your territory is open, write or wire me for full information.

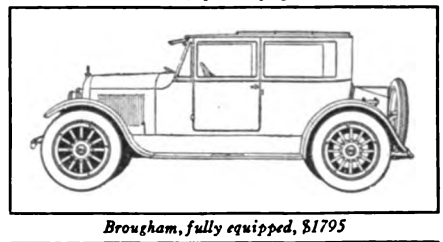
President and General Manager



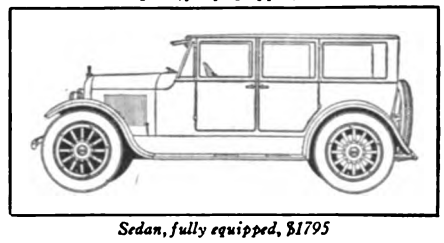
Touring Car, fully equipped, $1095



Custom Roadster, special equipment, $1485



Brougham, fully equipped, $1795



Sedan, fully equipped, $1795

Touring Car	$1095
Cabriole	1395
Custom Roadster	1485
Brougham	1795
Sedan	1795

Prices f. o. b. Jackson

EARL MOTORS, INC.

JACKSON MICHIGAN

"The right line, at the right price, with the right dealer discount"

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INCORPORATIONS

NEW YORK.—Arrow Body and Wagon Works, Manhattan, N. Y. Capital $15,000. Incorporators: H. Melnic, L. Rubin, H. Brown.—Jason Taxicab Corp., Manhattan, N. Y. Capital $10,000. Incorporators: W. S. Krebbs, B. H. Friendenberg, J. Orr.—Metcalfe & James, Manhattan, N. Y. To deal in automobile supplies. Capital $20,000. Incorporators: R. B. Metcalfe, G. E. Birckhead, W. Thompson.

Stern Brothers, Manhattan, N. Y. To deal in motorcycles. Capital $20,000. Incorporators: J. and E. and R. Stern.

Henry E. Stroh & Son, Bronx, N. Y. To conduct a garage. Capital $10,000. Incorporators: H. E. and R. E. and H. A. Stroh.

E. F. Boehm Motor Corp., Long Island City, N. Y. Capital $50,000. Incorporators: E. F. and M. L. Boehm, G. A. Violente.

Trice Motor Co., Albany, N. Y. To deal in automobiles and airplanes. Capital $75,000. Incorporators: H. M. Trice, L. B. Withers, W. H. Stott.

D. E. H. Garage Corp, Buffalo, N Y. Capital $7,500. Incorporators: L. F. Donnelly, D. J. O'Neill, K. E. Lehr.—Detroit Rotary Motors Co., Buffalo, N. Y. To manufacture engines, motors, automobiles, etc. Capital $2,500,000. Incorporators: J. P. Powers, L. F. Donnelly, D. J. O'Neill.—Unique Storage Battery Co., Buffalo, N. Y. Capital $50,000. Incorporators: W. R. Gass, M. A. Harrington, B. S. B. Linetty.

Buffalo-Tractor Truck Sales Corp., Clarence, N. Y. Capital $75,000. Incorporators: A. J. McMullen, L. Tilden, F. C. Moore.

Citizens' Garage, Glens Falls, N. Y. Capital $15,000. Incorporators: G. B. Withan, J. J. McEwen, T. J. Bennett.

Goshen Buick Co., Goshen, N. Y. To conduct an automobile business. Capital $20,000. Incorporators: J. and J. W. Robinson, G. N. Remer.

Moore Sales Corp., of Poughkeepsie, N. Y. To deal in automobiles. Capital $10,000. Incorporators: M. H. Moore, F. C. Menair, B. F. Ogg.

Auto Collision Corp., Troy, N. Y. To conduct an automobile business. Capital $10,000. Incorporators: C. Thorkildson, A. S. and B. E. Schmidt.

Atwater-Ogden Electric Co., Utica, N. Y. To deal in automobile accessories. Capital $25,000. Incorporators: R. Atwater, H. B. Ogden, R. V. Pugam.

NEW JERSEY.—Calvin Motor Car Co., Newark, N. J. To conduct a general automobile business. Capital $125,000. Incorporators: Christopher C. Rock, David T. Robson, George Richardson.

DELAWARE.—Billingsley Co., Dover, Del. To deal in automobiles. Capital $50,000. Incorporators: J. P. Scott, William K. Billingsley, A. T. Davis, V. M. Billingsley.—National Auto Products Corp., Dover, Del. To manufacture piston rings. Capital $200,000. Incorporators: Daniel J. Dowling, Clarence S. Ashley, Harry J. Newschafer.—Philadelphia, Trenton and Chester Motor Service, Dover, Del. To operate a haulage business. Capital $20,000. Incorporators: Richard S. Tweed, Maurice J. Gallagher, David G. Tweed.

High Speed Micrometer Co., Inc., Wilmington, Del. To manufacture high speed and other micrometers, measuring devices, etc. Capital $100,000.

MASSACHUSETTS.—Hi-Low-Jack Corp., Boston, Mass. To manufacture and deal in lifting jacks. Capital $200,000.

WEST VIRGINIA.—Kelly-Darnell Motor Co., Buckhannon, W. Va., has changed its name to the Kelly Motor Co.

Anderson Motor Sales Co., Charleston, W. Va. Capital $25,000. Incorporators: G. W. Hanshaw, Frank Gay, J. A. Booker, C. W. Whitt, J. I. Saunders.

Beaty Motor Co., Fairmont, W. Va. Capital $50,000. Incorporators: C. E. Beaty, Lottie Beaty, C. B. Deveny, M. A. Clarke, L. N. Beaty.

OHIO.—Waltz Brothers Motor Co., Cincinnati, O. Capital $15,000. Incorporators: L. F. Waltz, R. G. Braun, H. F. Seigler, George Bailes, L. P. Waltz.

Apperson Ohio Motor Co., Cleveland, O. Capital $1,250. Incorporators: V. G. Kibby, Charles M. Knight, F. M. Pritts, F. B. Kavanaugh, T. E. Jarrard.

Everbody's Auto Accessory Co., Columbus, O. Capital $10,000. Incorporators: Lewis M. Smith, Joseph W. Rile, George F. Smith, M. G. Rile, E. G. Smith.

Lakewood Motor Sales & Service Co., Lakewood, O. Capital $10,000. Incorporators: Wilmer C. Tims, Myron J. Farrell.

Cropper-Kinney Auto Spring Co., Lebanon, O. Capital $50,000. Incorporators: George W. Cropper, L. Simonton, E. J. Beedle, C. E. Lewis, A. B. Kaufman.

Lima Buick Co., Lima, O. Capital $25,000. Incorporators: L. B. Merritt, R. P. Mackenzie, Leefe Claybaugh, L. H. Merritt, H. A. Holdridge.

Torgler Motor Sales Co., Toledo, O. Capital $50,000. Incorporators: Carl V. Torgler, Herbert H. Torgler, Clayton W. Quale, Edward H. Ray.

INDIANA.—Eckler Motor Co., Evansville, Ind., has increased its capital from $20,000 to $50,000.

ILLINOIS.—Allied Garage, Inc., Chicago, Ill. To operate a public garage. Capital $5,000. Incorporators: Samuel W. Maltz, Hazel Jorssak, Anna Matz.—Auto Accessory Corp., of Chicago, Chicago, Ill. To manufacture, buy, sell, and assemble automobile accessories, etc. Capital $3,000 and 1,000 shares no par value. Incorporators: Walter F. Sommers, James W. Walis, Felix Stepelheim.—Rholite Mfg. Co., Chicago, Ill. To manufacture and deal in batteries, etc. Capital $40,000. Incorporators: Martin S. Corcoran, J. Russell, F. W. Reinhardt.

MICHIGAN.—Yale Auto Supply Co., Detroit, Mich. Capital $10,000. Incorporators: A. L. Blanc, Mary Blanc, Herman Fisher.

WISCONSIN.—Manley Oil Service Co., Eau Claire, Wis. Capital $20,000. Incorporators: A. R. Manley, E. P. Dagenhardt.

Diamond Motor Service, Inc., Milwaukee, Wis. Capital $5,000. Incorporators: E. George Dorsch, P. Adam Dorsch, Louis F. Miller.—Grand Avenue Buick Co., Milwaukee, Wis. Capital $50,000. Incorporators: Don Allen, J. P. Neehan.—Wisconson Independent Auto Co., Milwaukee, Wis. Capital $10,000. Incorporators: John Schulz, Chas. Rietz, Martha Schulz.

Jaeger Dowling Co., Neenah, Wis. To deal in automobiles, tractors, and conduct a garage. Capital $50,000. Incorporators: W. J. Dowling, P. R. Jaeger, C. C. Del Marcelle.

Knudson Sales Co., Racine, Wis. To deal in automobiles, tractors, accessories, and conduct a garage. Capital $15,000.

Super Traction Truck & Motor Car Co., Shiocton, Wis. Capital $50,000. Incorporators: W. E. Gosch, Rudolph Schwandt, John D. Kreenn.

J. C. Kindle Oil Co., Walworth, Wis. To conduct a service station. Capital $10,000. Incorporators: Donald P. Hanson, P. C. Powers, Ethel Lee.

ARKANSAS.—Robinson-Smith Auto Co., Little Rock, Ark. To operate a general garage and deal in carbureters, tires and accessories. Incorporators: Ray A. Robinson, Arthur E. Smith.

TEXAS.—Merritt-Woodlief Automobile Co. of Amarillo, Amarillo, Tex. Capital $10,000. Incorporators: H. M. Merritt, Mary Loretto Merritt, W. H. Woodlief.

Galveston Motor Finance Co., Galveston, Tex. Capital $50,000. Incorporators: T. R. Hancock, J. M. Frenkel, J. M. Jacobs.

Citizens Garage and Battery Company, San Antonio, Tex. Capital $5,000. Incorporators: W. T. Scott, I. B. Bowen, J. N. Miller.

WASHINGTON.—Loxon Piston & Ring Co., Seattle, Wash. Capital $100,000.—Northwestern Motors Corp., Seattle, Wash. Capital $2,500,000.

CALIFORNIA.—Sapp Vulcanizing Air Bag Co., Sacramento, Cal. Capital $25,000. Incorporators: George Sapp, Joseph Rossi, John A. Brown, E. J. Hughes.—Economy Piston Ring Co., Sacramento, Cal. To manufacture piston rings. Capital $50,000. Incorporators: H. D. Cutrell, William S. Newton.

Sacramento Buick Co., Inc., Sacramento, Cal. To distribute Buick cars in Sacramento County. Capital $100,000.

E. A. Test, Inc., Stockton, Cal. To conduct a general automobile and tractor sales business. Capital $200,000. Incorporators: E., Z. and W. Test.

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REO

Is This a Knock at Your Door?

Surely you have envied the Reo distributor and his tremendous advantage in having not only a name and reputation behind him—but a line which includes all popular models.

Not only that, but a range of models so complete as to insure him business twelve months in the year.

This Reo line is the product of an organization which for eighteen years has shown continual successful growth.

In this entire period there has never been any re-organization—financial or otherwise—in the Reo Company. This record attests to a steady and ever increasing demand for Reo product, which could only have been sustained by its inherent worth.

The additional fact that more than ninety per cent of Reo sales are to former Reo owners is tangible evidence of that "quality in unseen places", and the exceptional values which have represented Reo policy from the start.

In addition to our five standard types of Passenger Cars, that Mighty Speed Wagon and the Reo-Cab, (a "Taxi" model designed and built expressly for that severe service) we have just added a new Phaeton model which is destined to assume a commanding position among fine motor cars.

Fortunate is the dealer who holds the Reo franchise today!

Changes occur occasionally. One may be imminent in your present territory or elsewhere that would interest you. A letter to our Sales Department will put you in line.

Reo Motor Car Company, Lansing, Michigan

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CALENDAR

Davenport, Iowa, Aug. 14-19.—Automobile Show, to be held in connection with the Mississippi Valley Fair and Exposition, auspices of the Tri-City Auto Assn., Fair Grounds.

Aurora, Ill., Aug. 18-26.—First Annual Automobile Show, to be held in connection with the Central States Fair and Exhibition, auspices of Aurora Dealers' Assn.; Christian H. Solfisburg, secretary.

Toronto, Ont., Aug. 26-Sept. 1.—National Automobile Show, to be held in connection with the Canadian National Exhibition.

Bay City, Mich., Aug. 28-31.—Northeastern Michigan Fair.

Milwaukee, Wis., Aug. 28-Sept. 2.—Passenger Cars, Trucks, Buses, Trailers, and Accessories Show, auspices of the Milwaukee Dealers' Assn., Fair Grounds; B. J. Ruddle, manager.

Columbus, Ohio, Aug. 28-Sept. 2.—Automobile Show, to be held in connection with the Ohio State Fair.

Detroit, Mich., Aug. 29.—Convention, National Safety Congress.

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Toledo, Ohio, September.—Annual Convention of the Ohio Automotive Trades Assn.

Minneapolis, Minn., Sept. 2-9.—Minnesota State Fair.

Sacramento, Cal., Sept. 2-10.—Automobile Show, auspices of the Motor Car Dealers' Assn., State Exposition Grounds; Royal Miller, manager.

Colorado Springs, Colo., September 4.—Annual Automobile Races, auspices of Pikes Peak Auto Highway; F. C. Matthews, traffic manager.

Hartford, Conn., Sept. 4-9.—Automobile Show, Connecticut Fair Grounds.

Indianapolis, Ind., Sept. 4-9.—Automobile and Accessory Show, to be held in connection with the Indiana State Fair, auspices of the Indianapolis Automobile Trade Assn., Auto Show Building; J. B. Orman, manager.

Spokane, Wash., Sept. 4-9.—Annual Automobile Show, to be held in connection with the Spokane Interstate Fair; B. J. Garnet, manager.

Wilmington, Del., Sept. 4-9.—Automobile Show, to be held in connection with the Delaware State Fair.

Findlay, Ohio, Sept. 5-8.—Automobile Exhibit, to be held in connection with the County Fair, auspices of the Hancock Automotive Trade Assn., Fair Grounds; Earl D. Rummell, secretary.

Charlotte, N. C., Sept. 6-8.—Industrial Tractor Show, auspices of the Ford Motor Co.

New York, N. Y., Sept. 7.—First Fall Meeting, Automotive Service Assn. of New York.

Rio de Janeiro, Brazil, Sept. 7-Nov. 15.—Automobile Show during International Exposition.

Modesto, Cal., Sept. 9-16.—Automobile and County Industrial Show, auspices of the Stanislaus County Auto Tradesmen's Assn.

Louisville, Ky., Sept. 11-15.—Used Car Show, to be held in connection with the Kentucky State Fair, auspices of the Louisville Auto Dealers' Assn.; George T. Holmes, manager.

Syracuse, N. Y., Sept. 11-16.—New York State Fair.

Red Bluff, Cal., Sept. 11-17.—Automobile Show, to be held in connection with the Second Annual Tehama County Fair, auspices of the Tehama County Fair Assn., Fair Grounds; George Wahl, manager.

Buffalo, N. Y., Sept. 13-15. Annual Credit Meeting of the Motor and Accessory Manufacturers' Assn., Lafayette Hotel.

Sioux City, Iowa, Sept. 15-19.—New Car Exhibit, to be held in connection with the Interstate Fair, auspices of the Motor Trades Bureau, Interstate Fair Grounds; Milton E. Duggan, manager.

The Hague, Netherlands, Sept. 15-20.—Annual Automobile Show.

Rome, Italy, Sept. 18-23.—Second Annual Meeting of the International Chamber of Commerce.

New York, N. Y., Sept. 23-30.—Closed Car Show, auspices of Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—New Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of German Automobile Manufacturers' Assn., Kaiserdamm Hall.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Ventura, Cal., Oct. 4-8.—Automobile Show, to be held in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson, manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

London, England, Nov. 3-11.—Olympia Automobile Show.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—New Car Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Boston, Mass., March 10-17.—Passenger Cars, Trucks, and Accessories Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

* Tentative.

FOREIGN TRADE OPPORTUNITIES

Reserved information may be obtained from the Bureau and its district and cooperative officers by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Inquiries should be addressed to the Bureau of Foreign and Domestic Commerce, Washington, D. C., or to any of its following branch or cooperating offices: New York, 734 Customhouse; Boston, 1801 Customhouse; Chicago, 1424 First National Bank Building; St. Louis, 402 Third National Bank Building; New Orleans, 214 Customhouse; San Francisco, 307 Customhouse; Seattle, 848 Henry Building; Baltimore, Export and Import Board of Trade; Cleveland, Chamber of Commerce; Chattanooga, Foreign Trade Secretary, Southern Railway System; Cincinnati, Chamber of Commerce; Los Angeles, Chamber of Commerce; Philadelphia, Chamber of Commerce; Portland, Ore., Chamber of Commerce; Dayton, Chamber of Commerce; Pittsburgh Chamber of Commerce.

Commercial agent in Sweden desires to secure the exclusive representation of firms for the sale of motors, automobiles, flying motors, tractors, woodworking machines, etc. References. File 3197.

A commercial agent in Italy wishes to secure the representation of firms for the sale of American clincher automobile tires. Quotations, c. i. f. Genoa. References. File 3224.

A firm in Sweden desires an agency for automobiles, both trucks and passenger cars. A moderately priced car not already on the Swedish market is acceptable. Quotations, c. i. f. Stockholm. Terms, cash against documents. References. File 3246.

Commission agents in Spain wish to secure an agency for the sale of automobiles and mineral oils. Quotations, c. i. f. Gijon, Santander, or Bilbao. Correspondence, Spanish. References. File 3253.

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PROOF of performance is evidenced in the tremendous growth recorded this year in sales of Ajax tires.

Sales records show over 100% increase in Ajax casings for 1922 as compared to the same months of 1921. Tubes, too, show an even greater gain.

The dealer who seeks to establish a really profitable tire connection should investigate the Ajax Dealer's Franchise — an agreement between this company and those who sell its products.

Ajax quality—always the highest—priced to meet legitimate competition.

AJAX RUBBER COMPANY, Inc.
NEW YORK CITY
Branches in Leading Cities

The AJAX PARAGON





Ajax Cord Tires | Ajax Truck Tires | Ajax Road King

There is an Ajax Tire which best meets every service requirement

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PUBLISHER'S OBSERVATIONS

SCHIAVONE BUYS A RAILROAD

MICHAEL SCHIAVONE, of whom the world knows little, bought a whole railroad the other day for $15,000, or only a little more than a brand-new Rolls-Royce with an extra body would have cost him. Thereby hangs a very moral and possibly prophetic tale. Of course, it wasn't a brand-new railroad. In fact, it was very much second hand. That is not to say, however, that Michael did not get a bargain, because he did. It was literally cheap at the price.

The transaction took place under court auspices at Mineola, N. Y., under an action by the Union Trust Co., and Edward V. Hale, following a receivership. The price is subject to judicial approval and the sale is subject to taxes, but the amount represents less than ninety-one-hundredths of one per cent of the valuation placed upon the property in 1910. Some ways of looking at it, that was high, and yet, in its way, it is still a pretty good railroad at that.

What Schiavone got was a power house at Douglaston, L. I., which, together with the land on which it stands cost originally $325,000; a sub-station at Roslyn, L. I.; 38 miles of track, three bridges, 18 passenger and four service cars. Before he gets his money back, together with his 200 percent profit, the Jersey City junkman will have to demolish the whole outfit and parcel it out to those who want the material he may be able to salvage out of it. It was worth, one time, the tidy sum of $1,650,000, all told.

¶ So passes what was formerly a prosperous and profitable undertaking serving a well-populated and rich section on the north shore of Long Island. And the strange part of it is that the territory is more prosperous and better populated than it ever was when the defunct New York Nassau Traction Co. was in its prime, because it is right on the margin, half in and half out, of the great City of New York itself.

Motor buses and privately owned automobiles are today carrying more people back and forth than ever rode the line; motor trucks are nightly hauling to market more produce than ever the big horse-drawn wagons used to cart over the roads. Another gilt-edged investment has gone blooie, that is all.

¶ It is probable that local traction was a good deal overplayed in the interest of promoters, aided and abetted by those great powers that supplied equipment. Certainly the "law of diminishing returns," operated to encourage many consolidations, which were engineered for the benefit of financiers and managers. Demoralization in consequence of the war wrought havoc with business organizations of every kind, and rising costs wiped out remaining possibilities of profit in all too many instances. Frankly, traction lines in many sections were borne down by the march of events.

It is now plain to see that those that survive must do so by reason of abundant natural patronage, wise and economical management and a willingness on the part of investors to accept meager earnings for quite a while to come. Some will go under; others will return to a new and very much moderated degree of prosperity. The part that the motor bus is playing, and is destined to play, is by far the most instructive phase of their regeneration.

¶ It is a curious thing that street railway operators should have been as slow to perceive their drift as they were. From the very early days they had been schooled in the idea that they must figure on periodic renewal of equipment. Power plants, for instance, were written off on the basis of a ten-year life, not because they could not be made to last longer, but because it was anticipated that advances in design would render them obsolete within that time. When a piece of machinery from the powerhouse had lived its life, it was often literally thrown away.

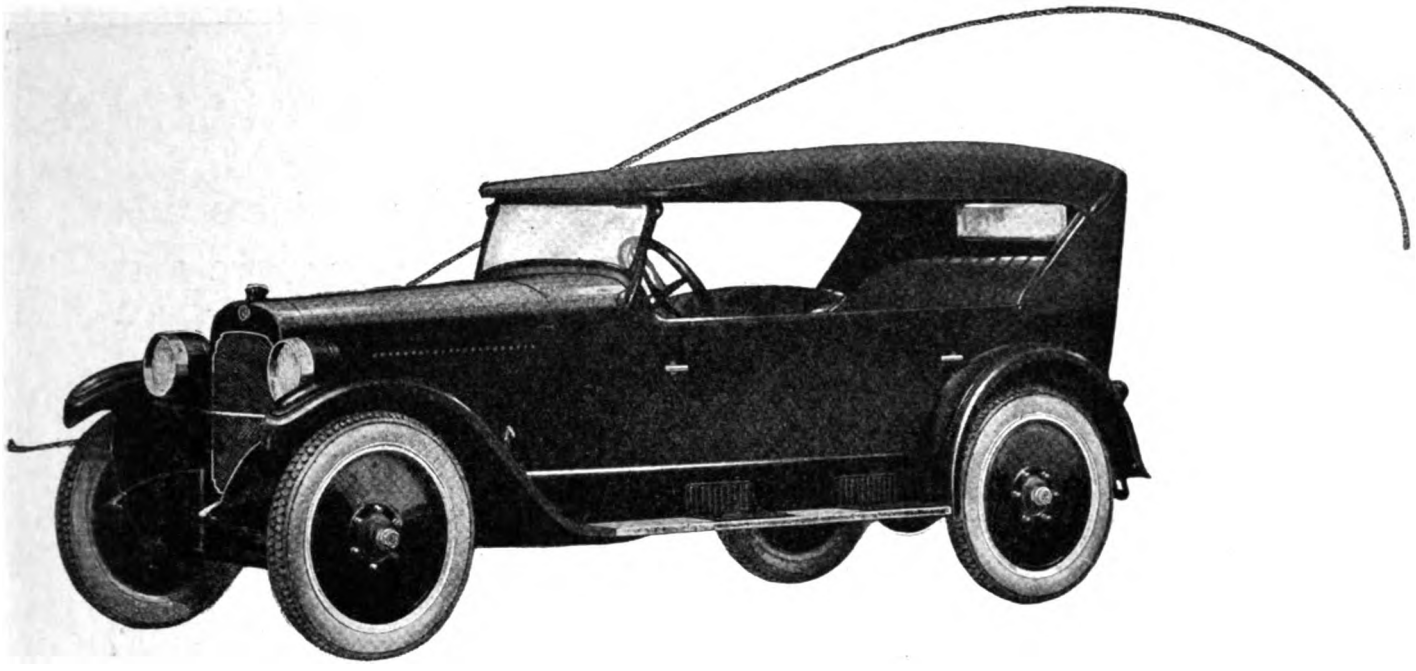
But when it came to a question of extensions into new territory, the adoption of trackless equipment was never countenanced. Always, the effort was to expand the system along its present lines. Similarly, when conditions changed and certain runs became unprofitable, the scrapping of rails and overhead construction was never considered, but operation was continued at a loss, and consolidations were effected in the vain hope that a more costly system of management would overcome a difficulty brought on solely by the fact that outlay was rising more rapidly than return, and lower rates in popular demand, while higher rates were justifiable.

¶ For many traction men the awakening came too late. Political chicanery is completing for them the destruction which their own shortsightedness began; their future is problematical and the junkmen of Jersey City and elsewhere are waiting for the wreckage of their exploits.

For others a far brighter future is in prospect, since they have learned to adapt themselves to changing conditions, and are even now making ready for still further changes. Closely associated with their plans, it is almost needless to say, the motor bus is now a most important consideration.

¶ To assert that the bus will wholly supplant the trolley car would be ridiculous. Haulage upon rails —given the paying load—must always be more economical than haulage on the highway. But where the load factor is uncertain, variable or low, the bus will supersede, even though political traffic signals may be set against it in some centers as plainly as they are set against the trolley car in others. Of that, there can be no longer any question.

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In fine performance and long life, in dignity and beauty, the Chalmers Six at the new price of $1185 is an unprecedented value.

Its worth as a motor car investment is so outstanding as to be absolutely without question.

The delights of fine six-cylinder motoring are now available to those who in the past have been forced to be content with less.

New Chalmers Six Prices

5-Passenger Touring Car, $1185 *Roadster, $1185*
7-Passenger Touring Car, $1345 *Coupe, $1595*

All Models Equipped With Disc Steel Wheels and Cord Tires

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada, Limited, Windsor, Ontario

The CHALMERS SIX

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In Brooklyn—

"We are very optimistic over the outlook for business this year and now that the public trend is growing more and more toward the Oldsmobile, both in the 4 and the 8 cylinder models, we feel that we will steadily forge ahead of our competitors in our respective class. We know we are above competition when it comes to real actual performance and cost of upkeep and we wish to say that we are sure that this will be one of the best years that we have ever had."

OLDSMOBILE COMPANY OF BROOKLYN, INC.
F. C. STOWERS,
General Manager

Brooklyn, you know, is where a great part of New York City *lives!*

Competition among motor car dealers there is unusually keen.

Here, too—the Brooklyn Oldsmobile dealer reports a decided trend upon the part of New York's *super-critical* motor car buyers toward the Oldsmobile!

Like all Oldsmobile dealers—the Oldsmobile Company of Brooklyn is making money; it is growing; it is thoroughly satisfied with its franchise.

If Oldsmobiles are in big demand in Brooklyn—they will be even more sought in communities where competition is less keen.

Your territory may still be open. Naturally, however, the better territories are rapidly being taken by alert dealers.

The Oldsmobile franchise is eminently worth-while! Prompt action may get it for you. Wire or phone us, or write by special delivery, for an appointment and complete information concerning your territory.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation



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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

CAR AND MODEL	TOURING Price	TOURING Seats	TOURING *Added Equipment	SPORT OR ROADSTER Price	SPORT OR ROADSTER Seats	SPORT OR ROADSTER *Added Equipment	COUPE Price	COUPE Seats	*Added Closed-Car Equipment	SEDAN Price	SEDAN Seats	ENGINE Size	ENGINE Make	ENGINE Valves	ENGINE Cam Drive	ENGINE Cooling	ENGINE Ign'g Cir.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem. Wheels	$ 580	2	Starter-Dem. Wheels	$ 645	5	3¾x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	Starter—Dem. Rims	645	5	3¹⁄₁₆x4¼	Con	L	H	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5								760	4	3⅝x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "490"	525	5		510	2		840	4	C	860	5	3¼x4	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "490"
Overland	550	5		550	2		850	2		895	5	3⅜x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980	2	C, K, N, P	1,440	5	3⅞x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	B, D, P	1,395	5	3¾x4¾	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3		1,395	5	3¼x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,265	3	B	1,385	5	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell "P"	885	5	C, K	885	2	C, K	1,385	4	C, D, K, T	1,485	5	3⅝x4½	Own	L	H	T	...	Eag	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell "P"
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	C, P, V	1,365	5	3⅞x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D, H	895	2	C, D, H	1,095	...	C, D, H	1,345	5	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,385	3		1,545	5	3¾x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5		985	2		1,400	3		1,450	5	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, V, Z	1,795	4	C, E, H, N, T, V, X, Y	1,795	5	3¹⁄₁₆x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.66	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3	C, D, H, N, O, P, T, U, b			3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5					1,195	2		1,895	5	3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Tim	S	4.66	32x4	108½	Essex
Halladay	1,095	5		1,095	2		1,990	3		2,085	5	3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5		1,225	4	C, D, M, P, Z	1,595	4	P, V	1,745	5	3¼x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,635	4	C, O, N, P, V	1,785	5	3¼x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Dixie Flyer	1,175	5	G	1,295	4		1,545	3		1,595	5	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Allen	1,195	5		1,195	3					1,845	5	3½x5	Own	L	H	T	...	Str	Con	Wes	B&B	Own	Col	S	4.6	32x4	110	Allen
Saxon	1,195	5		1,295	4		1,795	4		1,795	5	3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,375	5	B	1,350	2		1,875	4		2,095	5	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
R & V Knight	1,565	5					2,385	4	A, B, G, O	2,475	5	3⅜x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q				2,750	4	3¹⁄₁₆x5½	Own	H	C	T	...	...	Del	Del	...	Own	S	4.41	32x4½	120	Frontenac
Templar	2,125	5	G, I	2,175	4		2,785	4	A, H, I, N, V	2,785	5	3⅜x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Stearns-Knight	2,250	5		2,250	2		3,150	4		3,450	5	3¾x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	L	4.5	34x4½	125	Stearns-Knight
H. C. S.	2,400	5		2,400	2		2,850	3	C, 2J, L, O, U, V	3,150	5	3¾x5½	Wei	H	H	P	...	Str	Del	Del	War	.....	Own	S	...	32x4½	120	H. C. S.
Handley-Knight	2,650	7	D, G, J, K				3,450	4	D, G, J, L, O	3,450	7	4¼x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4	B, D, H, J, L, O, U	4,450	6	4¾x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
duPont	3,200	5	B, G, H	3,000	2		3,800	...		4,000	...	3¼x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z	3,985	2	A, D, G, J, L, Z				4,650	4	4½x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	B, G, 2I, L	5,250	7	3⅞x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				G	7,000	5	4x5½	Own	S	C	P	...	Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	B, D, C, G	1,550	5	3¹⁄₁₆x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	H, J, K, V	1,395	5	3¹⁄₁₆x4¼	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3¹⁄₁₆x4½	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5		995	3		1,445	4		1,465	5	3¹⁄₁₆x5	Own	L	H	T	...	Str	A-K	Rmy	Det	War	Tim	S	4.43	32x4	112	Jewett
Oakland	995	5		1,165	4	L	1,445	4	N, O, V	1,545	5	2¹⁄₁₆x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Nor	Mun	W-M	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4		1,585	5	3x4½	Own	H	C	P	...	Str	G&D	Bos	B&B	Mec	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3		1,825	5	3¹⁄₁₆x4¼	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1,185	2		1,595	4	C, D, K, P, T	2,295	5	3¹⁄₁₆x4½	Own	L	C	P	...	Str	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson Light Six	1,195	5	H, P									3½x4¼	Con	L	C	P	...	...	Wes	Wes	B&B	.....	Sal	S	....	32x4	114	Anderson Light Six
Buick	1,195	5	B, C, D, P	1,175	3	B, C, D, P	1,935	5	3, C, D, G, P, T, V	1,985	5	3⅜x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4		1,995	5	3¹⁄₁₆x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Velie "34"	1,235	5	P, Z	1,235	2	P, Z				2,085	5	3¹⁄₁₆x4¼	Fal	H	H	T	...	Str	A-K	Wes	B&B	Dur	Col	S	4.6	32x3½	112	Velie "34"
Nash Six	1,240	5	R	1,395	4	R						3¹⁄₁₆x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G	1,250	2	B, C, D, G	1,875	4	B, D, G, S	2,050	5	3¹⁄₁₆x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P, Z	1,275	2		2,185	4	S, U, V	2,185	5	3¹⁄₁₆x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3¼x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	K, J							1,795	5	3¹⁄₁₆x4¼	Con	L	C	P	...	Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	COUPE Price	Seats	*Added Closed-Car Equipment	SEDAN Price	Seats	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Elgin "K-1"	$1,295	5	C, D	$1,345	4	C, D, H, K, Z	$1,695	4	C, H, N	$1,695	5	3½x4¼	Fal	H	H	T	...	Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Liberty	1,295	5		1,495	5	C, D, G, H, K, O, T, Z	2,035	4	C, T, V	2,245	5	3½x5	Own	L	H	T	...	Str	Wag	Wag	B&B	Det	Tim	S	4.66	32x4	117	Liberty
Moon "6-40"	1,295	5								1,695	5	3½x4¼	Con	L	C	P	...	Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T	...	Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				B, G, N	2,095	7	3¼x5	H-S	L	H	P	...	Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,285	5	C, D, E, H, I, O, P	1,385	2	C, D, E, H, I, O, P	1,895	4	C D E H I N O P T Va	1,945	5	3½x4½	Own	H	H	T	...	Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4		2,190	7	3¼x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	2,065	3	C, D, H, N, O, P, T, U	2,165	5	3¼x4½	Con	L	H	P	...	Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Maibohm	1,395	5		1,495	4		2,165			2,165	5	3½x4½	Own	H	H	T	...	Til	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Maibohm
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	B, C, D, P, G, T, V	2,195	7	3⅝x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	A, B, C, D	2,245	5	3¼x5	Own	L	H	P	...	Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	O	1,895	4		2,275	4	O	2,345	5	3¼x4½	Con	L	H	P	...	Ray	Rmy	Rmy	B&B	G-L	Sal	S	5.0	32x4	121	Auburn
Columbia	1,475	5		1,475	4		2,295	4		2,350	5	3¼x4½	Con	L	H	P	T	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia
Jackson	1,485	5	G, K	1,685	4		2,985	4		2,985	5	3¼x4½	Con	L	H	P	...	Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Zb	2,355	4	B, G	2,435	5	3⅛x5	Own	N	H	P	...	Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4		1,985	5	3½x4¾	Own	L	C	P	...	Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Mitchell	1,490	5	A	1,790	5	A C D F H I K T V W	2,050	4	A, G, N, U	2,275	5	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,195	4	B, D, H	2,375	7	3½x5	Own	L	C	P	...	Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, O	1,545	2	D, G, H, O	2,095	3	D, G, H, O, U, V	2,395	5	3½x5	Own	L	H	P	...	Ray	Kin	L-N	B&B	Own	Own	S	4.11	33x4	121	Haynes "55"
Pilot "6-45"	1,500	5	C, G	1,500	4							3½x5	T-H	L	H	P	...	Til	Del	Del	B&B	Mun	Spk	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4		2,595	5	3¼x4½	Con	L	H	P	...	Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Velie "48"	1,585	5	H, Z	1,800	4		2,485	4	V	2,485	6	3¼x4¼	Con	L	H	P	...	Str	A-K	Bjr	B&B	Dur	Tim	S	4.67	32x4	115	Velie "48"
Davis "61"	1,595	5		1,695	4		2,095	4		2,195	5	3⅜x4½	Con	L	H	P	...	Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3		2,395	5	3½x5	Rut	L	H	P	...	Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	G, H, P	2,585	5	3⅜x4½	Con	L	H	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	A	2,550	7	3¼x4½	Own	H	H	T	...	Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2					2,645	5	3¼x4½	Con	L	H	P	...	Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Anderson	1,650	5	A, C, D, G, H, O, P	1,850	4	A, C, D, G, H, O, P	2,450	4	A, C, D, G, H, O, P	2,550	5	3¼x4½	Con	L	H	P	...	Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	C, G, P, V	2,400	5	3¼x4½	Ans	H	H	P	...	Ray	A-L	A-L	....	War	Tim	S	5.0	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	B, C, D, G, O, S	2,475	7	3½x5	Own	L	H	P	...	B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	D, H	1,690	2		2,750	4		2,790	5	3⅜x4½	Con	L	H	P	...	Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "A-44"	1,690	5	H, O, P, Z	1,890	5	E H 2I 2J M O P T X Z			E 2I 2J M N O P T U V X	2,890	5	3¼x4½	Con	L	H	P	...	Ray	Del	Del	B&B	WrG	Tim	S	4.66	32x4	120	Westcott "A-44"
Elgin "700"	1,695	5	B, C, D, H									3¼x4¼	Own	H	H	T	...	Str	Rmy	Wes	Rck	Mec	Col	T	4.25	32x4	118	Elgin "700"
Hudson	1,695	7	B	1,645	4		2,570	4		2,295	7	3½x5	Own	L	H	P	S	Own	Bos	Bos	Own	Own	Tim	S	4.45	34x4½	126	Hudson
Lexington "23"	1,695	5		2,045	5		2,345	4		2,545	5	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "22"
Stanwood	1,765	5		1,765	2		2,750	3				3¼x4½	Con	L	H	P	...	Str	A-K	Wes	B&B	G-L	S-P	S	4.5	33x4	118	Stanwood
Moon "6-48"	1,785	5	B	1,785	2		2,785	4		2,785	5	3¼x4½	Con	L	H	P	...	Ray	Del	Del	B&B	B-L	Tim	S	4.66	32x4	122	Moon "6-48"
Moon "6-58"	1,785	7										3⅜x4½	Con	L	H	P	...	Str	Del	Del	B&B	B-L	Tim	S	....	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, P	1,750	3		2,550	4		2,690	5	3¼x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	4.66	32x4½	122	Case "X"
Jordan	1,795	5	B, D, G, Z	1,895	2	B, D, G, M, Z	2,785	5	B, D, G, Z	2,785	5	3⅞x4¾	Own	L	H	P	...	Str	Del	Del	Lng	B-L	Tim	S	4.42	32x4	120	Jordan
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	C, G, H, V, Z	2,500	5	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
American	1,850	5	P	1,995	4	L, P			P	2,695	7	3¼x5	H-S	L	H	P	...	Str	A-K	G&D	B&B	WrG	Sal	S	4.5	32x4	127	American
Kissel (Standard)	1,885	5										3⅞x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Franklin	1,950	5	A, G	1,900	2		2,750	3		2,850	5	3¼x4	Own	H	H	A	...	Own	A-K	N-E	B&B	Own	Own	E	4.33	32x4	115	Franklin
Comet "C-53"	1,985	5								2,985	5	3½x5¼	Con	L	H	P	...	Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53"
Westcott "D-48"	1,990	7	D, H, O, P	2,190	7	D F H 2I 2J M O P T X						3½x5¼	Con	L	H	P	...	Ray	Del	Del	WrG	WrG	Tim	S	....	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5		2,100	4		2,950	4		3,000	5	3¼x5	H-S	L	H	P	...	Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	A, B, C, D, G, O	3,155	7	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Waltham	2,350	5		2,350	2		3,050	4		3,250	5	3½x5	Rut	L	H	P	...	Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4		3,825	7	3½x5¼	Own	H	C	P	...	Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	F G, H, 2J, L, O, X	3,075	6	3⅞x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, O, X, Y	2,595	2	C, D, H, J, L, O, T, W	3,095	5	A D G H O U V X Y	3,395	7	3½x5½	Own	L	C	P	T	Str	Kin	L-N	B&B	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, O, Q	2,475	4		3,000	4		3,105	5	3½x4½	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	C, G, O, M	3,275	5	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P, R	2,600	7	A, B, C, E, G, H, N, P, R	3,300	4	A B C E G H N P R V	3,600	6	3½x4¼	Own	H	H	A	...	Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Severin	2,550	5										3½x5¼	Con	L	H	P	...	Str	Wag	Wág	B&B	Mun	Sal	S	4.5	33x5	122½	Severin
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	A, G, H, J, L, U, Y, Z	4,250	5	3½x5¼	Con	L	H	P	...	Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"

(SEE FOOTNOTES)

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING			SPORT OR ROADSTER			COUPE			SEDAN			ENGINE																		CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	*Added Closed-Car Equipment	Price	Seats		Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	
(SEE FOOTNOTES)													SIX-CYLINDER PASSENGER CARS—Continued																	(SEE FOOTNOTES)
Packard Single-Six	$2,685	7	C, G, O M							$3,525	7		3½x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		$2,700	4		$3,350	4		3,700	7		3½x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	L		34x4½	130	Stearns-Knight
Ferris "70"	2,795	6		2,895	2					3,795	4		3½x5¼	Con	L	C	P		Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5		2,975	2					4,500	5		3½x5¼	Con	L	C	P		Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G	3,185	4		3,985	4	A, B, G, J, L	4,385	7		3½x5½	Own	H	H	P		Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4					5,500	5		3½x5¼	Con	L	H	P		Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, G	3,100	4	A, B, G	4,300	4	A, B, G	5,100	7		3½x5½	Own	H	H	P	T	Joh	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G	3,600	4	A, B, G	4,450	4	A, B, G	4,500	7		3¾x5¼	Own	L	C	P		Ray	Del	Del	B-L	B-L	Tim	S	4.91	35x5	132	Winton "40"
Ogren	3,750	5		3,750	4		4,500	4		4,800	5		3½x5¼	Con	L	C	P		Ray	Boe	Boe	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4		4,800	7		3½x5¼	Own	S	C	P		Ray	Sen	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H J M O T W Z				4,900	3	A C D G H J M O T W Z	4,900	5		3½x5	Own	H	H	A		Zen	Sen	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	A, G, H	5,750	7		4x5	Own	H	H	P		Str	Boe	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			A, G, H, O	6,500	5		3½x5¼	Con	L	C	P		Str	Boe	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	A B C E G M N O P S U V	7,000	6		4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5								6,825			3¾x5¼	Own	H	S	P		Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A, B, C, D, G, J, M, O, Z	6,300	4	A, B, C, D, G, J, M, O, Z	7,500	4	A, B, C, D, G, J, M, O, Z	7,500	7		4½x6	Own	T	H	P		Ray	Spl	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4					8,900	7		4½x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X			A, B, D, E, G, 2I, P, Q, U	11,000	7		4½x5½	Own	T	H	P		B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	F, G, H, I, J, L, U, Z										4½x4¾	Own	L	H	P		Own	Own	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
EIGHT-CYLINDER PASSENGER CARS																															
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	D, N, O, P, V	2,145	5		2⅞x4½	Own	L	H	P		Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			G, N, O, P	2,635	7		2⅞x4¾	Own	L	H	P		B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	A, B, D, G, H, N, Y, Z	2,550	5		3x5	Own	L	C	T		B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	2	B, C, J, K, O, P	3,275	4	B C G J K O P T U V	3,475	7		3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Cole	2,485	5	A, B, G, N	2,485	4		3,185	4	A, B, G, N	3,685	5		3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Standard	2,500	7	A, B, D, G	2,500	4	A, B, D, G	2,750	4	A, B, D, G	3,200	7		3¼x5	Own	L	H	P		Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Apperson	2,645	7	A, G	2,620	4		3,625	4	A, G	3,695	7		3¼x5	Own	L	H	T		Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Peerless	2,790	7	A, B, C, E	2,790	4		3,500	4	A, B, C, E	3,650	5		3½x5	Own	L	H	P		B&B	A-K	A-L	Own	Own	Own	P	4.9	34x4½	125	Peerless
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	A, B, C, D, G, P, T, V	4,100	5		3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	5	A, B, C, D, G, T	3,800	4	A, B, C, D, G, T	3,900	4	A, B, C, G, U, T	4,200	5		3½x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.64	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	A B C D G H O T U V	5,500	7		3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2		5,250			6,000			3½x5¼	Own	L	H	P		Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	5,800	5	A B E G H I J M O X Z				7,150	4	A E G H J M U V X Z	7,650	7		3¼x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5		6,500	4		7,800	4		7,800	7		2⅞x5	Own	H	V	P		Str	Del	Del	Own	Own	Own	S	4.6	33x6	134	Duesenberg Str. Eight
TWELVE-CYLINDER PASSENGER CARS																															
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	C, G	5,400	7		3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—stop signal.

ENGINE: Ans—Ansted; Con—Continental; Due—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lye—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wei—Weidely.

VALVES ARRANGED: H—in head; L—at side; M—side and head; R—horisontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith.

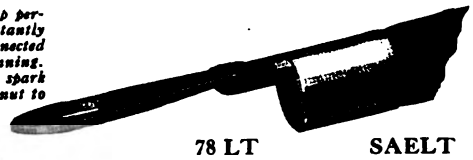
IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Leece-Neville; N-E—North East; Rmy—Remy; Scn—Scintilla; Sim—Simms; Spl—Splitdorf; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; Rok—Rockford; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

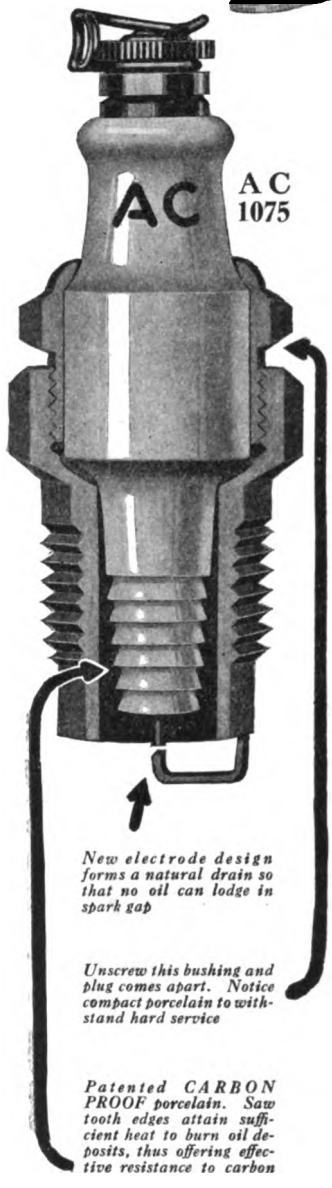
REAR END Adm—Adams; Col—Columbia; Fln—Flint; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

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The Standard Spark Plug of the World



78 LT



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

SAELT



Long SAE
Durant 4
Oakland
Olds
Saxon

78 DT

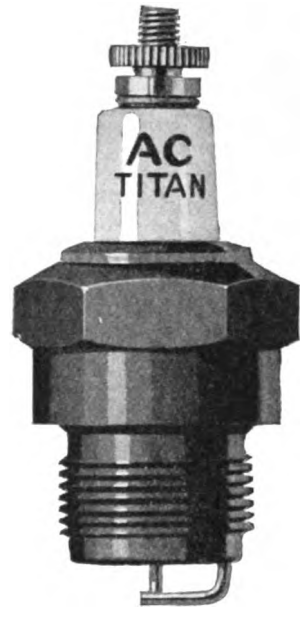


Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

78 LBT



Long Body 7/8
Chandler
Willys-Knight



Reg. 7/8 T
Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton
and 170 other makers of cars, trucks and tractors

18 MT



Reg. Metric
Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½
Overland 4

SAENT



Extra Long SAE
Elgin
McFarlan
Nash

SAET



SAE
Apperson
Durant 6
Mitchell
Marmon
Standard 8

Millions of Car Owners Must Have These AC Plugs

The fact that most builders of fine cars use AC's for factory equipment year after year is an outstanding proof of AC quality and means that there are millions of car owners who know that AC's are the proper plugs to use. This alone creates a tremendous market.

Of course the plugs shown here give only a small idea of the many cars that are factory equipped with AC's. But they give you some thought of the great, ready-made market that already exists for the dealer who goes after the AC business of his neighborhood.

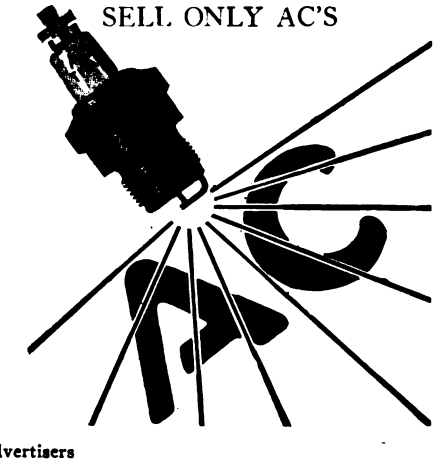
And don't forget—there are specially designed AC's for any engine. If you have the complete AC line you can easily meet the spark plug needs of every customer. You need waste no time in "introductions" or long-winded explanations. ALL YOU HAVE TO DO IS SAY "AC."

The famous AC 1075 is AC's answer to the need for a better plug for Ford engines—cars, trucks, and tractors.

Think of it—this plug gives you first place in the biggest automotive market! And when you build up an AC trade among Ford owners of your community you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum—the AC line gives you this opportunity to reduce your plug stock to one line—the best line, the most profitable line.

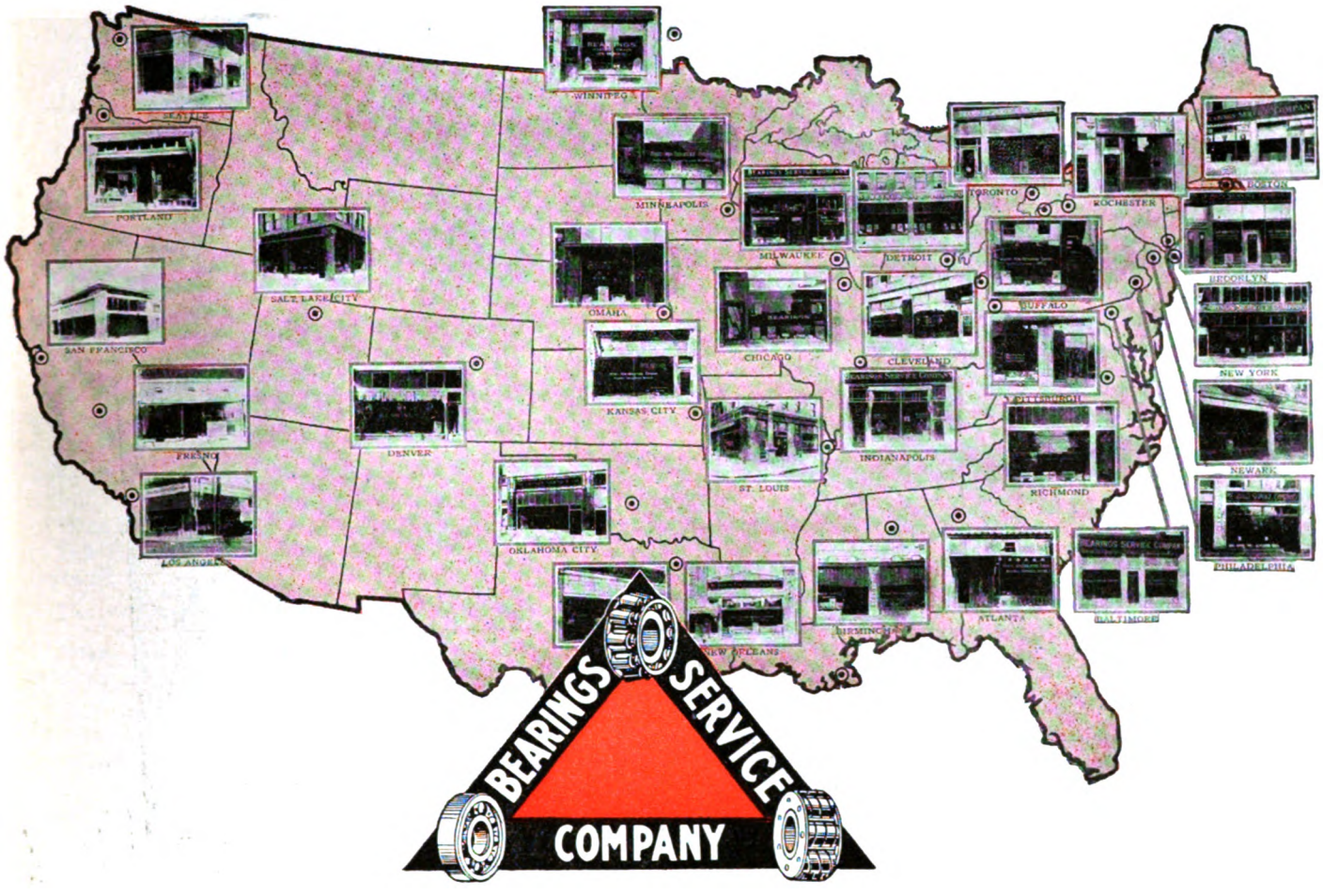
SELL ONLY AC'S



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915, U. S. Pat. No. 1,216,139, Feb. 13, 1917. Other Patents Pending

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Why you never have to *wait* for a *New* Hyatt, Timken or New Departure Bearing

No matter where you are located it is never necessary for you to wait long for a new Timken, Hyatt or New Departure Bearing.

The Bearings Service Company maintains a distribution system for these three makes of bearings that comprises 33 centrally located branches and approximately 1000 distributors established in every section of the United States and Canada.

Look to the Bearings Service Branch or Distributor nearest you for your complete bearings replacement needs.

BEARINGS SERVICE COMPANY

General Offices: Detroit, Michigan

Branches in Principal Cities

THIRTY-THREE BRANCHES

Atlanta	Buffalo	Detroit	Los Angeles	New Orleans	Pittsburgh	San Francisco
Baltimore	Chicago	Fresno	Milwaukee	New York	Portland, Ore.	Seattle
Birmingham	Cleveland	Indianapolis	Minneapolis	Oklahoma City	Richmond	St. Louis
Boston	Dallas	Kansas City	Newark	Omaha	Rochester	Toronto
Brooklyn	Denver			Philadelphia	Salt Lake City	Winnipeg

Approximately 1000 Distributors in Other Centers

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WARNER

The Best Advertised Merchandise of its Kind





Reproductions of some of the whole page ads in the Saturday Evening Post

Never before has there been such an advertising selling campaign behind canned goods for motor cars as the Warner Liquid Solder campaign.

Dealers of all kinds are direct beneficiaries of this tremendous selling pressure.

Instead of a radiator compound simply being something to "carry in stock," we are making it live, moving, salable, profitable merchandise.

Until we started this campaign there was an appalling lack of understanding of the purpose of water and almost criminal indifference among car owners if water was lost through leaks.

We are changing this, by educating car owners that the loss of water quickly overheats and causes ruinous damage to the engine. And when for only $1.00 they can always carry a 16-ounce can of Warner Liquid Solder to instantly find and stop leaks, the car owners are *not* going to remain indifferent any longer.

They are buying and will continue to buy in increasing numbers. They will not accept questionable substitutes. They will not take the chance of clogging circulation.

Will they buy from you or your competitor? Get *your* share of this rapidly-increasing and permanent trade—order from your jobber at once.

WARNER-PATTERSON CO., CHICAGO, ILL., 914 S. Michigan Ave.

Order through

Digitized by Google

LIQUID SOLDER

FINDS AND STOPS LEAKS

The Best to Sell

The best merchandise of any kind for the dealer to sell is the one for which there is the greatest public demand.

The one that moves the fastest!

Among radiator compounds Warner Liquid Solder is the best seller.

The name Warner itself is probably the best known name in the automobile accessory field. Car owners have faith in it. They have done business with merchandise under that name over a long period of years and they have always enjoyed complete satisfaction.

There are millions of car owners to whom the name Warner is the best guarantee, and it is the biggest *selling asset* any dealer could ask for.

But the fundamental reason Warner Liquid Solder is the best to sell is its wonderful efficiency in quickly finding, and absolutely stopping leaks and furthermore—

It does *not* clog the cooling system nor inflict the slightest injury of any nature. As a matter of fact it does actually *assist* circulation.

That is why car owners are suspicious of questionable substitutes. They want Warner Liquid Solder, *which is guaranteed.*

Every day the number of satisfied users rapidly increases. Every day the demand grows. Do not wait and lose this business, order from your jobber at once.

The Best to Use

Warner Liquid Solder is time-tested by car owners all over the country and indorsed by leading engineers, manufacturers, and approved by chemical authorities.

Its greatest virtue is its unfailing ability to completely stop and almost invariably to *permanently* stop leaks.

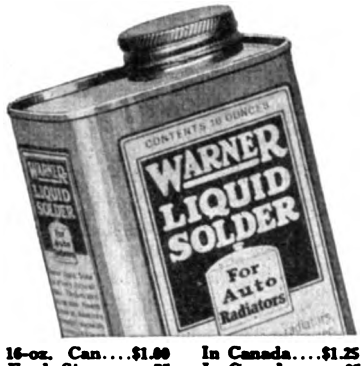
Its performance far and away exceeds the claims we make for it. We get reports almost daily of how it stopped leaks where *everything else had failed.* Its efficiency is almost unbelievable.

Its quality easily explains the public preference for Warner Liquid Solder, but that is only half the reason for its great *selling success.*

Equally important is its *harmlessness.*

Usually half of a 16-ounce can is enough for the average water system. Figuring that the average water system holds about 4 gallons of water, it requires only 8 ounces of Warner Liquid Solder, or 1/64 of the entire liquid volume to find and stop the leaks. It overcomes the common objection to radiator compounds because there are no sediments or solids to cause trouble, form and interfere with or clog circulation.

We will furnish you with attractive show counter display stands which hold three $1.00 cans of Warner Liquid Solder. Also we will send you window displays, window signs and other advertising matter upon request.



16-oz. Can....$1.00 In Canada....$1.25
Ford Size..... .75 In Canada.... .85

Mail Us This Coupon

WARNER-PATTERSON COMPANY, CHICAGO, ILL.,
914 South Michigan Ave.

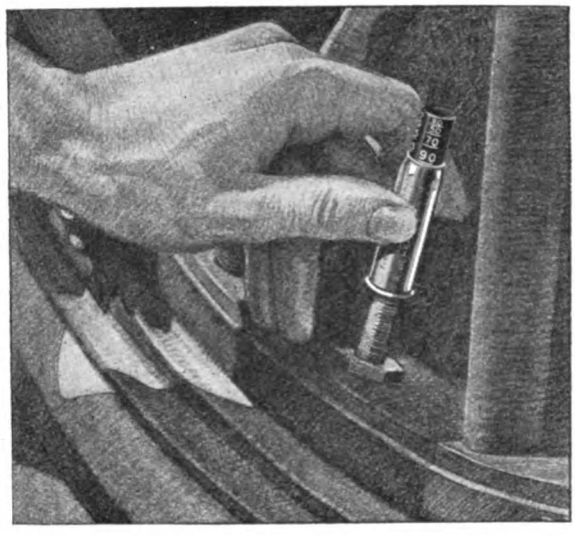
Gentlemen.—Please send us information regarding the greatest dealer offer ever made.

Name .....
Address .....
Town ..... *State*.....
My Jobber is .....
Address .....

A. T.

Your Jobber

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If a Car-Owner Wants Tire Mileage

Tell him to buy a Schrader Tire Pressure Gauge and USE IT

No car-owner can expect maximum mileage unless he keeps his tires properly inflated at all times.

He can't do this unless he owns a tire gauge.

The man who doesn't own and use a tire gauge, guesses about his air most of the time.

The idea of a tire gauge is to stop guessing about tire inflation.

Advise your customers to own a Schrader Tire Gauge, and if they don't own one to buy one.

Its use is simple; it is always accurate; it will last for years.

Order a stock now of Schrader Tire Pressure Gauges from your jobber. They are easy to sell because they are needed—and there's worth-while profit in it for you

Manufactured by A. SCHRADER'S SON, Inc., Brooklyn, N. Y.
CHICAGO TORONTO LONDON

SCHRADER

TIRE-PRESSURE-GAUGE

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You Can Do a Good-Sized Business on Valve Caps, Dust Caps, and Valve Insides

No man wants to drive around with his valves uncovered—no valve cap and no dust cap. Let your customers know that you have them for sale.



Schrader Valve Insides

Many car-owners like to have several spare valve insides in the tool kit. Packed five in a metal box.

Schrader Valve Caps

Seal in the air. Half the cars you see need from one to four valve caps. Schrader Valve Caps in metal boxes of five are ready sellers when **offered** for sale. They are simple, effective, and economical for holding air in a tire.

Schrader Dust Caps

Quickly removed or replaced. Protect the valve from dust and dirt. Will not shake off. Combination Rim Nut and Dust Cap Bushing illustrated, provides for quick attachment and removal of Dust Cap.

CAUTION: Apply Rim Nut with wrench or pliers, but do not use either of these on the Dust Cap, which should be screwed on by hand only—not necessary to force Dust Cap tightly against nut, but only sufficiently to seat the Dust Cap.

Schrader Pump Connection

For use on foot pumps. Air pressure can be tested without removing pump hose from valve.

Schrader Valve Repair Tool

A useful little tool, handy to every man who makes his own minor repairs. Order a stock now from your jobber.

Manufactured by A. SCHRADER'S SON, Inc., Brooklyn, N. Y.

CHICAGO TORONTO LONDON

SCHRADER

TIRE-VALVE-ACCESSORIES

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A PRODUCT OF THE NEW ERA



ENDURANCE

that wins friends and records

REPUBLIC GRANDE CORDS are piling up the mileage records! Not once or twice, but always they are delivering service as yet unsurpassed by any tire on the road.

And there will be no "let-down." The wonderful resiliency and toughness of Prodium Processed rubber, the sturdy strength of side-wall and carcass that have "made" Republic will not and shall not change. The Republic policy of "quality always" does not vary.

Republic Tires, "products of the new era," are everywhere turning the casual buyer into the steady customer. Larger sales, quicker turnover, longer profits, and *steadfast customer-friends* are the rewards of the Republic dealer.

For new plans and prices on other products of the new era, get in touch with the nearest Republic branch today.

THE REPUBLIC RUBBER COMPANY
Youngstown, Ohio
New York, Chicago, Philadelphia, Minneapolis, Atlanta, Cincinnati, Kansas City, Pittsburgh



REPUBLIC TIRES

With STAGGARD Tread

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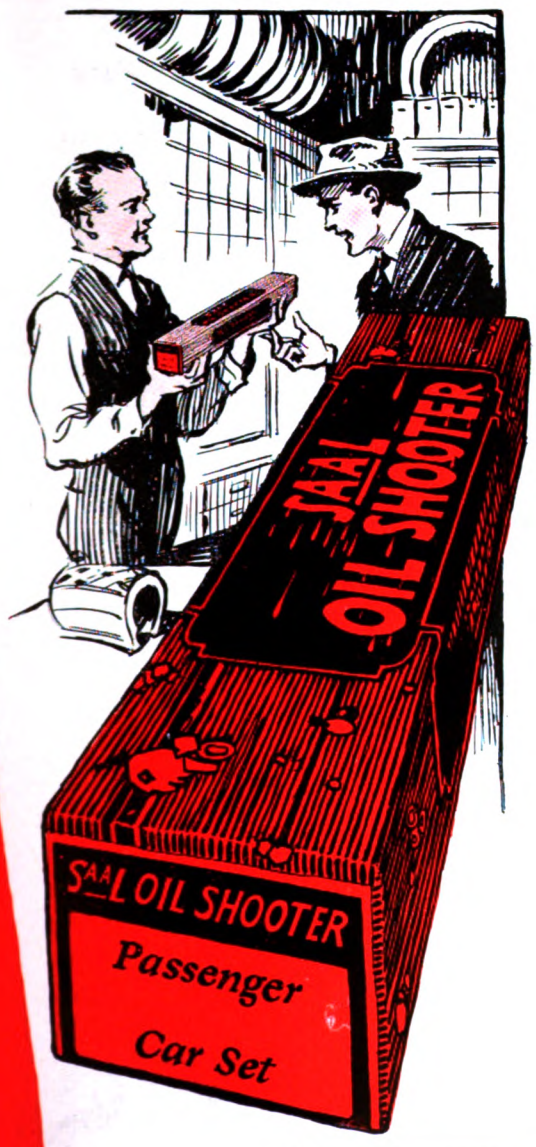
At Last!

In package form

Retail Price — Complete Set (Oil Shooter with Holster and 42 Fittings).

$8.00

Anywhere in the United States



The Saal Oil Shooter

—oil pressure chassis lubrication

It's what the dealer wants! A compact, handy package—complete—ready to sell. It's the kind of merchandise that sells quickest and easiest.

The SAAL OIL SHOOTER—a system of oil pressure lubrication—comes to the dealer in a convenient red and black box. Every item is there, the simple, fool-proof copper Oil Shooter, the holster, the 42 solid brass fittings, and the easy-to-understand instructions.

With the Saal Oil Shooter on your shelf, you are not bothered with order picking. No installation sheets are necessary. You can retail this better oil lubrication system at a price that's lower than other high-pressure systems. This low price is certain to fit the purse of any car owner. Yet, a wide margin of dealer's profit is assured.

New sales-making advertising helps are supplied to every dealer. And behind all dealers there is to be a man's-size magazine and newspaper advertising campaign to create a consumer demand for the Saal Oil Shooter. Every motorist will hear of this Shooter and how it "keeps your car young." It's a money-saver for motorists and a money-maker for you.

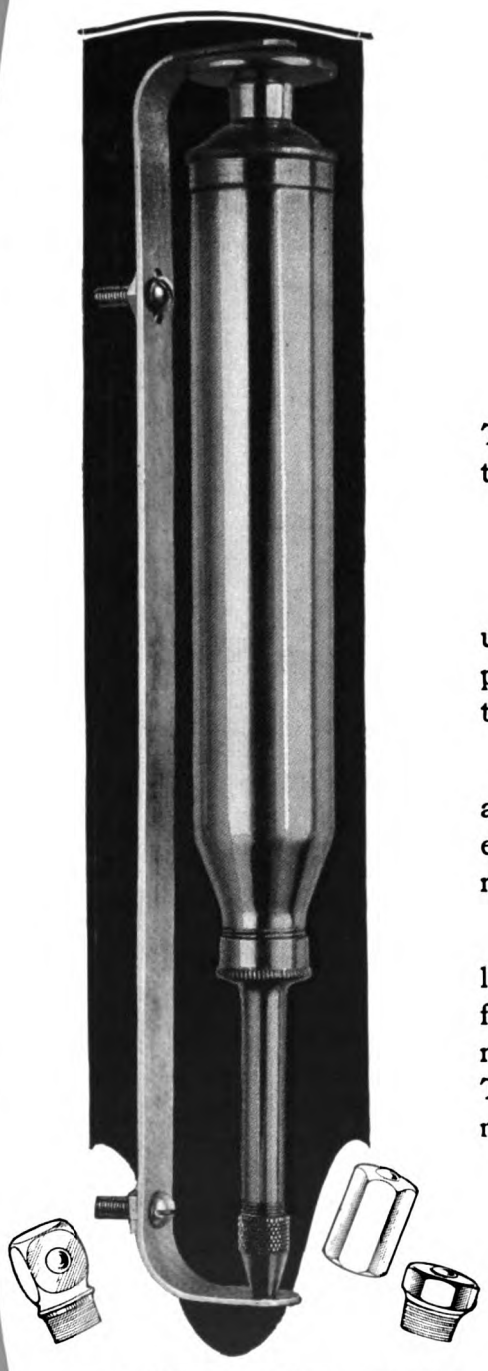
To know all the details is to become enthusiastic. Just ask your jobber. There's money in it for you.

H. G. Saal Company
1800 Montrose Avenue
Chicago

KEEPS YOUR CAR YOUNG

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KEEPS YOUR CAR YOUNG



Retail Price—Complete Set (Oil Shooter with Holster and 42 Fittings).

$8.00

Anywhere in United States

Engineers and Mechanics Know— Do You?

They know that heavy oil is the best chassis lubricant. They know it should be forced into bearings under pressure, thus forcing grit and dirt out and lubricating thoroughly.

The Saal Oil Shooter

uses a heavy oil, forcing it into bearings under 2,000 pounds pressure (greater pressure than any other system). It gives the most thorough lubrication.

The Saal Oil Shooter has no flexible tube—in fact, there are no delicate parts to get out of order. The Shooter is easily filled and may be operated with one hand. The average motorist can install all of the fittings and operate the Shooter.

The H. G. Saal Company aimed to produce an oil pressure lubrication system that would sell at a low price in package form. One that would be simple and strong—meeting the needs of every car owner. All this has been accomplished. The Saal Oil Shooter, because it fills a need, will assure maximum sales and profits for dealers.

Your jobber will tell you all you want to know about the Saal Oil Shooter. It's going to be one of the most widely advertised, the best known and most profitable article a dealer ever handled.

H. G. Saal Company
1800 Montrose Avenue
Chicago

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Inside Opinions of the new Stearns-Knight Six

MANY careful buyers believe that the enthusiasm of dealers over the article sold is an indestructible characteristic. Yet, the fact remains that few manufacturers ever undertake to make radical changes in their product without first consulting their dealers.

A good dealer-organization is an asset too valuable and too sensitive to be disregarded by any manufacturer fortunate enough to possess one.

Years of association of Stearns Dealers with the parent Company have established a mutual confidence that can not be easily shaken. For this reason, and because of the faith of the Stearns management in the new Stearns-Knight Six Engine, the Company undertook to surprise its dealers with its greatest engineering achievement.

The following letters are frank expressions received from some of the most critical dealers of The F. B. Stearns Company after their first driving-experience with the new Stearns-Knight Six.

These letters were not written for publication. They are simply personal notes to the executive heads of the Company—honest comment from business men who have had years of experience in the operation and sale of many makes of high-grade motor cars.

Telegram received from The Britton Company, Stearns-Knight dealer at Hartford, Conn.:

"The new six-cylinder model we drove from Cleveland to Hartford, four hundred eight miles, proved wonderful performer. Absolute freedom from vibration, wonderful smoothness in performance, and beauty of style have caused most favorable comment from those to whom we have shown it. You can rely upon its making a fine record."

Telegram sent by Wagner Brothers, Inc., Stearns-Knight dealer at Detroit, Mich., to the president of The F. B. Stearns Company:

"In the birth of your new six-cylinder car you have contributed to us and the motor car public of Detroit a supreme achievement. Knowing this creation to be a product of your own genius, permit us to thank you personally. Our month's allotment is entirely sold out."



Telegram received from R. N. Winslow, Stearns-Knight dealer at Milwaukee, Wis.:

"Your new six cylinder car is the greatest achievement in the motor car industry today and we honestly state that we have never seen or driven an automobile with such a smooth flow of power and that would accelerate to fifty and sixty miles per hour with so little effort. We wish to congratulate you on your new product."

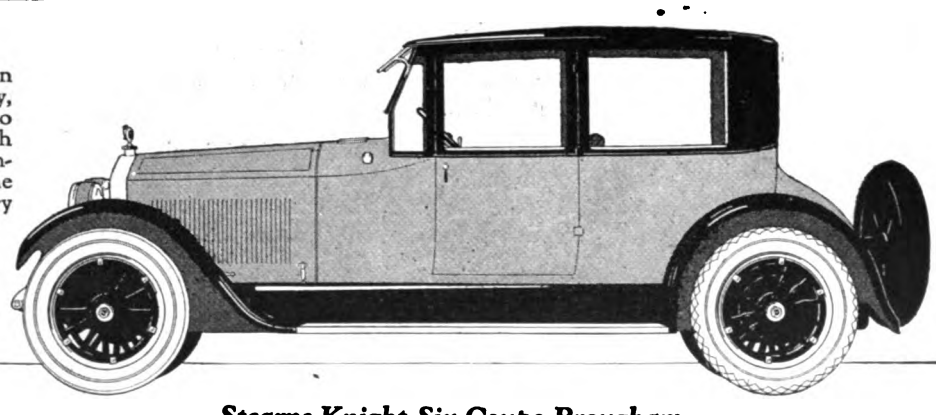
Telegram received from George C. Rice, Stearns-Knight dealer at Washington, D. C.:

"Arrived Washington Sunday six forty-five PM, four hundred and forty-six miles. Averaged better than fourteen miles per gallon. Motor showed better each mile until it convinced me we have by far the best six-cylinder motor built today. The absence of vibration at all speeds is really remarkable. To our minds the problem is not one of sales but the ability of the factory to fill orders. The beauty and performance of the six was the topic of conversation at every stop."

Production of the 4-CYLINDER Stearns-Knight will be continued

To Dealers:

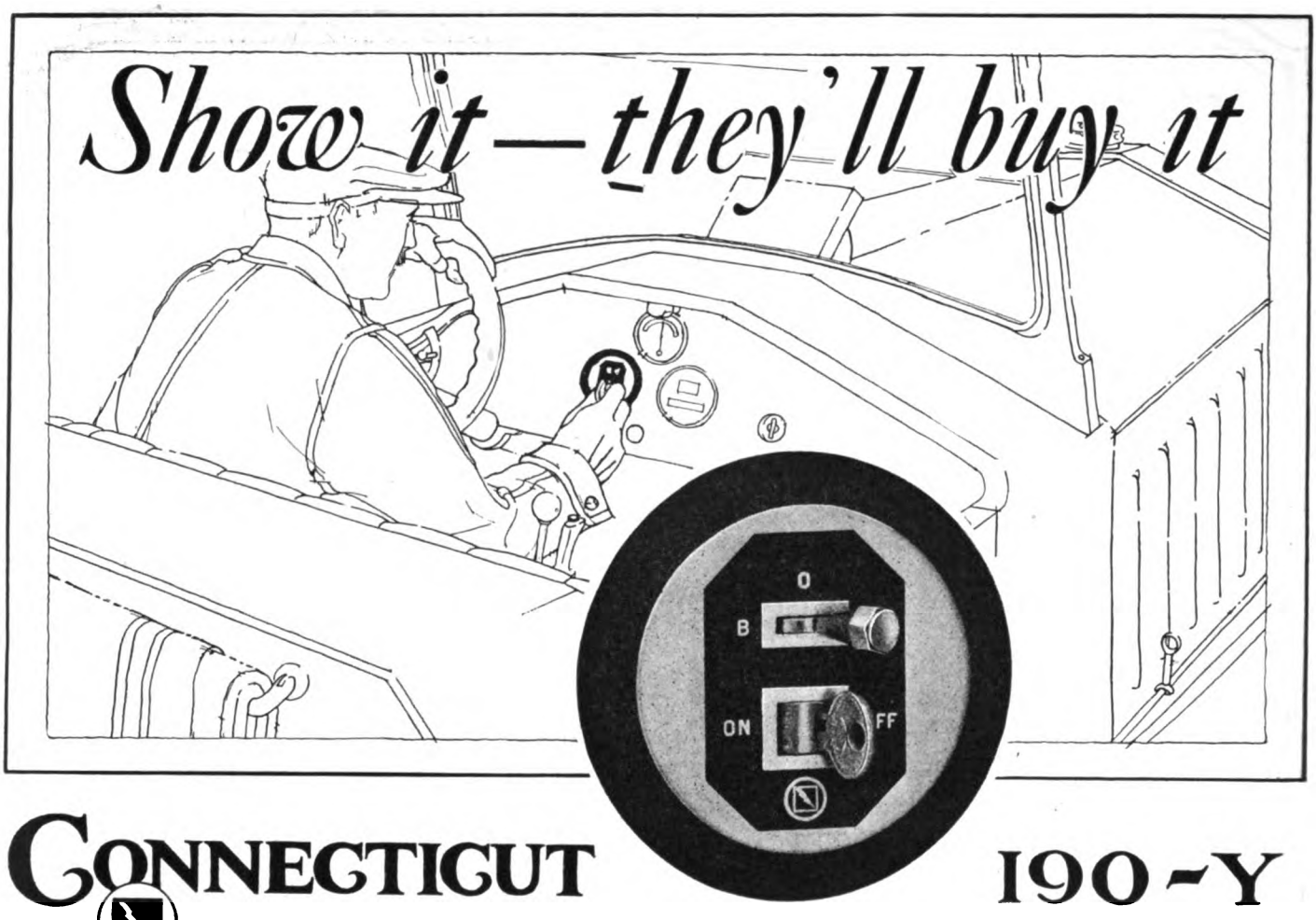
Owing to a recent increase in production facilities, The F. B. Stearns Company, for the first time in five years, is able to increase its distribution. Dealers of high standing, regardless of location, are invited to write for particulars of the Stearns Dealer Franchise. *Your* territory may be open.



Stearns-Knight Six Coupe Brougham

The F. B. Stearns Company, Cleveland, Ohio

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CONNECTICUT 190-Y

Replacement Switch

Here is a high-grade Ignition and Lighting control, a single unit that will replace practically any of the various round type standard equipment switches.

Mechanical Features

Handsomely finished beveled Aluminum and black enamel face plate, size to cover space taken by regular round type switch.

Complete with studs long enough for mounting on either wood or metal dash.

Switch block of CETEC, a high dielectric of great mechanical strength. Toggle action (crosswise) for both ignition and lighting controls.

Lever, with Bright, Dim, and Off positions for lights—

Pin tumbler lock (with changes) with On and Off position for the ignition.

Merchandising Advantages

The universal adaptability of the CONNECTICUT 190-Y switch not only enables you to meet practically every replacement order you get, but eliminates the necessity of carrying a large assortment of switches.

Packed in individual cartons with wiring diagram and mounting instructions. Price,

$4.50

CONNECTICUT TELEPHONE & ELECTRIC COMPANY
Meriden Connecticut

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A REAL OPPORTUNITY FOR REAL DISTRIBUTORS

Those who are in position to handle a genuinely high grade automobile should investigate at once The Dorris and the Dorris franchise.

In The Dorris they will find a car which sells readily to those who want the exclusiveness of a practically hand made job, with the refinements in engineering and construction which are characteristics of this wonderful car.

For seventeen years the famous Dorris valve-in-head motor has maintained an exellent reputation by its smooth delivery of power at every speed, its lack of vibration, and particularly by its remarkable freedom from the customary necessity for frequent attention. Distributors say, "The Dorris doesn't eat you up with service costs." The Dorris Distillator, which was added about a year ago, only increased the satisfactory operation of this already seemingly perfect motor.

The beauty of design, the finish, the refinements of inside decoration and appurtenances are unsurpassed. Truly an aristocrat, The Dorris finds ready recognition among the aristocratic.

Dealers in open territory are invited to write for details regarding the Dorris franchise.

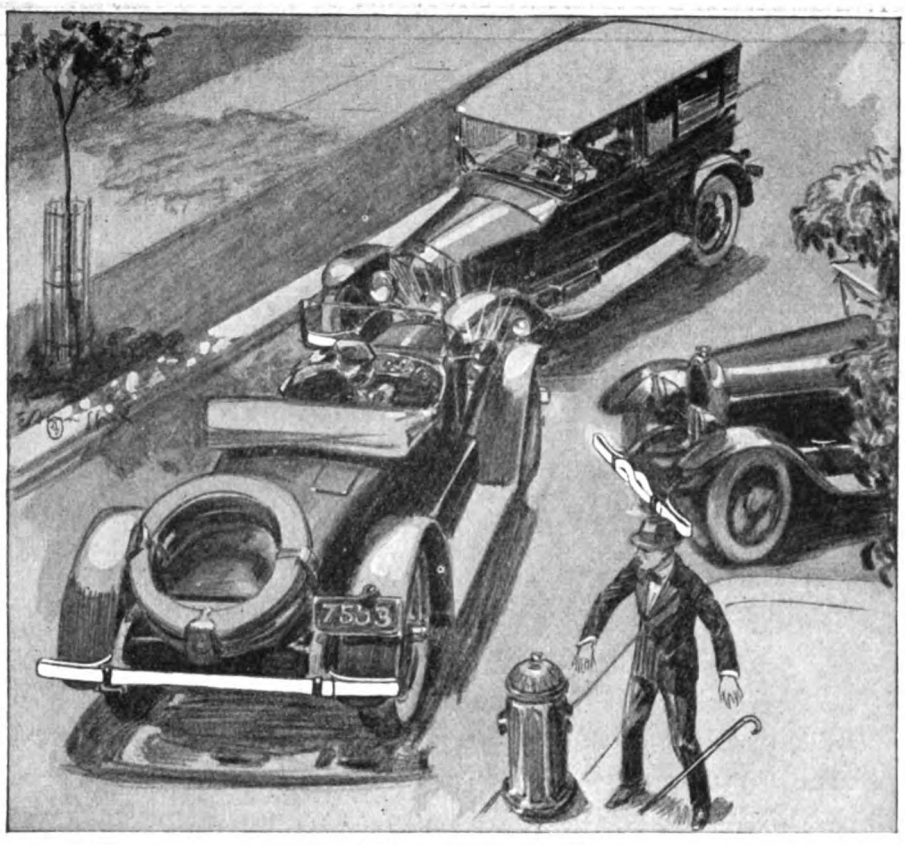
DORRIS MOTOR CAR CO., ST. LOUIS

The Dorris

"Built Up to a Standard, Not Down to a Price"

F378

Digitized by Google



Careless Driver Cuts Corner—Crash!

CAR shoots out of side street! Driver on highway is too late to stop! A quick turn to the left—then, *crash* into the car coming in the opposite direction. But neither car is damaged. Both were Lyon-protected.

It's the all-spring steel construction that makes Lyon Spring Bumpers so resilient—and so desirable! When struck, the Lyon-patented two-piece overlapping front bars and the open "looped-ends" absorb the shock completely instead of passing it on to the frame.

Lyon Spring Bumpers are guaranteed to take the full force of any blow at the rate of fifteen miles an hour without injury to the car or its occupants. Then, too, insurance companies grant reduced rates on Lyon-protected cars. This saving, when pointed out to a prospect, is very convincing "selling talk."

Lyon Spring Bumpers are beautifully finished, remarkably strong and perfectly balanced. More of them are sold than all the others put together. Isn't this conclusive proof that they are one of the most profitable accessories you could handle? They can be quickly attached without drilling or altering the frame by the use of the Lyon-patented hook-bolt.

Over a million in use. Retail prices, $10 to $25.

METAL STAMPING COMPANY, Long Island City, New York

Dealers: **Our bumpers are manufactured under basic Lyon patents. No other bumper is like them; none can be like them.**

Jobbers: **If your stock doesn't include Lyon Bumpers, write to us; our proposition will benefit both of us—it is fair and square.**



Lyon Straight Bar Bumper



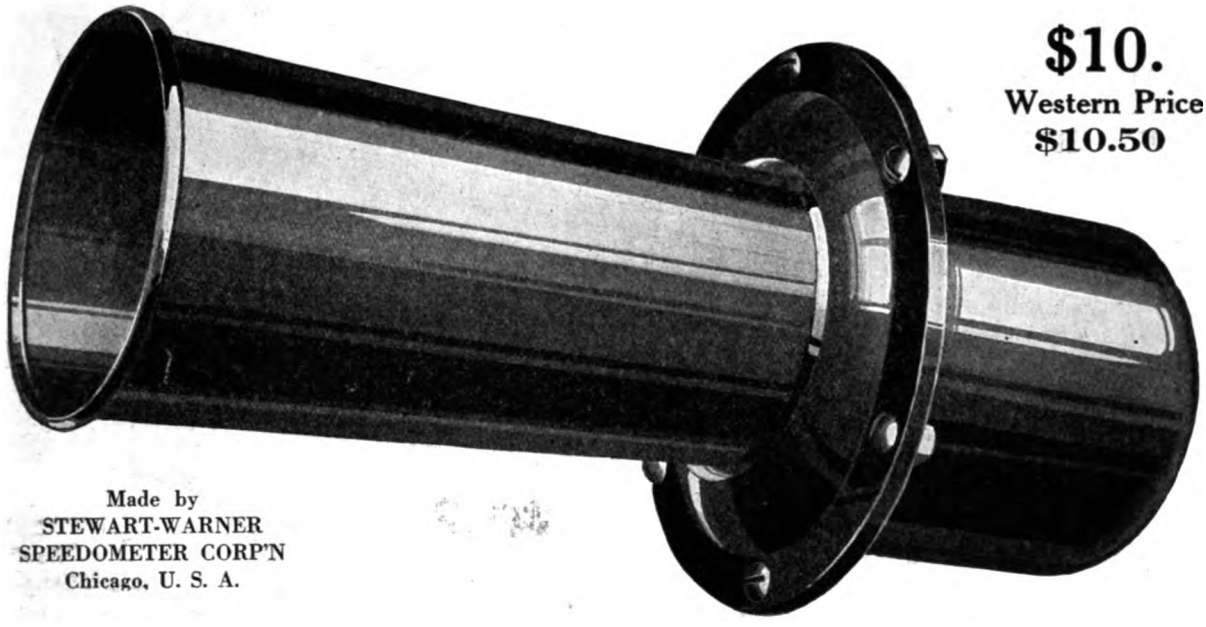
Lyon Convex Bumper

LYON RESILIENT BUMPERS

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A New Stewart Horn

Model 186

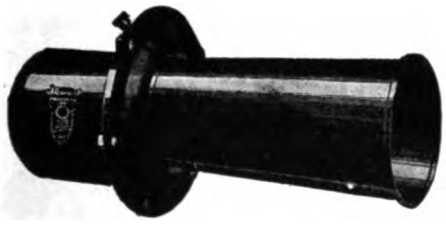


$10.
Western Price
$10.50

Made by
STEWART-WARNER
SPEEDOMETER CORP'N
Chicago, U. S. A.

YOU'VE never heard so much volume of sound in a horn of this size. A loud deep-toned warning that clears the way instantly.

An extra large diaphragm and motor. Soldered electrical connections. Hard-baked black enamel finish. A horn that requires practically no attention.



A smaller horn of remarkable efficiency and low current consumption. Responds instantly. Built to stand up.

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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Tremendous Strength & Vitality Characterize



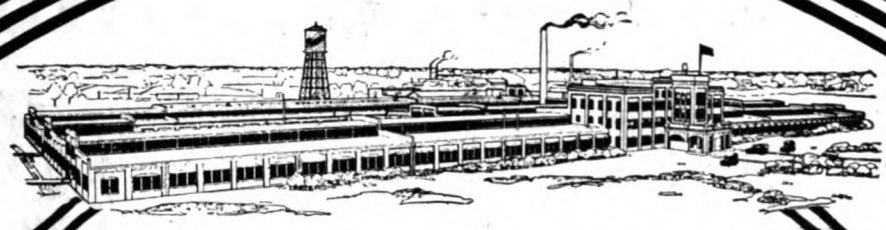
AGATHON
ALLOY STEELS

THE CENTRAL STEEL COMPANY, Massillon, Ohio

SWETLAND BLDG. CLEVELAND | BOOK BLDG. DETROIT | PEOPLES GAS BLDG. CHICAGO | UNIVERSITY BLOCK SYRACUSE | WIDENER BLDG. PHILADELPHIA

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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PREMIER

An Old Name—A New Success

A vital new significance is being attached to Premier activities throughout the trade.

It is being sensed that important factors are operating to establish this pioneer organization in an advanced position.

The new plans are laid on the soundest foundation — the unshaken solidity of the present Premier dealer organization and the noted excellence of the Premier product.

All the elements of success are so conspicuously present that shrewd merchants see a brilliant new opportunity facing them.

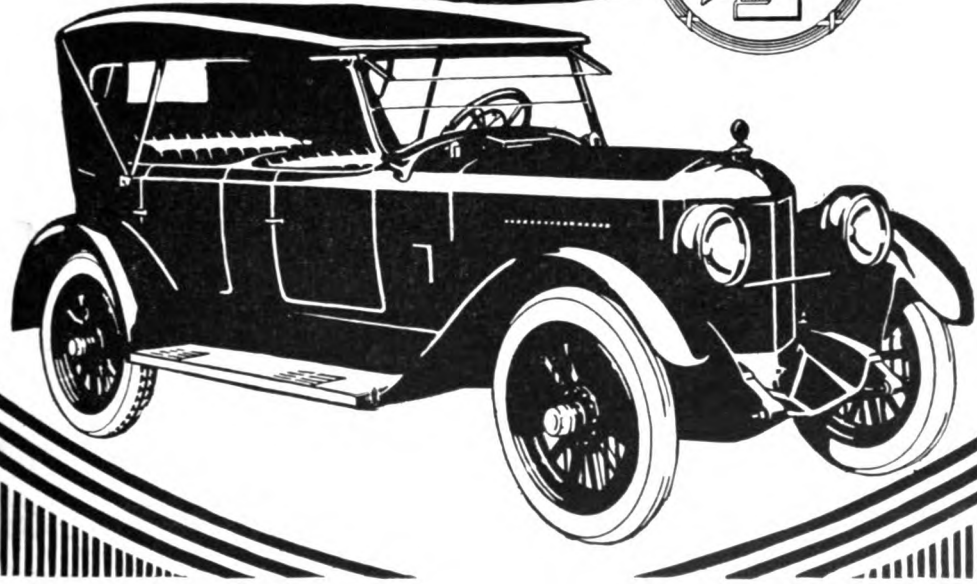
There is every basis for the opinion that the Premier franchise will multiply in value from now on!

This is the precise moment to "get in." A letter or wire brings you the highly interesting facts.

PREMIER MOTOR CORPORATION

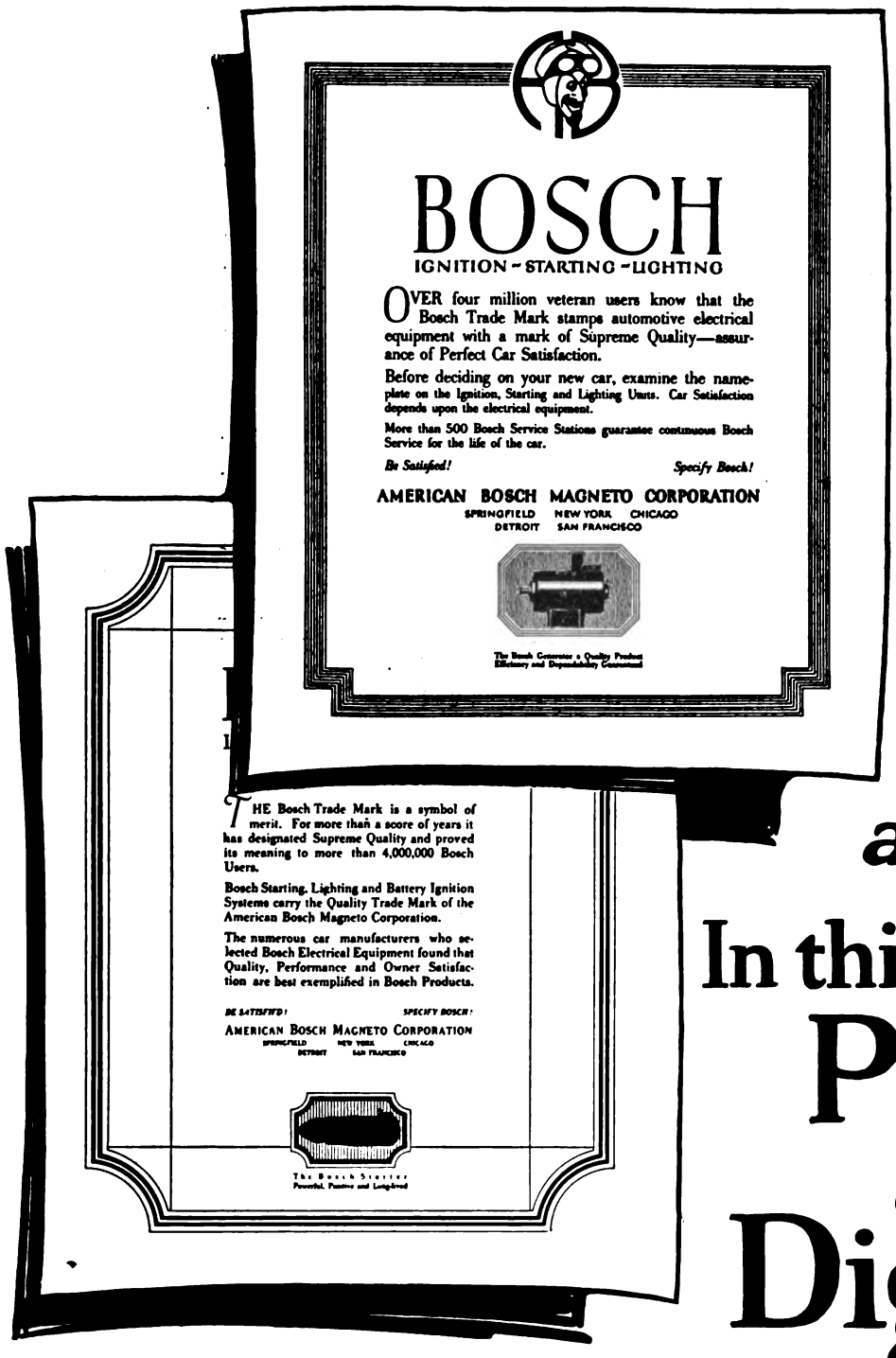
Fletcher Savings & Trust Co., Receivers

Indianapolis, Ind., U S A



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Over Three Million Prestige Building Messages To Help You Sell Cars



Part of a Series.

In this week's Post and Digest

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Mercer Buyers Are Worth-While Customers

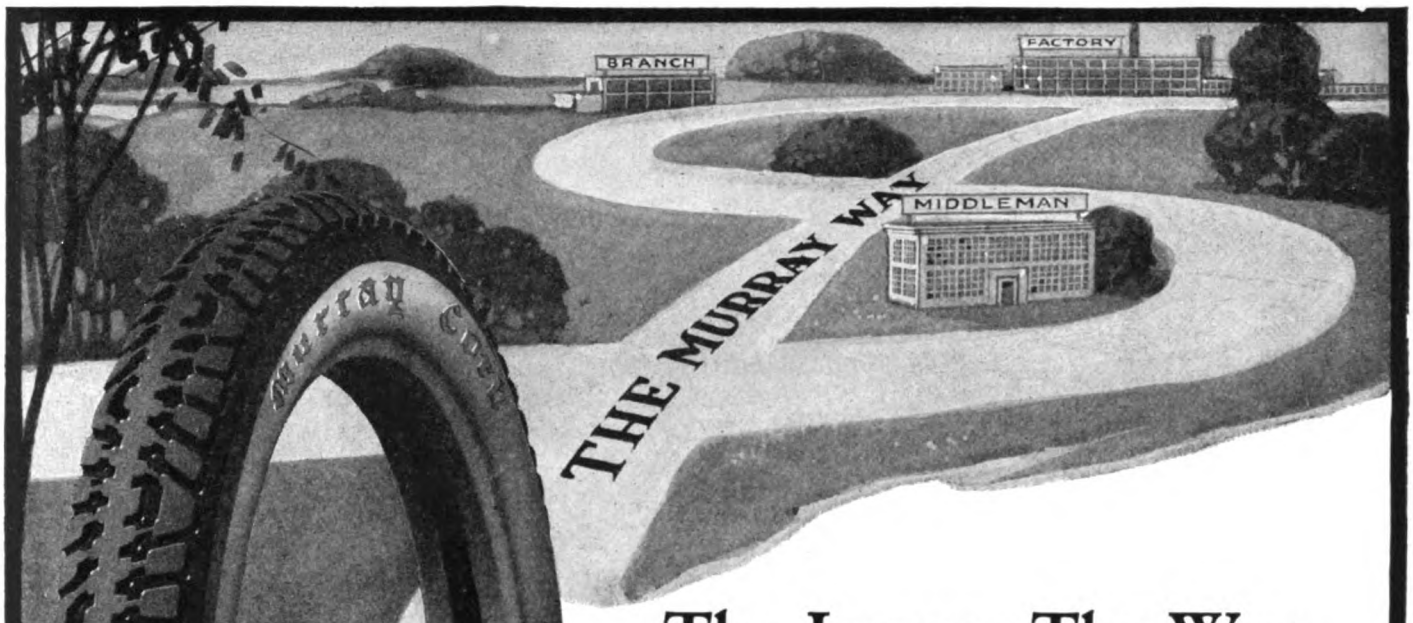
BECAUSE Mercer is distinguished by being a quality car, the dealer who handles it gains through the character of the people who buy from him.

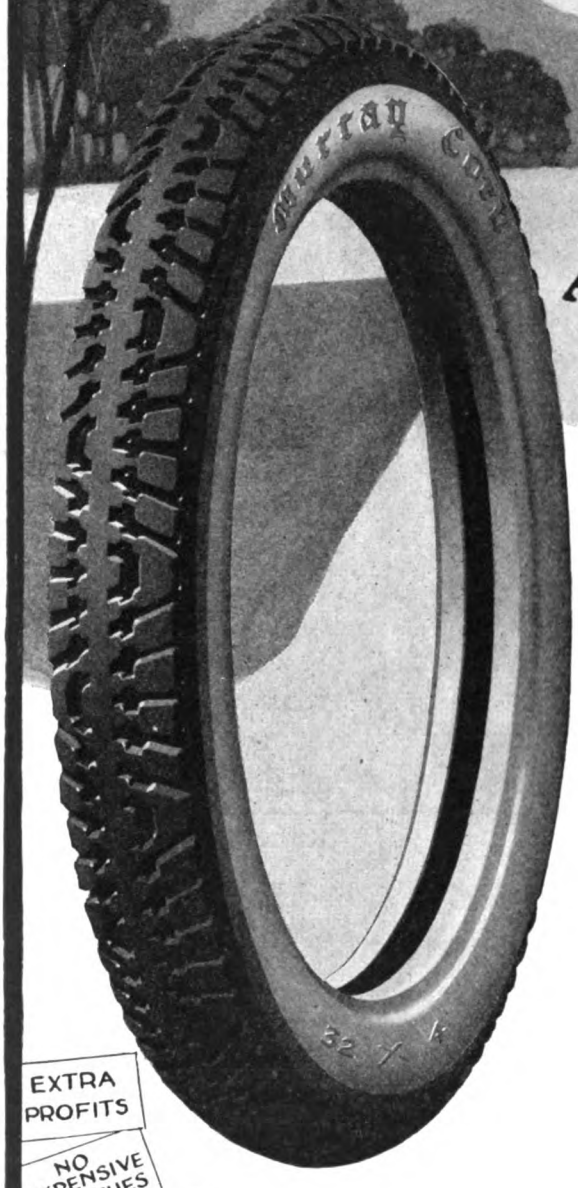
Mercer Motors Company is ready to negotiate with responsible business men who are big enough to back up the reputation which a Mercer agency will bring.

Write for full particulars concerning an interesting plan.

MERCER MOTORS COMPANY
TRENTON, N. J.

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The Longer The Way The More You Pay

Follow the tire you have been selling from the factory to your store. It stops at branches and the middleman's place. Each collects a portion of the profits that legitimately belong to the dealer.

Murray
"Ne'er A Worry" TIRES

Come Direct from the Factory to You

Not a stop on the way. All of the old expenses of the round-about route now go for quality of product and extra profits for the dealer.

And in addition, Murrays are sold to you tax and freight paid. Your profits are free and clear.

EXTRA PROFITS
NO EXPENSIVE BRANCHES
TAX AND FREIGHT PAID
NO OLD COMMITMENTS FOR HIGH PRICED MATERIAL
NO BURDENSOME OVERHEAD
SOLD DIRECT FROM THE FACTORY TO YOU
SATISFIED CUSTOMERS
RESTRICTED AGENCIES

Every Murray Tire a Sou'-Easter

Made and tested for the south-east wheel, where the traffic is roughest. The reinforcement on the side wall gives "truck-tire" strength where the strain is hardest.

MURRAY RUBBER COMPANY
TRENTON N.J.

Write Dept. MT-3 for our Exclusive Dealers' Proposition

Be the sole distributor in your community for this quality, profit-bearing tire. We will be glad to discuss our distribution plan with dealers and show how we can make such a good tire at such a low price.

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VALVE-IN-HEAD Buick MOTOR CARS

Delco

WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM



We are intensely proud of the fact that Buick, one of the really notable cars of the world, has been equipped with Delco Starting, Lighting and Ignition for eight consecutive years.

It is the conviction of the many Buick admirers that the performance of America's foremost electrical equipment adds greatly to the car's traditional reliability.

THE DAYTON ENGINEERING LABORATORIES CO.
DAYTON, OHIO, U. S. A.

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The Final touch of Beauty

Every type of motor car—trim coupé or smart sedan, fleet sport model or dignified touring car—is immeasurably improved in appearance by Michelin Steel Wheels.

The gleaming discs conceal the unsightly underbody of the car, offer a choice surface for color effects, and instead of being the most difficult part of the car to clean, are the *simplest.*

You will also find that your car looks longer, lower and more graceful when equipped with Michelin Steel Wheels. The *convex* or *outwardly curving discs* blend with the sweep of the streamline body—itself a harmony of *convex surfaces*—suggesting speed and easy gliding through space.

Finally, the extra wheel in the rear—unlike a mere spare tire—completes the effect of smartness and clean cut simplicity.

Dodge Brothers, Studebaker, Willys-Knight, Chalmers, Winton, Nash, and Yellow Cab are among those who have recognized the superiority of Michelin Steel Wheels by adopting them as standard or optional equipment

BUDD WHEEL COMPANY
Philadelphia

BUDD
Michelin
STEEL WHEELS

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GEARS

form the all-important link between the power unit and the wheels of every automobile.

They are called upon to absorb shocks and impacts by suddenly applied thrusts by the careless chauffeur.

They must retain their pitch, developed with geometrical precision under, the most severe service.

Therefore, the steel from which they are made must excel in strength, hardness, toughness, wear resisting and anti-fatigue qualities.

VANADIUM STEEL

combines all these properties in the highest degree, and advantage should be taken thereof where "perpetual service" gears are the goal.

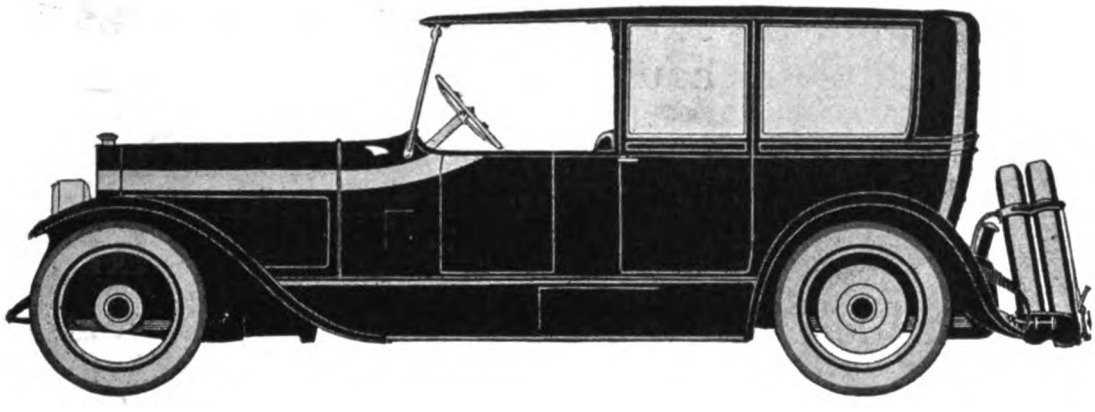
VANADIUM CORPORATION of AMERICA

120 BROADWAY

NEW YORK CITY

Detroit, Michigan—849 Book Bldg.

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Three-Quarter Limousine $8,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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Ferry Bright-Finished, Heat-Treated Cap Screws

Engineers Insist On Ferry Heat-Treatment

The demand for Ferry Heat-Treated Cap Screws is growing as engineers realize the importance of heat treatment in Cap Screws made by the Upset process.

They know that brittleness in the steel from which screws are fashioned is the most dangerous condition that users of cap screws have to contend with.

It is the cause of cap screws breaking when under unusual strains. And only by the use of heat-treatment can this be completely eliminated.

Send for above sample of our new Bright-finished, Heat-treated cap screw and compare it with other makes.

"If it's upset, it must be heat-treated"

The Ferry Cap & Set Screw Co., Cleveland, Ohio

FERRY

PROCESS SCREWS

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You Know This Man—

HE wants his money's worth—and a little bit more—when he buys a tire.

Willing to pay the price if the tire will deliver the value.

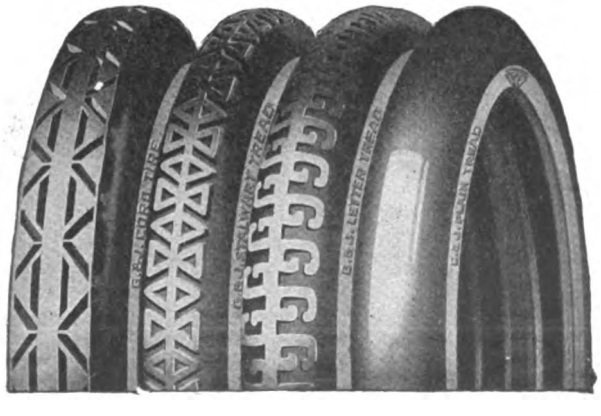
Glad to stick to one brand and one dealer when they're *right*. Glad to tell his friends about both.

It is the trade of this man and the millions like him that G & J Dealers have been able to count on since the days before the automobile.

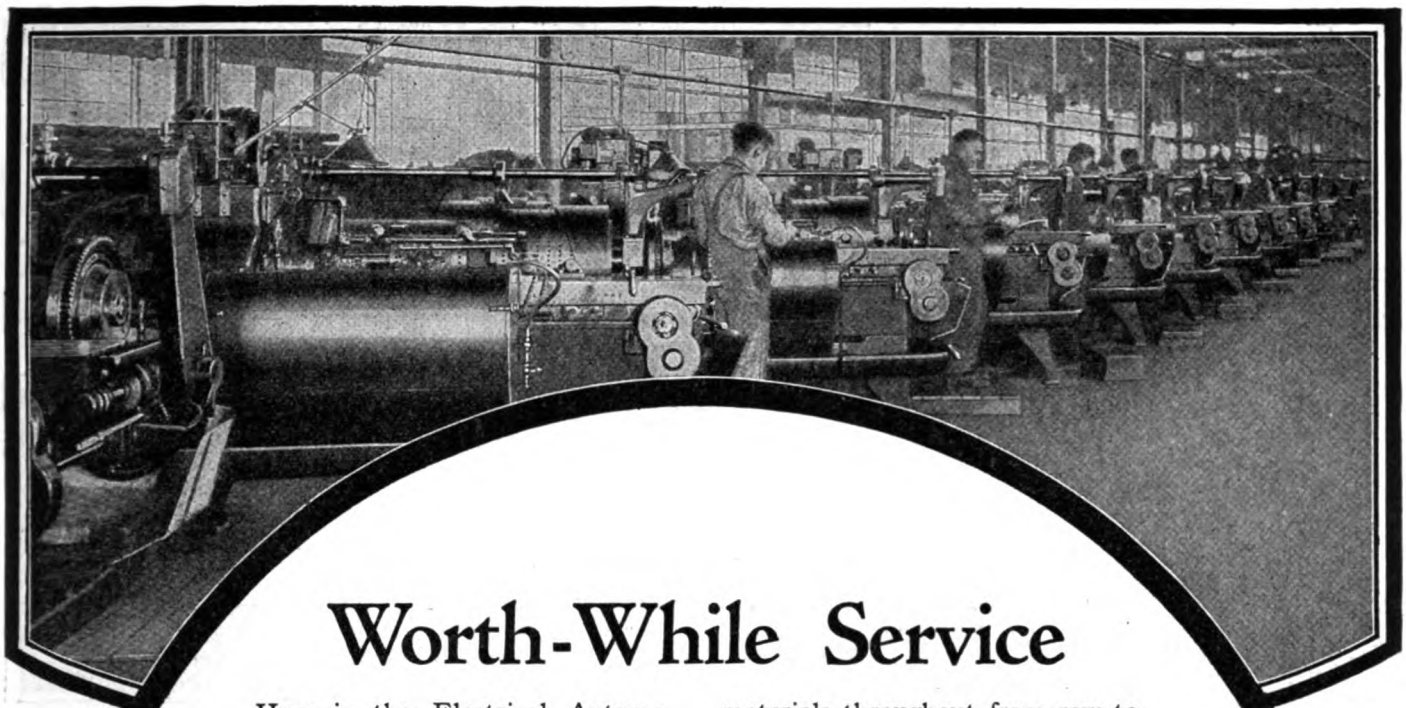
TIRES & TUBES

G & J TIRE COMPANY

1790 Broadway **New York**



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Worth-While Service

How is the Electrical Automotive Equipment Manufacturer going to give worth-while service unless he plans for the requirements of the future as well as for the needs of the present?

In the large Automotive Equipment Manufacturing Plant recently completed in Springfield, Mass., Westinghouse has provided for the present and future requirements of Westinghouse Service to the Car Builder.

Built in the heart of the New England headquarters of skilled mechanics, this new plant is a daylight building with a production floor one thousand feet by one hundred feet without an obstructing post. The highly specialized machine tools are individual motor driven. Production plans provide for a progressive movement of materials throughout from raw to finished product. Four other buildings form a part of the Automotive Equipment Group, the Foundry, the Punch Shop, the Shipping Department and the Service Parts Stock.

With this complete plant equipment, manned by a highly efficient manufacturing organization, Westinghouse quality in Starting, Lighting and Ignition equipment is maintained, with ample provision for large quantity production.

From the manufacture of Westinghouse Automotive Equipment for the car builder, to servicing of that equipment by the 290 Westing house Field Service Representatives, after it is in the hands of the car owner, Westinghouse Service is complete and worth-while.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Automotive Equipment Department
Sales and Service Headquarters: 82 Worthington St., Springfield, Mass.

W
WESTINGHOUSE ELECTRIC

Westinghouse

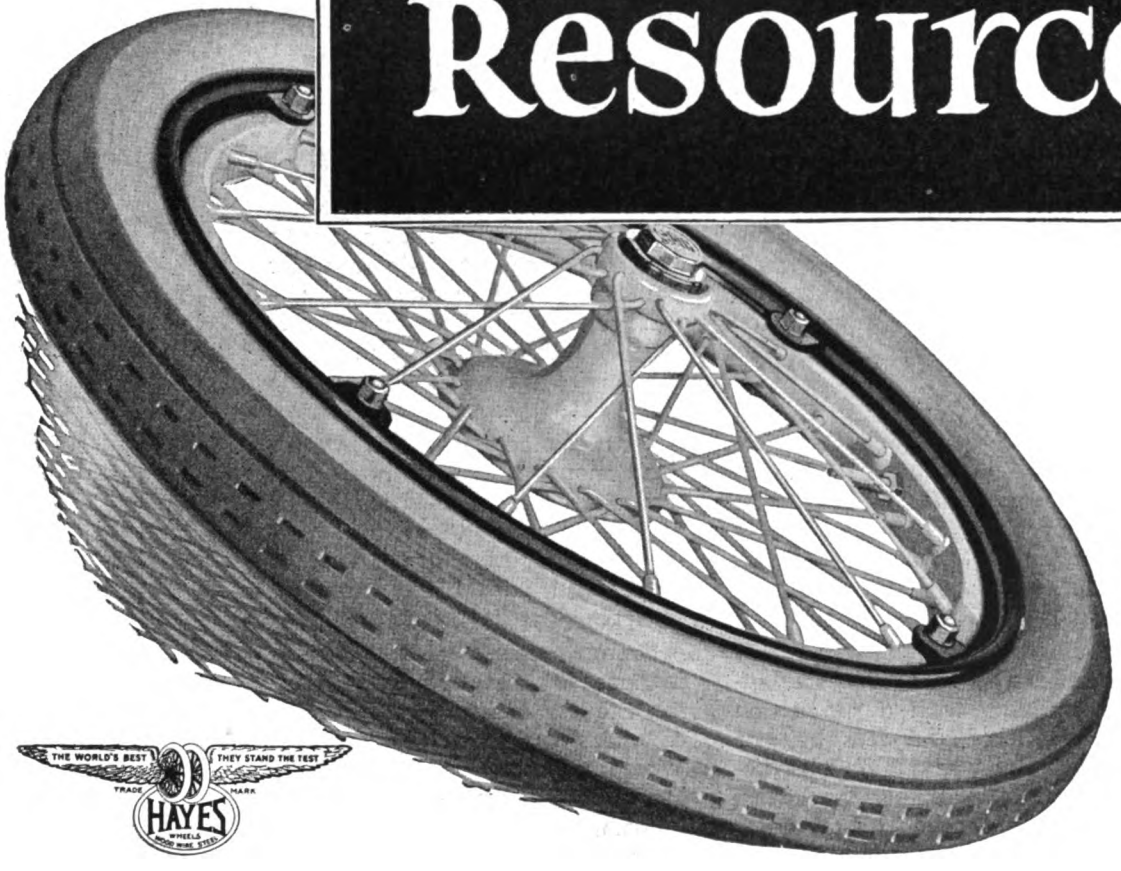
STARTING, LIGHTING & IGNITION

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HAYES

DEMOUNTABLE AT THE RIM

Resources



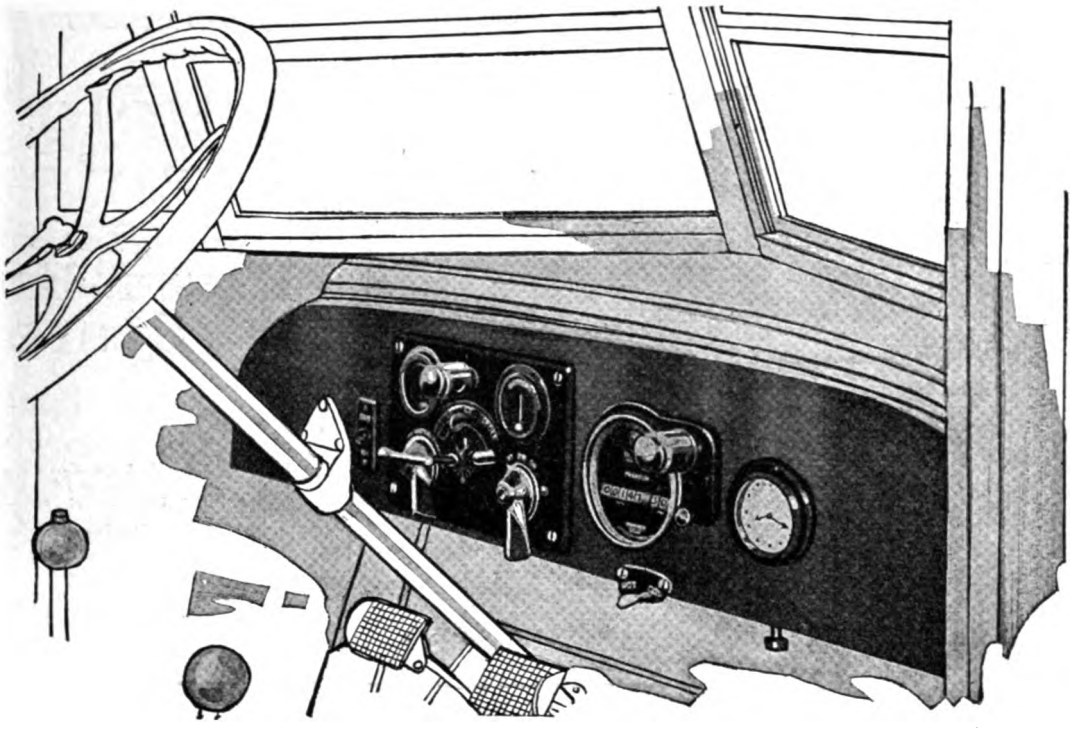
THE resources of the largest organization in the world producing wheels exclusively are back of Hayes Demountable at the Rim Wire Wheels. This means not only ample financial resources, but every facility for designing and producing wheels, — a well grounded engineering staff of wheel experts, the largest body of skilled workmen, the most efficient automatic machinery for immense quantity production. All these factors are turned to one idea—to make the very best wheels possible in design, in materials, and in workmanship, at the lowest price consistent with quality. All are placed unreservedly at the disposal of the motor car manufacturer, with whom we are always pleased to work in planning our product to efficiently meet his requirement.

(51)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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Basco Switches and Franklin Cars



Lighting, Ignition and Starting Switches, Instrument Panels, Generator Cutouts, Motor Driven Horns, Door Handles, Compartment Locks, Door Locks, Body Hardware.

THE above view of the Basco Instrument Board and Switches used on Franklin Cars is an index of the company Basco products keep. For twelve years leading automotive manufacturers have turned confidently to Briggs & Stratton Company as a dependable source of electrical components, knowing full well that any part bearing the Basco trade-mark would reflect credit upon their product.

Resourcefulness and versatility—ability to meet the individual manufacturers' requirements—are indicated by the fact that Basco components of one kind or another have been continuously used on a majority of every price-class of cars in America.

Briggs & Stratton Co
Milwaukee
A BASCO PRODUCT
Wisconsin

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Bowen-Empress

HIGH PRESSURE LUBRICATING SYSTEM

FOR ALL MOTOR CARS AND TRUCKS

How The Kelly-Springfield Motor Truck Company Regards The Bowen-Empress System

THE KELLY-SPRINGFIELD MOTOR TRUCK CO.

SPRINGFIELD, OHIO

March 2nd
1 9 2 2

Mr. Ross,
Bowen Products Corporation,
Auburn, N. Y.

Dear Sir:

We are in receipt of your letter of February 24th, requesting a photograph of a Kelly-Springfield truck and also requesting us to outline our reasons for adopting the Empress System of Lubrication. Enclosed you will find photograph of our model K-41 truck which would be suitable for publication.

Our reasons for adopting the Empress System were

1: The good will shown our company in the past and present, and because you are a reliable source of supply.

2: Because it was the consensus of opinion that your outfit was far superior to other makes, inasmuch as it took less time to operate, was clean, and would stand up under the use it would be put to by truck drivers.

3: Because of your policy for our service requirements, inasmuch as you would allow us to sell direct to our customers this outfit.

We might add that we have now been in production for some time with your outfit and we have yet to receive the first complaint, and in these critical times it speaks very well for your lubricating system.

Yours very truly,

THE KELLY-SPRINGFIELD MOTOR TRUCK CO.,

BY: L. F. Hosley
L. F. Hosley
Chief Engineer

LFH:GL

Installed on your trucks, it will render this same satisfactory and effective service, provide proper lubrication and help to keep down maintenance costs.

By eliminating the drudgery and messiness of other methods, the Bowen - Empress System provides the driver with a real incentive for keeping his truck properly lubricated, saving many dollars in repair bills.

Ease, speed and effectiveness of operation together with the absence of the usual mechanical troubles encountered in similar pressure systems are its outstanding features.

Write for Descriptive Folder No.-W-301

Bowen Products Corporation

Auburn Division, Auburn, N. Y.



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Harry C. Stutz has designed a new H. C. S., more powerful and greater performing, which is not only a new car but a new type of car.

It is the kind of a car that more and more dealers will be handling in the next five years.

It is built for a market that draws prospects from two sources: 1, those who rebel at the awkwardness of the over-big car; 2, those who dislike the unsteadiness of the light car.

As you might expect, Mr. Stutz has endowed this new H. C. S. with rare performing ability, and has clothed it with lines and appointments that make it stand out and above the many good appearing cars of the year.

For those dealers who are concerned more about the words "net profits" than "volume sales" the H. C. S. line is finding a warm reception.

Correspondence invited.

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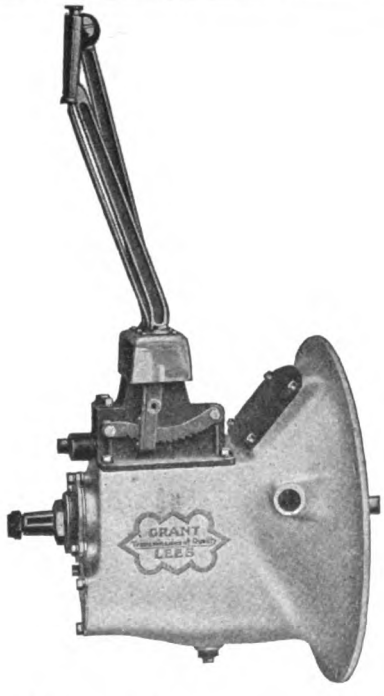


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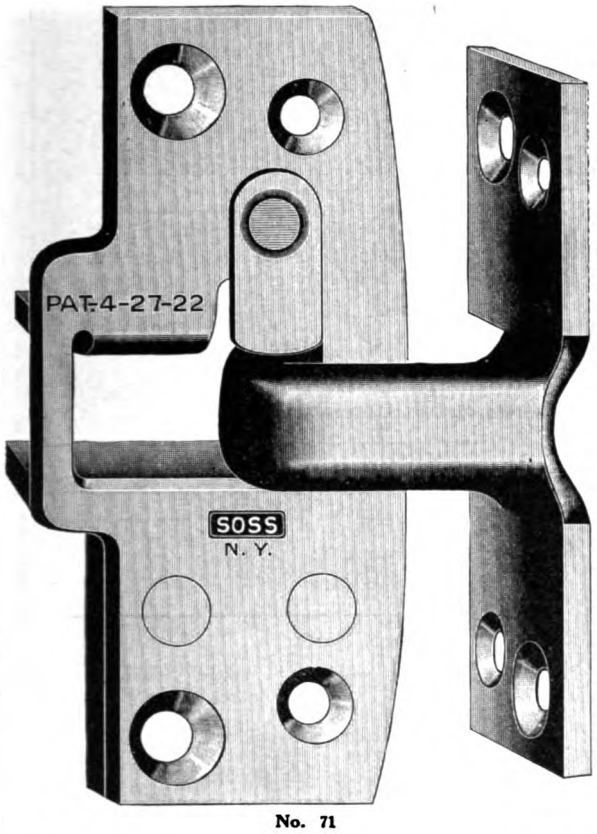
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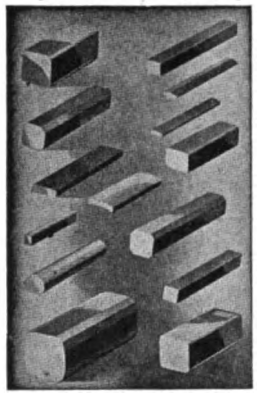
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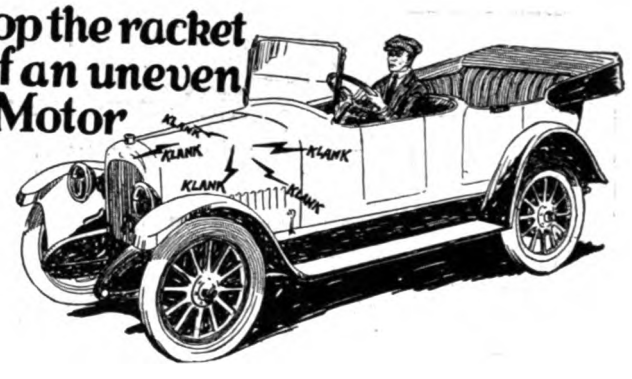
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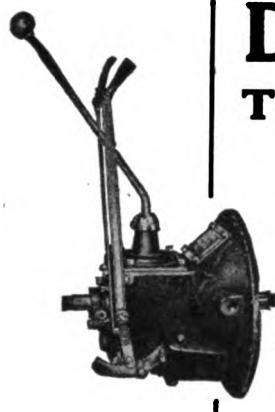
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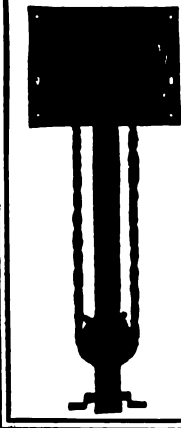
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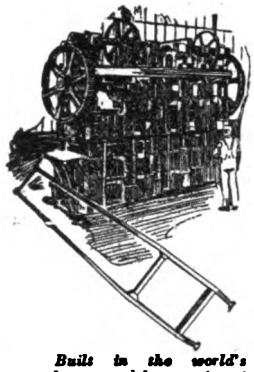
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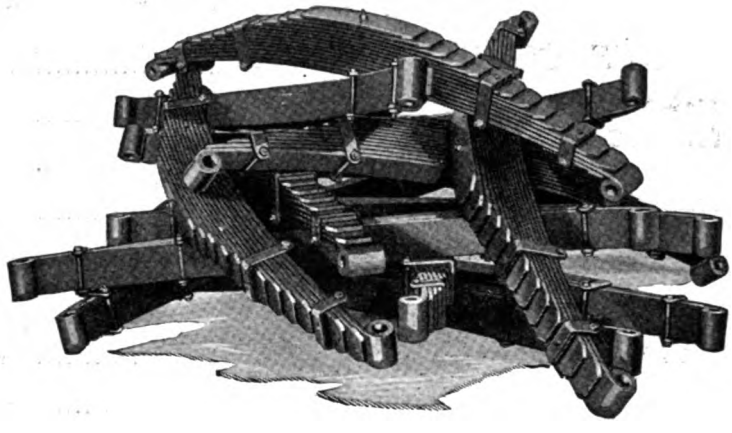
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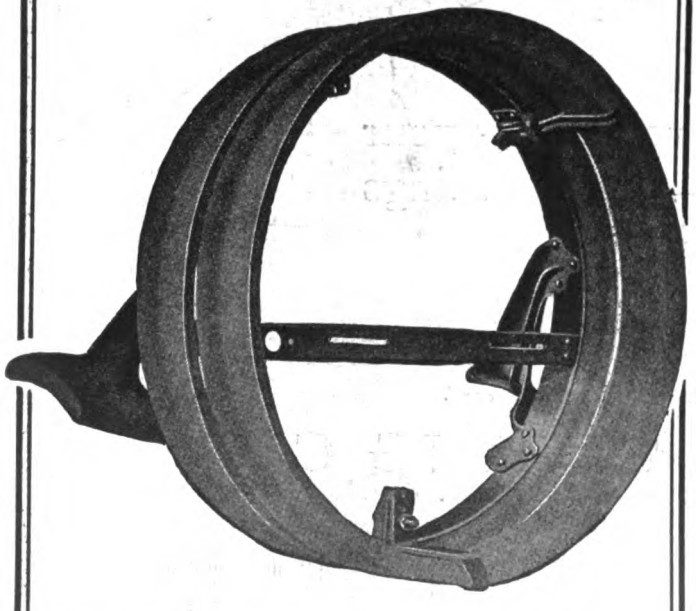
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INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co..... 62
Ajax Rubber Co., Inc..... 55
American Bosch Magneto Corp. 76
American Sheet & Tin Plate Co. 92

B

Bassick Manufacturing Co.. 95
Bearings Company of America 93
Bearings Service Co..... 63
Bethlehem Steel Co., Inside Back Cover
Bosch Magneto Corp., American 76
Bowen Products Corp..... 88
Bower Roller Bearing Co... 96
Briggs & Stratton Co..... 87
Brown-Lipe Chapin Co..... 95
Brown-Lipe Gear Co..... 95
Budd Wheel Co..... 80
Buick Motor Co..... 13

C

Cadillac Motor Car Co..... 32
Central Steel Co..... 74
Chalmers Motor Car Co..... 57
Champion Machine & Forging Co. 92
Cleveland Tractor Co..... 93
Connecticut Telephone & Electric Co. 70
Continental Motors Corp., Inside Front Cover
Crosby Co. 92

D

Dayton Engineering Laboratories Co. 79
Detroit Carrier & Manufacturing Co. 98
Detroit Pressed Steel Co.... 2
Dodge Brothers 14
Doehler Die-Casting Co..... 92
Dorris Motor Car Co..... 71
Durston Gear Corp..... 94

E

Earl Motors, Inc. 51
Eclipse Machine Co..... 94
Edmunds & Jones Corp..... 98
Electric Auto-Lite Co., The, 10, 11

F

Federal Bearing & Bushing Corp. 1
Ferry Cap & Set Screw Co.. 83
Firestone Tire & Rubber Co. 94
Fisk Tire Co., Inc..... 9
Flint Varnish & Color Works 7
Frenchtown Porcelain Co... 93

G

G & J Tire Co..... 84
Gabriel Manufacturing Co.. 6
Goodrich Rubber Co., B. F.. 15
Grant-Lees Gear Co..... 90
Grant Motor Car Corp..... 94

H

H. C. S. Motor Car Co..... 89
Hayes Wheel Co..... 86
Haynes Automobile Co., Back Cover
Hess-Bright Manufacturing Co. 100

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INDEX TO ADVERTISEMENTS

L

Laminated Shim Co., Inc... 94

M

Mather Spring Co..... 97
Mercer Motors Co..... 77
Metal Stamping Co..... 72
Moltrup Steel Products Co.. 92
Morse Chain Co..... 95
Motor Wheel Corp..... 94
Murray Rubber Co..... 78

N

Nash Motors Co..... 16
National Twist Drill & Tool Co. 92
New Departure Manufacturing Co. 90
Norma Company of America 3

O

Oakley Chemical Co..... 91
Olds Motor Works..... 58

P

Packard Electric Co..... 96
Park Drop Forge Co..... 96
Perfect Window Regulator Co. 94
Pocono Rubber Cloth Co.... 12
Premier Motor Corp..... 75

R

Reo Motor Car Co..... 53
Republic Rubber Co..... 68

S

S K F Industries, Inc..... 100
Saal Co., H. G..... 68a
Schrader Sons, Inc., A..66, 67
Sharon Pressed Steel Co.... 92
Smith Corp., A. O..... 96
Soss Manufacturing Co., Inc. 91
Stearns Co., F. B..... 69
Stevens-Duryea, Inc. 82
Stewart-Warner Speedometer Corp. 73
Stromberg Motor Devices Co. 94
Studebaker Corp. 5

T

Ternstedt Manufacturing Co., Front Cover

U

Union Drawn Steel Co..... 96
Union Switch & Signal Co.. 92
U. S. Ball Bearing Manufacturing Co. 4
United States Rubber Co.... 49

V

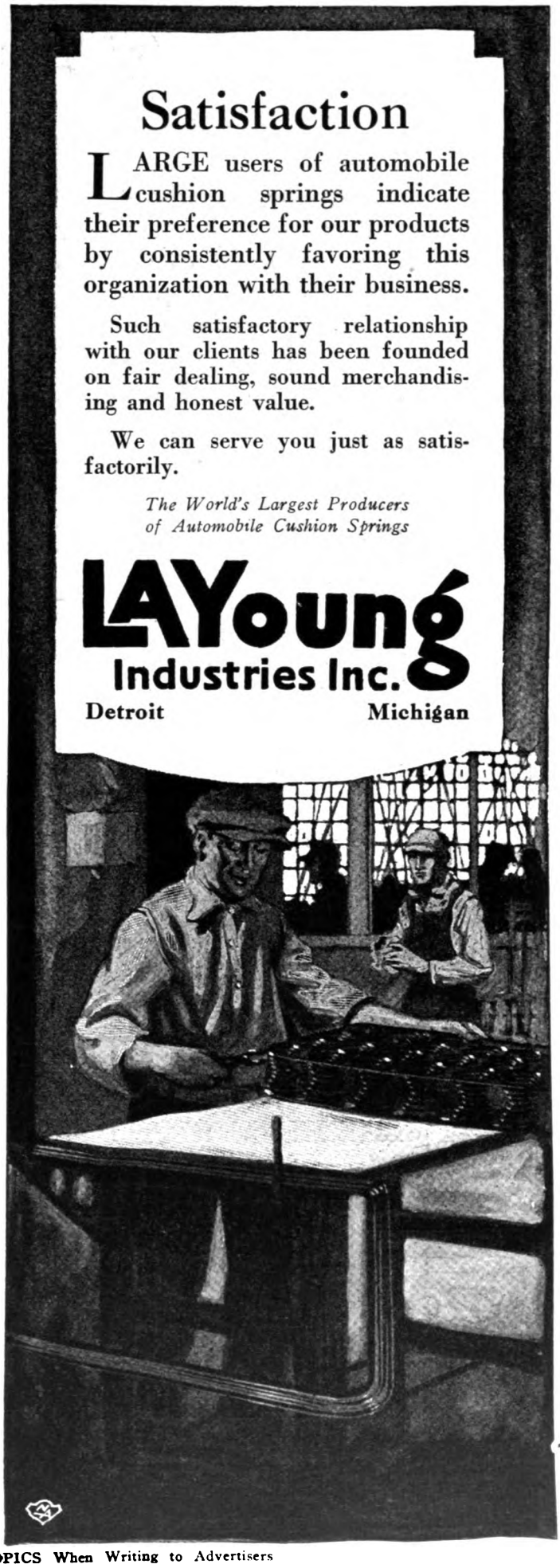
Vanadium Corporation of America 81

W

Warner Gear Co..... 96
Warner-Patterson Co....64, 65
Wayne Tank & Pump Co... 95
Westinghouse Electric & Manufacturing Co. 85
Whitney Manufacturing Co. 95
Willard Storage Battery Co. 95
Wyman-Gordon 95

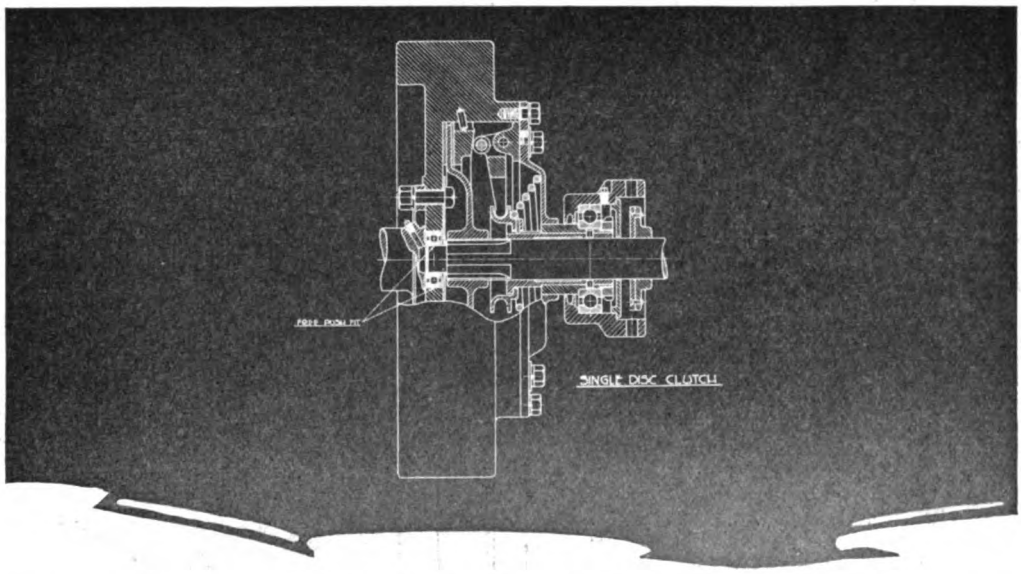
Y

Yale Storage Battery Co.... 8
Young Industries, Inc., L. A. 99



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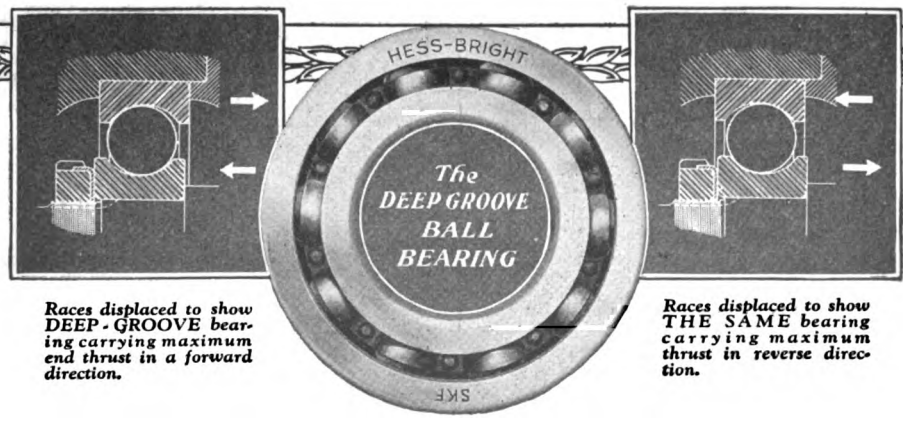
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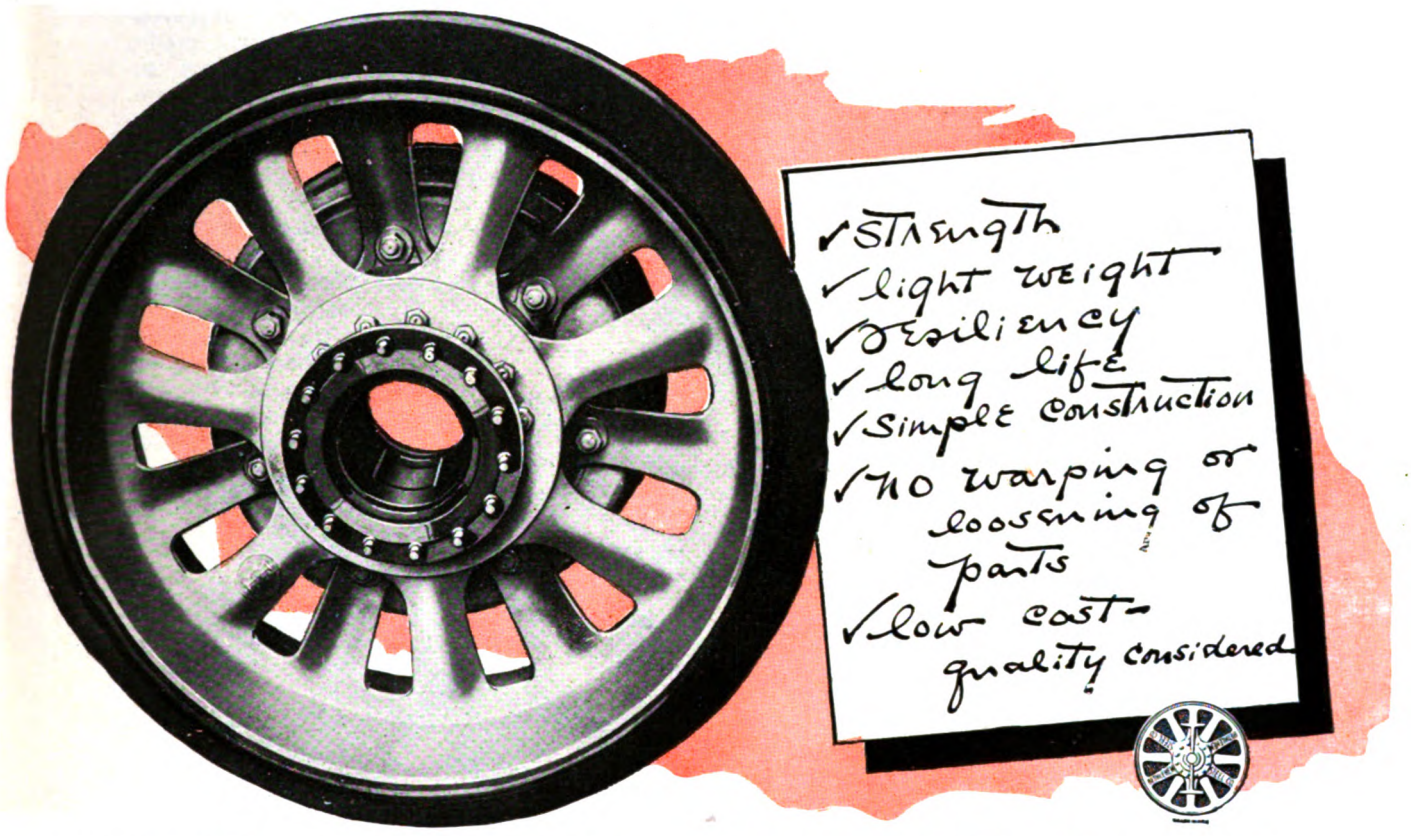
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BALL BEARINGS
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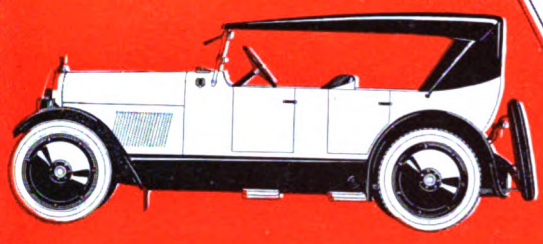
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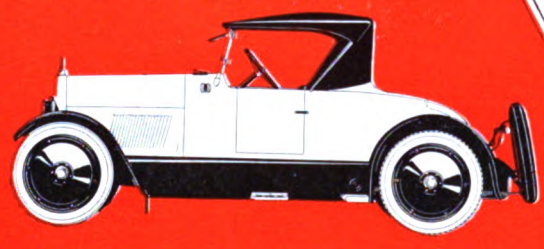
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The HAYNES 55

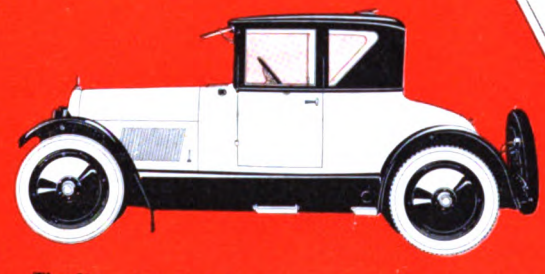
The lasting success of the new, improved Haynes 55 rests upon its proved, established worth as "the value of values" in automobiles. The illustrations show how these cars meet the wishes of the motorist in either open or closed types. With the sturdy, Haynes-built, light six engine, its power plant leaves nothing to be desired. In design and finish the Haynes 55 models respond to the exacting wishes of those who insist upon beauty, attractiveness and service. Inspect these cars, and your judgment will confirm that of every owner of these unusual productions of the great Haynes factories at Kokomo.



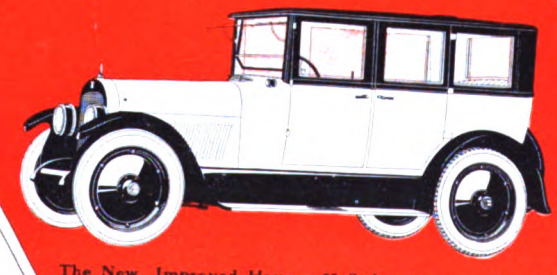
The New, Improved Haynes 55 Touring Car, 5-passenger, $1495



The New, Improved Haynes 55 Roadster, 2-passenger, $1545



The New, Improved Haynes 55 Coupelet, 3-passenger, $2195



The New, Improved Haynes 55 Sedan, 5-passenger, $2395

$1495 to $2395

F. O. B. FACTORY

With its 121-inch wheel base, its strong chassis, its unrivalled mechanical equipment, its thoroughly modern accessories, and its sweeping body lines in every type, the Haynes 55 instantly responds to the ideas of the buyer who demands the utmost in value for a truly economical price. The 32x4½ cord tire equipment, the leather upholstery, the Haynes electric button starting system—all these up-to-date touches—make it even more desirable. Its record, ever since it was introduced, is one of steadily increasing favor. If you are a dealer with a successful record, and are interested in finding a car and territory which give you still greater opportunity, we suggest that you get in touch with us. Write, wire or telephone. Interviews will be arranged in confidence if desired. In writing or wiring, address Dept. 851.

THE HAYNES AUTOMOBILE COMPANY
Factories and Offices: Kokomo, Ind., U. S. A.
EXPORT OFFICE: 1715 Broadway, New York City, U. S. A.

Disc wheels are optional equipment on all the new, improved Haynes 55 and 75 models, at no extra charge.

HAYNES Character Cars 55

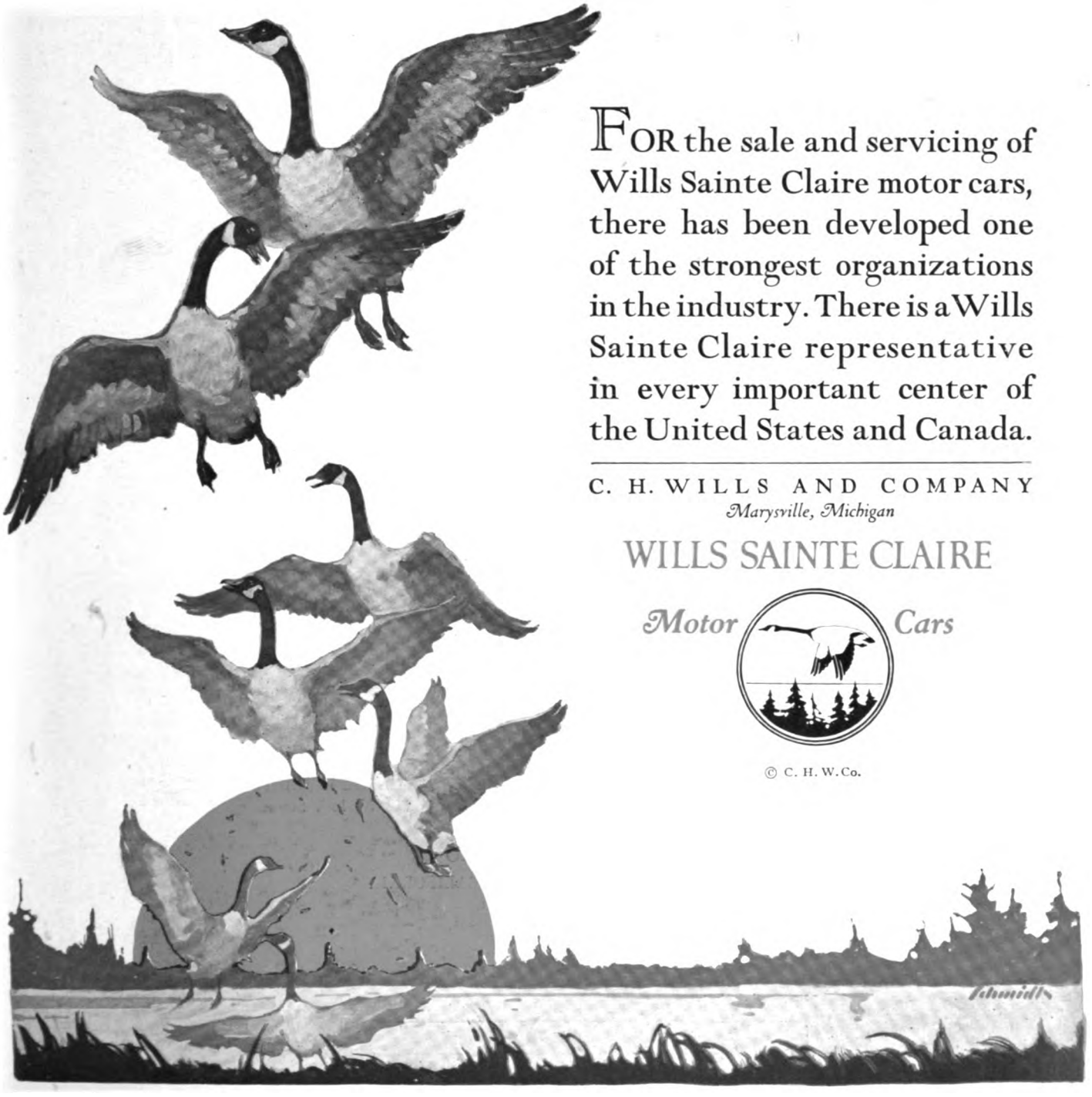
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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 2 | PUBLISHED WEEKLY NEW YORK, AUGUST 26, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



FOR the sale and servicing of Wills Sainte Claire motor cars, there has been developed one of the strongest organizations in the industry. There is a Wills Sainte Claire representative in every important center of the United States and Canada.

C. H. WILLS AND COMPANY
Marysville, Michigan

WILLS SAINTE CLAIRE
Motor Cars

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SATISFACTION to the owner, because of the car and the service you sell, will increase in the same ratio as your specifications for LAIDLAW MOTOR CAR FABRICS.

Their use spells beauty, quality and durability, assuring to the car owner a contentment measured in—

Yards of Satisfaction

THE LAIDLAW COMPANY, INC.
16 West 60th Street
New York

DETROIT	CHICAGO	ST. LOUIS
H. H. KNEPPER	F. J. PARTLAN	CLYDE B. JUDD
4835 Woodward Ave.	2638 Michigan Ave.	321 N. 14th Street

SAN FRANCISCO
THE LAIDLAW CO. OF CALIFORNIA
1314 Post Street

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The "Service Tax" On Your Profits

HAVE you ever stopped to figure it?

Maybe you have never looked at it from this angle—perhaps you never consider this important feature when choosing the line of products you carry.

When a customer leaves your store with the assurance that immediate repair service is available, should anything go wrong with the product he has just purchased, he will come back to buy from you again. Satisfied customers return. Failure to give such service eventually turns business from your doors to those of your competitors.

The ruling god of your business is SERVICE. It levies a tax on the profits of every dealer. You pay tribute to it every time you make a sale, for every customer demands it.

However, this tax on profits can be reduced to a minimum. To assist dealers in this pursuit was the motive in the establishment of the Stewart system of distribution and service. Wideawake dealers were quick to see the advantage of it—that is why they handle Stewart products.

Coupled with the nation-wide distribution of Stewart equipment through 120 Authorized Distributors, is the system of Stewart Service Stations, located in 53 principal cities thruout the United States. These stations were established for the exclusive sale and repair of Stewart Products. Each is equipped with a corp of factory-trained expert mechanics, thoroughly familiar with Stewart Necessities.

This method of distribution and service brings right into your district a complete line of Stewart Products, and places at your disposal an unequaled specialized, Same-Day Service. It nets you a large saving in time and in transportation charges.

Dealers who choose to handle Stewart Products find the Service Tax on their profits automatically reduced to a minimum. It's an easy method of gaining prestige, cutting overhead and adding to your profits.

Stewart

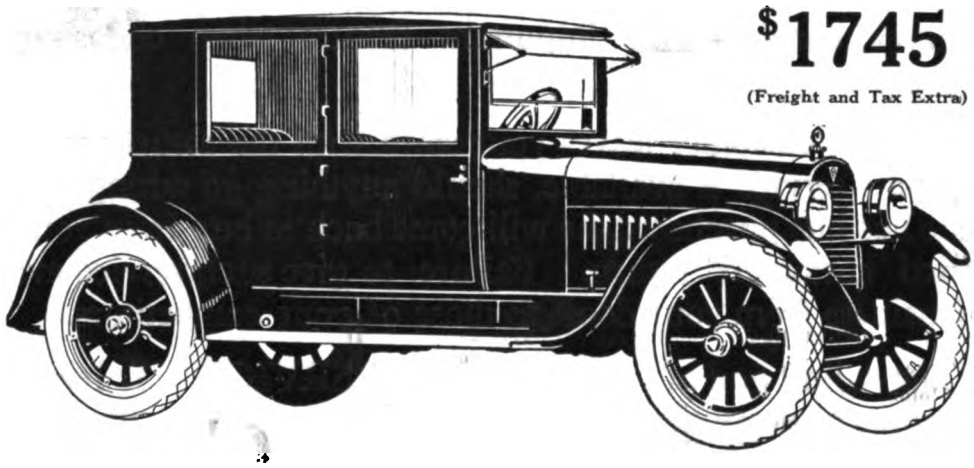
PRODUCTS
USED ON 7 MILLION CARS

STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, U. S. A.

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HUDSON

The Coach
$1745
(Freight and Tax Extra)



One Reason Hudson Dealers Are Prosperous

Hudson dealers everywhere are making money. They are having exceptional success with the Coach. This type which Hudson developed brought more than 50% of fine car buyers into the field of closed car users.

Costing only 6% above open models it is the biggest seller in years.

Now is added the new Hudson motor. Performance is wholly altered—a glorious sense of motion, free as flight. It eludes description. It is a revelation even to Hudson owners. It has added tremendously to the interest and selling power of the Hudson Super Six.

You should see and try this new motor. It will convince you that Hudson is the car to sell, now, more than ever.

If you are interested in a franchise write today.

HUDSON SUPER SIX

Speedster	$1645
7 Pass. Phaeton	1695
Coach	1745
Sedan	2295

Freight and Tax Extra

A Ride Tells All

HUDSON MOTOR CAR COMPANY DETROIT, MICHIGAN

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, AUGUST 26, 1922 NO. 2

TABLE OF CONTENTS

Automobile Makers Face Crisis in Coal 117
Steel Rationing Now Among Possibilities 117
Weeks Hints U. S. to Run Roads 117
Selden Made Chief of Joseph N. Smith & Co. 118
G. M. C. Vice-Presidents Return 118
Williams Goes Abroad 118
Arizona Chooses to Ride in Maxwells 119
Hudson Sees Final Half-Year Largest 119
Clark Sees Big Future for U. S. Cars Abroad ... 119
Earl Motors Prospers 120
Last of Ryan Stutz Stock Sold 120
Sides, of Hupp, Finds Future Encouraging 121
G. M. C. Units Keep on High Level of Sales 121
Timkens Offer Stock in Bearings Company 122
U. S. Rubber Seen as in Strong Position 123
Hayes at Capacity as Demand Keeps Up 123
New Process Gear Sale Held Up 123
A. A. A. Loses Chance to Test N. Y. Ruling 124
Good Managers Plan Study of Goodness 124
The Traffic Problem 124
Rail Strike Slows Up Southern Trade 125
Courier Takes Over Former Maibohm Car 125
Westcott Motor Tells of Best Six Months' Business 125
Headlights Light Up California Sales 126
California Retail Business Holding Up 126
British Take Steps for Trade Recovery 127
Poor Methods Peril Automotive Exports 127
Cubans Look for Revival of Motor Trade Soon .. 127
England Takes Large Share of U. S. Tires 128
August Tire Output Continues in "High" 128
Urge Congress to Pass Statute Against Thefts ... 128
"Keep Upkeep Down" New Federal Slogan 129
Selden-Atlas Begins Combining Branches 129
U. S. Finds Quality of Gasoline Better 130
"Gas" Stocks Fall as Tourists Tour 130
Dealer Tried under Law of Bulk Sales 131
U. S. Develops New Type of Road Filler 131

FEATURES IN THIS ISSUE

New Peerless a Typical Collins Triumph 135
Selling Goods at Retail 139
Publicity Keeps the Wheels Turning Round 140
Latest Offerings of the Car Makers 142
In the Field of Accessories 144
With the Wholesalers and Retailers 147
Calendar 154
Table of Passenger Car Selling Points (copyrighted) 159

Alphabetical Index to Advertisers 202

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
WORCESTER, MASS. CHICAGO, ILL. CLEVELAND, OHIO

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No Automobile Man Should Overlook These Facts

READ the list printed below. Note how many passenger car and truck manufacturers here and in Europe standardize on Zenith Carburetor equipment. Manufacturers, automobile and accessory dealers should not overlook this evidence of Zenith preference. A Zenith fixed adjustment carburetor will give greater economy better acceleration, easier starting, more uniform operation, and added power to any motor vehicle,—facts a demonstration will prove.

Irrefutable Proof of Zenith Supremacy

PASSENGER CARS

United States
Anderson
Brewster
Chalmers (export)
Chevrolet
Comet
Crow Elkhart
Daniels
Driggs
Elgin
Fox
Hatfield
Kurtz Automatic
Maxwell (export)
Meteor
Monroe
Noma
Norwalk
Oldsmobile
Ranger
Romer
Standard Eight
Tulsa
Washington
Wills St. Claire
Yellow Cab

France
Alba
Aries
Ballot
Bazelaire
Beck
Bedelia
Bellanger
Benjamin
Bignan
Brasier
Bugatti
Charron
Colda
Corre-la Licorne
Cottin Desgouttes
Crespelle
De Dion Bouton
Delage
Delaugere Clayette
Doriot-Flandrin & Parrant
Farman
Gobron
Gregoire
Hotchkiss
Irat
La Buire
Leon Bollee
Lorraine Dietrich
Mors
Motobloc
Mourre
Paquis
Paulet
Peugeot
Philos
Rauch-Lang (Taxi Cab)
Rochet Schneider
Rolland Pilain
Roy
Salmson
Th. Schneider
Sidea
Sigma
Slim
Soriano-Pedroso
Turcat Mery
Vermorel
Vinot-Deguingand
Voisin
Zebre
Zedel

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Argyll
Arol Johnston
Austin
Beardmore
Belsize
Blackburn
Briton
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Calcott
Calthorpe
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Cluley
Enfield Allday
Ensign
Galloway
Guy
Hampton
H. E.
Hillman
Jowett
Lagonda
Orpington
Palladium
Phoenix
Ruston Hornsby
Standard
Star
Swift
Talbot
Vauxhall
Vulcan
Waverly

Germany
Adler
Audi
Beclowen
Benz
Benz-Sochne
Dux
Elite
Horch
Joswin
Ley
N. A. G.
N. S. U.
Protos
Richard & Hering
Simson
Steiger
Stoewer
Szawe
Wanderer

Belgium
Abadal
Belga
d'Acoust
Dasse
F. N.
Metalurgique
Minerva
Nagant
Niesse
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Somea

Italy
Alfa Romeo
Ansaldo
Bianchi
Chiribiri
Diatto
Isotta Fraschini
Itala
Lancia
Nazzaro
S. C. A. T.
Spa

TRUCKS

United States
Abbot-Downing
Acme
American
American Motor-bus
Armleder
Atlas
Atterbury
Beaver
Belmont
Bethlehem
Biederman
Bridgeport
Buffalo
Casco
Clydesdale
Collier
Commerce
Dart
Day Elder
Dearborn
DeMartini
Dependable
E. A. Denz
Double Drive
Eagle
Elgin St. Sweeper
Facto
Fageol
Federal
5th Ave. Coach Co.
Forschler
Gotfredson-Joyce
Hahn
Hall
Harmer-Knowles
Hawkeye
Hercules
Higrade
Huffman
Hug Co.
H. R. L.
Huron
Indiana
J. T. Tractor
Kelly-Springfield
Kerns Dughie
Keystone
Kimball
Koehler
Krebs
Larrabee-Deyo
Maccar
Mack
Massey-Harris
Moreland
Municipal Supply Company
National
Nelson
New England
Northway
Norwalk
Oklahoma
Olympic
Oshkosh
Penn
Perfection
Power
Rainier
Ranger
Rowe
Samson Tractor
Sanford
Schacht
Southern
Sterling
Stewart
Stoughton
Sullivan
Tower
Towmotor
Traylor
Triumph
Veteran
Vim
Wachusetts
Walker Johnson
Watson
White
Witt-Will

England
A. E. C.
Albion
Austin
Beardmore
Belsize
Daimler
Enfield Allday
Guy
Halley
Hallford
Karrier
Mandslay
Marathon
McCord
Pagefield
Palladium
Scrammell
Star
Tilling Stevens
Vulcan

France
Aries
Cottin Desgouttes
DeDion Bouton
Peugeot
Rochet-Schneider
Saurer

Italy
Spa

Switzerland
Berna

Germany
Adler
Benz
Horch
N. A. G.
Richard & Hering

ZENITH CARBURETOR COMPANY, DETROIT, MICHIGAN

Factories at: DETROIT LYONS LONDON TURIN BERLIN

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LOSSES *that should be* PROFITS

Every time a customer says to you —"Jim, I would rather buy from you than anyone I know, but you don't have a car at the price I want to pay"—you ought to count that sale as *a definite dollar-and-cents loss.*

Your bank account doesn't show it, but every sale that you *could* make and *don't* make is a *loss*, pure and simple, because if you *did* make these sales, your bank account *would* show it.

There's as much profit in the sales you *lose* as in the sales you *close.*

How many such sales have you lost during the past six months? How many the past month? How many will it total for the year?

No car buyer can ever tell a Studebaker dealer that he doesn't have the right car at the right price, because Studebaker appeals to every market above $500.

This is another reason why the Studebaker franchise is so profitable to the dealer.

MODELS AND PRICES—f. o. b. factories		
LIGHT-SIX *5-Pass., 112" W. B., 40 H.P.*	SPECIAL-SIX *5-Pass., 119" W. B., 50 H.P.*	BIG-SIX *7-Pass., 126" W. B., 60 H.P.*
Touring $975	Touring $1,275	Touring $1,650
Roadster (3-Pass.) 975	Roadster (2-Pass.) 1,250	Speedster (4-Pass.) 1,785
Coupe-Roadster (2-Pass.) 1,225	Roadster (4-Pass.) 1,275	Coupe (4-Pass.) 2,275
Sedan 1,550	Coupe (4-Pass.) .. 1,875	Sedan 2,475
	Sedan 2,050	

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA

SOUTH BEND, INDIANA

Studebaker

THIS IS A STUDEBAKER YEAR

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The New Peerless

The creation of this new Peerless eight-cylinder car had its source many months ago in a clear-cut, definite and positive conviction.

That conviction was that there were inherent in the eight-cylinder principle, depths of reliability which had not been sounded—and heights of performance as yet unattained.

Pioneers first, in that principle, and recognized authorities for years afterward, the new Peerless administration was convinced that eight-cylinders have never yet yielded up their fullest capacity for prodigal power, sustained speed, and undeviating ductility.

Out of these convictions has come what we believe to be the most powerful, the fastest, and the most flexible stock car America has ever produced.

No experienced motorist can inspect the bare chassis of this splendid car without encountering as many occasions for enthusiasm as the more casual observer will find in its exquisite exterior.

The chassis itself is a thing of beauty to the man who can appreciate a transcendent nicety of balance, proportion and continuity.

It is a clean, simple, staunch and rugged chassis, which will tell its story of prodigious power, speed, and steadiness to the connoisseur of fine construction, even before he has proven these qualities at the steering wheel.

This beauty, and balance, and proportion, beginning at the ground, builds itself up into the chassis, and through the chassis, into and throughout the splendid superstructure of the Peerless.

Just as there is not one iota of waste weight or lost momentum in any single detail of the chassis design—so there is neither line, shade nor contour, in radiator, fenders, hood or body, which does not contribute to an harmonious ensemble.

This new Peerless is the product of a long and intimate acquaintance with the motoring preferences and prejudices of the American people.

It recognizes, as a Peerless announcement said many months ago, that a really fine motor car attracts an eager and an appreciative market in America as surely as a magnet attracts steel.

It responds to the native passion for manufactured merchandise which is sound and substantial, and defers to the American abhorrence for transportation which is slow or sluggish.

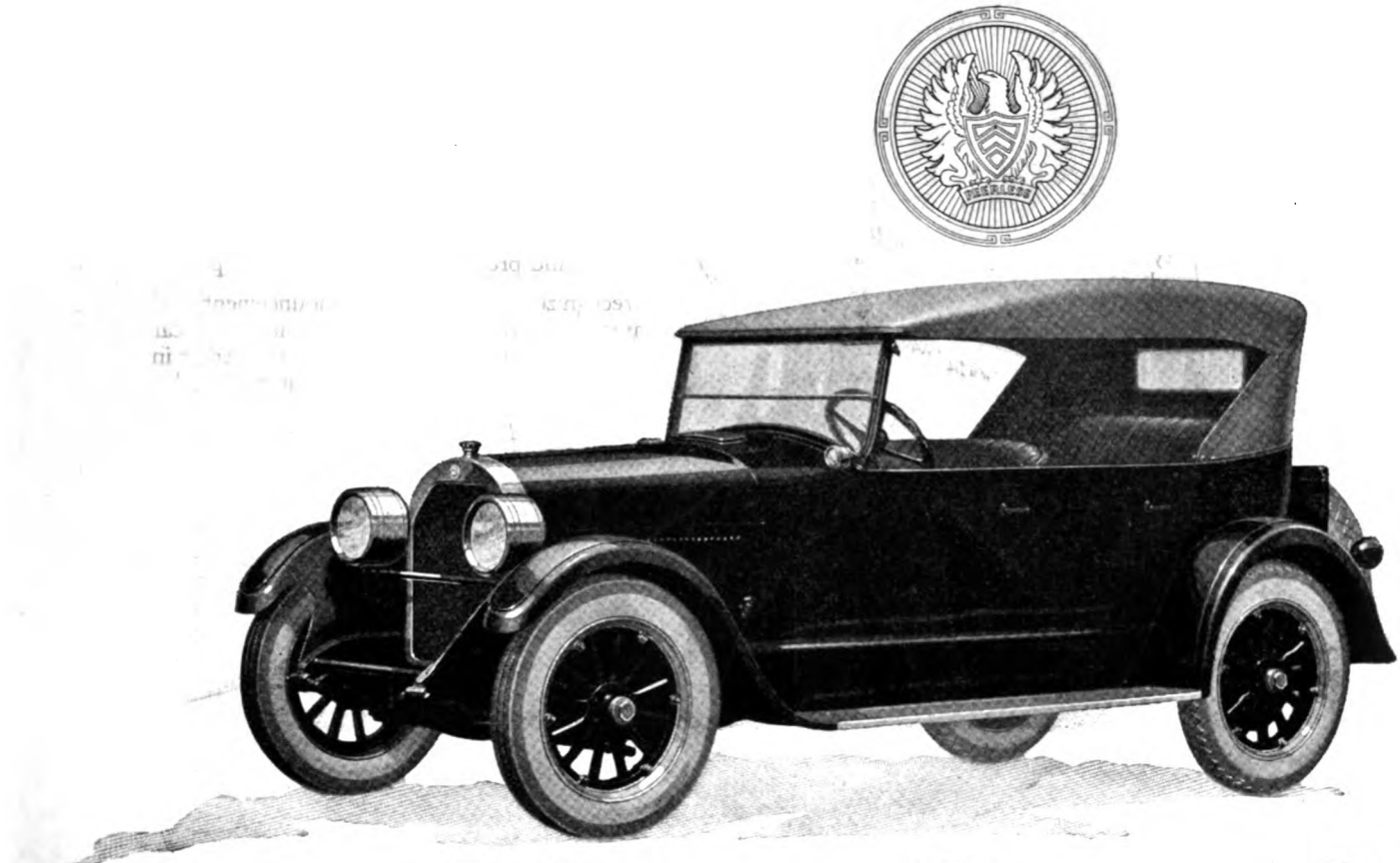
Its prodigality of power, and arrow-like swiftness of action, should render the new Peerless supreme in every condition in which a motor car can find itself.

At any rate it is our earnest and honest conception of what we believe the American people have long desired.

THE PEERLESS MOTOR CAR CO., CLEVELAND



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L E S S

It is our sincere belief that nothing short of the most costly custom-built creations can compare with the beauty of the new Peerless eight-cylinder motor car.

The body design itself is one of unusual grace and exceptionally fine proportions. The car is longer and lower. The wheels are smaller, the tires larger. The fenders are exceedingly attractive. The radiator and hood present an extremely pleasing aspect.

The degree of riding smoothness is so pronounced, by reason of the longer wheelbase—now 128 inches—and the new equipment with extra-long semi-elliptic springs, that it will induce you, we believe, to say this is the most comfortable car you have ever ridden in.

The driver finds himself in a position of greatest ease, whence he steers, shifts gears, starts and stops with the very minimum of exertion.

Perhaps the most notable feature of the new Peerless road-behavior is its smoothness—a lack of chattering and bumping and sidesway bound to delight the motorist who has always sought such comfort and always fallen short of finding it.

This new Peerless goes even farther, if that is possible, in those splendid qualities of reliability which enable a car always to respond promptly and efficiently, no matter what it is called upon to do.

The power, the speed, the ductility for which the Peerless eight-cylinder engine has long been famous, are enhanced by carefully worked out engineering improvements. Engine design is cleaner. All parts are easy to get at.

Delco starting, lighting and ignition contribute to the all-around dependability of the car. The storage battery is Exide.

Both axles are Timken, the front with roller-bearings not only on the wheel spindles, but in the steering pivots as well, to increase steering-ease still further; and the rear of the semi floating type, with 15½ x 2½ inch brakes—a size scientifically proportioned to the weight and power of the car.

It is easy to appreciate all we say of riding comfort when it is known that the front springs are 41 inches long and the rear springs 60 inches long. The shackle bolts have the unusually large diameter of ⅛ inch, which means almost no wear at a point ordinarily slighted in engineering.

Open cars carry the Peerless permanent top, equipped with dome light. The side-curtains fit so snugly that they give the practical advantages of a closed car.

In the closed car types, the doors and windows are unusually wide, the hardware reminds you of fine jeweler's-plate, and every accessory of comfort is provided.

Maximum strength in the chassis frame is assured by side bars measuring 7½ inches at their greatest depth. Rigid cross-members, and stout tubular cross-members at both ends, obviate the weaving that inevitably results in body squeaks and rattles.

In addition to a complete equipment of tools, the new Peerless is provided with rear-view mirror, windshield cleaner, combination speedometer and clock, a handy lamp of the reel type, and a special Peerless tail lamp which incorporates an automatic electric rear signal.

The New Peerless is Built in the following types:

4-Passenger Touring Phaeton
7-Passenger Touring Phaeton
2-Passenger Roadster Coupe
4-Passenger Town Coupe
4-Passenger Suburban Coupe
5-Passenger Town Sedan
7-Passenger Suburban Sedan
5-Passenger Berline Limousine
4-Passenger Opera Brougham

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SCHWARZ WHEELS



Interlocked spokes and steel felloe

The wheel that can be shipped WITHOUT the hub

EVERY spoke in a SCHWARZ wheel is self-supporting. For the interlocked spoke construction makes the spider itself almost as rigid and strong as the completed wheel.

As evidence of this, consider the fact that thousands and thousands of SCHWARZ Spiders are shipped every year with neither hub nor rim to hold them intact.

Add to the sturdiness of this construction, the great strength and rigidity secured in the SCHWARZ Interlocked Spoke Steel Felloe wheel by contracting the felloe upon the spokes under an enormous pressure of 15 tons and you will understand why it is that SCHWARZ wheels are standard equipment on many of the country's highest grade cars and trucks.

America's foremost builders of cars and trucks are invited to write for the blueprints and full particulars.

In addition, Schwarz Wheels with interlocked spokes also are furnished with wood felloes.

THE SCHWARZ WHEEL COMPANY
Frankford, PHILADELPHIA

NOTE THE WOOD WHEELS EVERYWHERE

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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FISK RED-TOPS

"Whip the demand for cheap tires"

Their sale brings a good profit, holds present customers and secures new ones.

This is what they have done for one dealer:

Flemingsburg, Ky., July 19, 1922

Fisk Tire Co.,
816 Main Street,
Cincinnati, Ohio

Gentlemen:—

When your Mr. Leonard fought me into buying Fisk Red-Tops back in 1919 he started me on the road to success in the tire business.

My business has steadily increased since then, and I attribute this to the fact that every man that ever bought a Red-Top has not only continued buying them, but sent me more customers.

The Red-Top has successfully whipped the demand for low-priced tires by demonstrating that they are cheapest in the long run.

In all the years I've sold Red-Tops, I have only had two come back for adjustment.

I am giving you this information in appreciation of the fine service and treatment accorded me by your company.

Yours,
Central Garage,
M. C. Foxworthy.

When you sell Fisk Red-Tops you will have the one tire that is without competition.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



Extra Ply of Fabric—Extra Heavy Tread

FISK
RED-TOP
CLINCHER TIRE

Trade Mark Reg U.S Pat Off.

Time to Re-tire?
(Buy Fisk)

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Better Lighting
Better Looking
Better Lenses



—and Cost ***No More***

Monogram Lens Corporation
1834 Broadway
New York City

Jobbers—
Distributors—Dealers
Wanted Everywhere

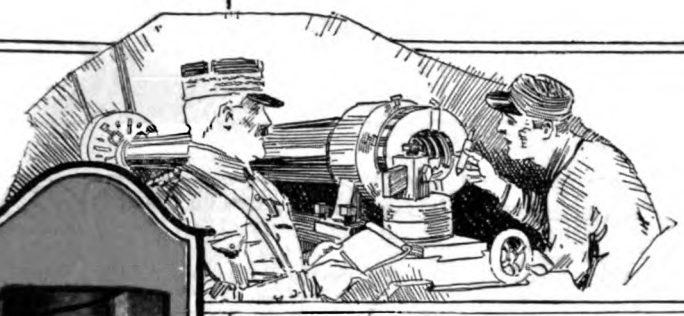
Factory Equipment on these Cars

CADILLAC	LEXINGTON	PAIGE
DURANT SIX	MAIBOHM	R & V KNIGHT
GRANT	MAXWELL	RICKENBACKER
HAYNES	MOON	STEARNS-KNIGHT
JEWETT	NASH	WILLYS-KNIGHT
JORDAN	OAKLAND	WILLYS-OVERLAND
	OLDSMOBILE	

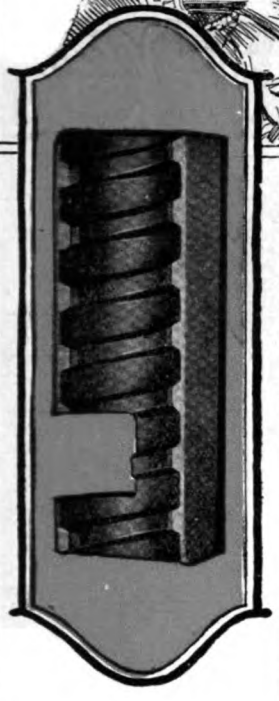
Wire or write today for Discounts and Territory

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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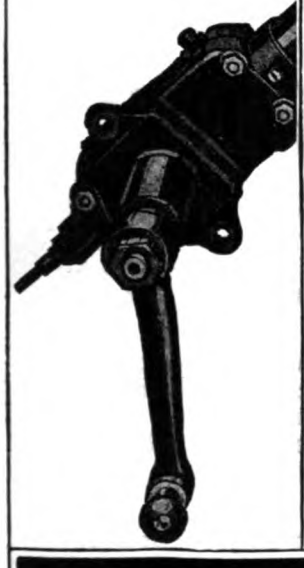


"Rifled" Like the French 75

—another reason why many truck makers specify LAVINE

ORDNANCE accuracy, in machining and fitting, has had much to do with the Lavine's fine service record in the truck field. No gear is better than its parts!

Lavine sliding heads are special analysis steel, hardened and ground. They are cut with the same buttress thread used on the breech-block of the famous French "75" gun—in fact, former "75" makers superintend their machining.



Unusual, of course. But the Lavine throughout is an unusual gear—a gear of a dozen extra-quality features—a gear that sets new standards of durability, simplicity, safety and ease of adjustment. Silky smooth in its action, permanently free from rattling yet the Lavine is no higher-priced than many inferior steering gears.

There is a

LAVINE GEAR

for every job

For every truck, bus or tractor there's a special Lavine Gear—and the famous "Pilot" for passenger cars.

Manufacturers, send us your blue prints and let us quote on your requirements. Perhaps you overestimate Lavine prices.

LAVINE GEAR CO.
Milwaukee, Wisconsin

LAVINE STEERING GEAR

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The Perfect Window Channel



Supreme

The exclusive features of PERFECT CHANNEL will interest every manufacturer endeavoring to reduce production cost and at the same time to retain or increase the efficiency of their product.

One of the most important features of this new felt lined channel is that it permits the body engineer to reduce the thickness of the pillar construction to a minimum, which is an important factor in the cost of the closed body construction.

We will be glad to send a copy of our booklet upon request.

PERFECT WINDOW REGULATOR COMPANY
20 Exchange Place, New York City

Branch Offices—Detroit, No. 528 Detroit Savings Bank Bldg.; Indianapolis, No. 310 Kahn Bldg.
Representatives—E. F. Rogers, Philadelphia; Scovel Iron Store Co., San Francisco, Los Angeles, Seattle; Hanyei Trading Co., Ltd., Tokio, Japan.
Foreign Branch—H. M. Hobson, Ltd., London, England.

Channels *Window Regulators* *Handles*

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Buick Dealers Are Leaders

The Buick dealer in every village, town and city is looked up to as a leading motor car merchant of his community. He prospers because Buick cars are *wanted* cars and because he, as a business man, measures up to Buick dealer requirements. Why not keep your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

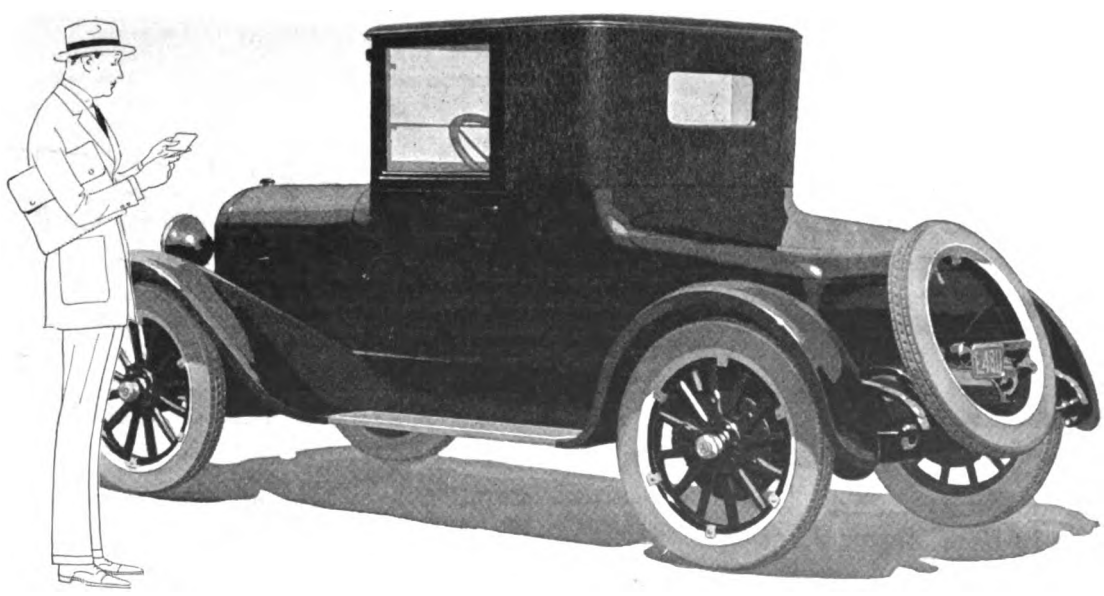
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

The price is $980 f. o. b., Detroit

DODGE BROTHERS



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NEVER were the advantages of being a member of the Goodrich organization so great as this year.

Never were Goodrich values so outstanding—never was the Goodrich line so complete. You can offer just the tire for every purse and purpose.

Goodrich stands for greater dollar for dollar value to the user.

Goodrich has the goods and Goodrich has the plan to sell them. The cooperative selling plan for 1922 complete to the last detail is all ready for the right dealer. Thousands are already cashing in. If you are looking for present profits and future prosperity write or wire for the Goodrich plan. We will get in touch with you at once.

THE B. F. GOODRICH RUBBER COMPANY
Akron, Ohio



Goodrich Tires

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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"Nash Leads the World in Motor Car Value"

NASH

Nash Now Increases Size of Four-Cylinder Plant

It is no secret to the trade that the Nash Four has been continuously oversold since it was first placed on the market.

It was fully expected at the start that the great value of this fine car, at its exceptionally low price, would create an unprecedented demand.

So strikingly rapid, however, has been its consequent rise in popularity, and so unusually promising the forecast of future business, that it became not only expedient but imperative to substantially enlarge the Milwaukee plant.

This will provide a greatly increased output of Nash Fours, which will be available for Spring business.

With already large Six production and an added volume of Fours the Nash dealer enjoys an exceptionally favorable opportunity.

Fours and Sixes

Newly Reduced Prices range from $915 to $2190

f. o. b. factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

"Nash Leads the World in Motor Car Value"

(540)

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, AUGUST 26, 1922 No. 2

AUTOMOBILE MAKERS FACE CRISIS IN COAL

Fuel Administration Deaf to Pleas of Industry — Non-Essential Ruling to Stand, Is Reply to Congressman—Shut-Down Seems Inevitable.

Detroit automobile manufacturers face the most serious coal shortage in their history. Indeed, unless extraordinary relief is furnished in some way very quickly a shut-down seems almost inevitable.

Such is the tenor of private advises to Automobile Topics from the Michigan metropolis. Pleas of the industry for coal priority have failed.

As related in these columns under date of August 19, the Federal fuel administrator placed the business of making automobiles on the non-essential list. The decision was decried, not alone by the industry but by all business interests in Detroit. Representative Vincent M. Brennan appealed to the Interstate Commerce Commission. State Fuel Administrator W. W. Potter added his pleas. Both were told flatly that there was no possibility of placing the automobile industry on the priority list until production at the mines increases sufficiently to meet the needs of the various public utilities.

Brennan pointed out than in the event of the breakdown of railroad transportation, the automobile would be expected to act as a substitute. Trailing Michigan's fuel administrator to Washington, a number of representatives of the industry pleaded for coal. The only word forthcoming was that the administration would like to "keep these industries going" if it could but "it doesn't look as if it would be able to do so."

The facts in the Michigan situation are these:

¶ 1. There is not enough coal priority routed to Michigan to take care of the class one and two industries. These include railroads, public utilities, hospitals and households.

¶ 2. There is no prospect of getting coal for consumers of class five. This includes automobile factories, paper mills, copper and iron mines. This means that the copper mines in Michigan will be closed until next May. What this would mean to the Detroit motor makers is readily apparent.

Michigan coal mines began operation on August 21. The State will take over all the output and ration it out. The production will not be more than 75,000 tons a month for home consumption. Normally the public utilities of the State consume 190,000 tons a month. When the mines are working at full force a pro-

(*Continued on page 120, first column*)

Postoffice Prepares Trucks

Postoffice officials announced late in the week that the War Department has begun movement of its trucks to the postal department in anticipation of necessity for their use as a result of the failure of rail executives and strikers to settle the controversy. One hundred trucks have been put in condition for immediate use. One thousand have been loaned so far by the War Department, 700 of which have been shipped to other States in preparation for mail hauling.

Weeks Hints U. S. to Run Roads

Secretary of War Weeks hinted late this week that the United States government may take over operation of the railroads. "The government will not permit the transportation service to break down," he said. "It is hardly likely that the Administration will intervene further in negotiations. It has done everything it could to bring about a settlement. It is now up to the railroads to run them or let some one run them who can. This means the government although there is no immediate thought of taking them over."

STEEL RATIONING NOW AMONG POSSIBILITIES

Prices Scheduled to Increase as Wage Boosts Are Given Workers—Action of Big Corporations Is Nevertheless Taken as Heartening Sign.

Indications of increased steel prices following close on the heels of the announcement on August 23 of a 20 per cent boost to wages in that industry, are evident. The United States Steel Corp. led off and by the end of the week practically all other large concerns had followed suit. The move reflects several industrial conditions in which automobile manufacturers cannot but have interest.

Briefly, the steel mills have been feeling the influx of increased business and are fairly well satisfied that the growth will continue. They will need more labor. They must engage it in a market in which the demand is getting keener all the time, not merely because of better business but because of the policy now in force in regard to immigration. The steel industry is a barometer of trade. Where it leads, others follow. It is therefore a heartening and assuring action, this raise in wages.

While the wage increase is viewed in many quarters as the most important factor of the year in general business, it is equally widely credited that prices must also advance. Sales managers of the Corporation met in New York during the week and while no definite word was forthcoming as Automobile Topics goes to press, it is understood that the matter of prices was threshed out thoroughly with the result that an increase is on the books.

Steel prices, as is well know, are now about 50 per cent above those of last February. A composite price of 2.4 cents a pound as against 2.2 last week has been reached for 1923 commitments.

(*Continued on page 120, third column*)

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G. M. C. Vice-Presidents Return

Alfred P. Sloan, Jr., J. J. Raskob and Alfred H. Swayne, who bear between them as vice-presidents quite a bit of the burdens of the General Motors Corp. affairs, returned to America from Europe this week aboard the *Majestic*. Sloan sailed for overseas on July 4 to visit England, France and Switzerland. Raskob and Swayne departed July 8 for a vacation with business on the side. No comments were forthcoming from any of them on their return.

Mason Advances with Maxwell

George W. Mason has been advanced to the position of works manager by the Maxwell Motor Corp. Mason is an experienced executive, having gained his knowledge with Studebaker, Maxwell, Dodge Brothers and the American Auto Trimming Co. According to W. Ledyard Mitchell, vice-president of the Maxwell corporation, the promotion comes as recognition of Mason's work in the rehabilitation of the Maxwell plants and processes.

Davis Joins Durant

James A. Davis, for the past three years manager of the Advertisers & Investors Protective Bureau and investigator for the Illinois Secretary of State in the administration of security laws, has been appointed to a confidential position close to W. C. Durant. The exact nature of Davis' new duties has not been disclosed. Davis holds an enviable record in his past positions and attracted nation-wide attention through his prosecutions of certain practices of the life insurance "Twister."

Barker Books His Return Passage

Arthur E. Barker, vice-president and general sales manager of the Maxwell Motor Co., sailed for home on August 25 on the *Berengaria*. Barker, who has been studying conditions in Europe, was at first expected to land August 26 but had to change his passage due to some delay in the sailing date of the vessel he originally selected.

Tisdale Joins Hupmobile

Glenn W. Tisdale has been appointed distributer for the Hupmobile in Union and Essex counties, New Jersey, with headquarters at Newark. Tisdale is the son of the president of the Franklin Motor Co., of New York.

Dunbar Brunswick District Chief

Charles B. Dunbar has been appointed district sales manager of Wisconsin for the Brunswick-Balke-Collender Co. He will maintain headquarters at Milwaukee.

Boyd Heads Indianapolis Overland

James F. Boyd has been appointed branch manager at Indianapolis for the Willys-Overland Co. He succeeds G. V. Orr, who resigned to become associated with the Overland distributer for Iowa. Boyd's new position brings him to one of the most important branches of the organization, serving as it does two-thirds of Indiana and half of Kentucky.

Ostby Directs Prest-O-Lite Sales

Oscar F. Ostby, connected for some time with the Prest-O-Lite Co., Inc., has been appointed general sales manager of the organization. Ostby succeeds C. C. Leininger, who has resigned.

C. G. SELDEN MADE CHIEF OF JOSEPH N. SMITH & CO.

Promotes General Manager to Presidency and Makes Other Changes

Directors of Joseph N. Smith & Co., Detroit, one of the very large builders of automobile body hardware in the world, have elected Cass G. Selden president of the Company. Selden assumes his new responsibilities after several years of service, having been general manager for some time.

Coincident with the announcement of Selden's promotion, that of Robert Dittenhaver as secretary and treasurer was made. Dittenhaver was formerly of the General Motors Corporation staff. Appointment of H. P. Williams as sales manager is also announced. His promotion follows 13 years of uninterrupted service with the Company in virtually every department.

Meixell Campaigns for Jersey Roads

Following an address by Harry D. Meixell, secretary of the Good Roads Assn. of New Jersey, the Automobile Dealers' Assn. of Bergen County and the Hackensack Rotary club voted a hearty endorsement of the Pierson $40,000,000 good roads bond issue. The Pierson bill comes up for referendum in November.

Troescher Joins Premier

William F. Troescher, formerly general manager of the Ohio Valley Motors Co., Cincinnati, has joined the Premier Motor Corp. as special representative. He has formed the Premier Motor Sales Co., and will act as distributer at Cincinnati.

Postal Heads M. A. M.

Charles L. Postal of Detroit has been elected president of the Motorists' Association of Michigan, a newly organized body affiliated with the National Motorists' Association. Since July 25, the date of organization, it is claimed the membership roll has grown to 3,000.

Detroiters on Safety Congress Program

W. S. Gilbraith, manager of the Detroit Automobile Club, H. F. Keating and Dr. W. S. Ash of the United States Rubber Co. and other prominent men of the Michigan metropolis will take part in the National Safety Congress this year. The Congress will convene at Detroit August 28 to September 3.

Williams Goes Abroad

O. H. Williams, export manager of the Hudson Motor Car Co., sailed on August 19 on the *Adriatic* for Europe. He will visit the British Isles, the Scandinavian countries and points on the Continent. The trip will combine business investigation with a vacation.

Hoag Heads Hyatt Advertising

K. K. Hoag has been appointed advertising manager of the motor bearings division of the Hyatt Roller Bearing Co. Hoag for nine years has been connected with the engineering and sales departments. In his new position he will supervise commercial research in connection with his other duties.

McMillan Joins Kardex

A. G. McMillan, formerly director of sales of the Mitchell Motors Co., has joined the Kardex Sales Co., card index manufacturers. McMillan has evolved a system for efficiency operation in the automotive industry. The initial system is the Kardex Master Business Control for Ford dealers which is given over to the operation on an efficiency basis of an agency.

Van H. Cartmell

Van H. Cartmell, who in the years he served as president of the Kelly-Springfield Tire Co., won a host of firm friends in the industry, died of pneumonia on August 23 at his home in Springfield, O. He was 73 years old. He resigned the presidency of the Tire company early in December, 1920, and retired from active business. He was a pioneer in the industry, having founded the old Springfield Rubber Tire Co. in his home city when making tires for carriages was the main source of revenue for such concerns. This company was merged with the Consolidated Rubber Tire Co. in 1898 and Cartmell became president in 1903. He also served the industry as vice-president of the Rubber Association of America. His passing is a matter of deep regret to the trade and a party of officers of the concern which he so long directed attended the obsequies. He is survived by his wife and by three sons, Van H. Cartmell, Jr., of New York; Robert Cartmell, of Springfield, O., and Harold Cartmell, of Buffalo, N. Y.

Richard F. Kelsey

Richard F. Kelsey, widely known among the youth of twenty years ago as a leading light in the sport of cycle racing, died suddenly on August 19, at his home in Montclair, N. J. Kelsey served for fifteen years as chairman of the board of control of the National Cycling Assn., of which he was a charter member. He followed the late A. G. Bachelder as chairman. He was 60 years old at the time of his death, which occurred while he was still "in the harness," he having been in charge of the Velodrome races when a heart attack proved fatal.

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ARIZONA CHOOSES TO RIDE IN MAXWELLS

Sales in That State Exceed All Others Save Fords—Portland, Me., Hangs Up Record Early in Year—Portland, Ore., Registrations Now in Lead.

One of the exceedingly bright spots in the field of automobile sales this year is the record of the Maxwell Motor Sales Corp. Gains in production and sales continue to be the rule, according to the Company, which declares that in a number of districts the Maxwell leads all others in its class.

In Arizona, R. D. Roper Co., distributer at Phoenix, finds that its sales lead all save only the Ford. The advantages of the light car in negotiating the sands that cover so much of the State is appreciated by the populace, the record would indicate.

Earlier in the year Portland, Me., hung up a record when, for a period of several months, Maxwell business is asserted to have bettered that of any other car at any price. As a rather peculiar coincidence, Portland, Ore., came to the fore next with registrations exceeding everything in the local $1,000 field, according to the Company.

Maxwell has no false ideas concerning its position in the industry, but hopes are harbored that the places in which it stands second in sales will increase before they diminish. Owing to minor improvements and refinements, July production was somewhat modest, but before August has run its course, the 400 mark will be reached in daily output, according to present indications.

Overland Passes 900,000

Friday, August 11, was especially marked at the Willys-Overland plant at Toledo when No. 900,000 passed through the tester's hands and was delivered in a shipment. One million cars is now the goal of the production department and it is expected that the number will be reached before many more months have passed.

Dodge Brothers Output 650 Daily

Dodge Brothers is now producing an average of 650 vehicles a day, the highest level attained this year. No slackening of demand is apparent in the near future to the officials of the concern. In respect to coal and raw materials, the company finds itself in what it terms a "comfortable" position.

Pierce-Arrow Sales Good

As a result of its price reductions, the Pierce-Arrow Motor Car Co. has received a large volume of orders lately and within a comparatively short space of time it is expected that the Company will be in much larger production than at any time since the depression of 1920. That the statement for the final quarter of 1922 should show a handsome increase, not only over the figures of a year ago but as compared with all previous quarterly sums this year, is generally acknowledged. For this reason, confidence is entertained as to the outlook for the concern and its ability to successfully liquidate its present bank loan position.

Duesenberg Activities Increase

Plans for increasing activities of the Duesenberg Automobile and Motors Co., Inc., extend to a more complete line of bodies covering all requirements of the class of owners to which the line appeals. More factory space is being provided by construction of a new building at the Indianapolis plant, 200 x 60 feet, work on which was started August 7. At the same time, the selling organization is being strengthened by a number of additions to the force.

CLARK SEES BIG FUTURE FOR U. S. CARS ABROAD

Detroit Banker, After Motor Trip in Europe, Pictures Possibilities

Emory W. Clark, president of the First National Bank of Detroit, and widely known in the automotive as well as financial world, sees great opportunities for American automobile manufacturers in foreign fields. Just returned from a brief trip abroad during which he motored between 2,500 and 3,000 miles through France, England and Scotland, Clark expresses himself as satisfied that the time is ripe for the American maker to establish himself in a permanent way both in the British Isles and in France.

"They want our cars and are daily getting in better position to afford to buy them in increasing numbers," Clark declares. "Although the duty imposed is high and makes American cars expensive, the cost is not out of line with foreign-built automobiles. The industry has a great future abroad and the companies whose products have been established over there for some years, are today unable to supply the demand."

G. M. C. Uses Its Planes

General Motors of Canada last week called upon the Dayton Wright Co., a division of the parent American corporation, for help in obtaining a hurry-up shipment of parts needed to complete an important overseas consignment. The planes flew from Dayton to Toronto, where trucks completed the trip to Oshawa, carrying numerous but light parts. The planes consumed about 100 gallons of gasoline and were four hours and twenty minutes making the flight of 450 miles.

HUDSON SEES FINAL HALF-YEAR LARGEST

Business Will Exceed First Six Months by 20 to 25 Per Cent, Is Belief—August Sales Hang Up Record for Company—Schedules Increased.

Management of the Hudson Motor Car Co. looks for the greatest volume of business in the history of the concern during the final half of 1922. Basing predictions on reports from the various sections of the Country, the Company believes when December 31 rolls around, from 20 to 25 per cent more sales and production will have been accomplished when the record is compared with that of the first half.

"Today's demand for Hudson and Essex cars is equally as heavy as during the Spring months, with no let-up in sight," it is pointed out. "Shipments for the first 15 days of August were higher than for any similar number of days in the 13 years of the Company's history. Distributers and dealers throughout the Country continue to report new high sales records, with many still behind on delivery. Closed car sales are growing even larger.

"Demand for cars has been so great that tentative production schedules for the later months of the year have been increased three times since June 1. Sufficient orders have already been placed to keep the factory at capacity production for several weeks. No let-up of output because of the coal and railroad difficulties is in prospect.

"July sales set a new record for that month. August sales will exceed July's and will be 200 per cent greater than for August, 1921, and nearly 40 per cent more than for the largest previous August. September sales will also set up a new September mark.

"Demand from a number of sections for cars for the next several weeks is heavier than at any previous time this year. These points are from Portland, Ore., in the West to Providence in the East, and from Dallas, Shreveport, Miami and Tampa to Lincoln, Neb.

"States from which orders, heavier than for any time this year, have been placed for the next several weeks include Oklahoma, Tennessee, the Carolinas, Georgia, Florida, Mississippi, Louisiana and Texas in the South; Utah, Oregon and Montana in the far West; Kansas, Nebraska, Iowa, Ohio and southern Illinois and Indiana in the middle West, and New York, Connecticut, Rhode Island and Massachusetts in the East. Several other States are ordering in the same volume as in May, June and July.

"More than a third of Hudson's distributers have ordered the heaviest shipments of the year for the next few weeks, and about two-thirds of the remainder are asking that their Spring and Summer allotments be continued. Sales to the rural sections are excellent, but more gratifying is the way in which metropolitan orders continue."

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AUTOMOBILE MAKERS FACE CRISIS IN COAL

(*Continued from page 117, second column*)

duction of 1,500,000 tons annually is maintained. This is less than a tenth of the fuel consumed in the State yearly.

Replacement of coal burning plants in factories to oil burners is receiving serious attention. Much more than the expense is involved. Experiments in New York city in large buildings shows that while but three barrels of oil are required to produce the energy developed by a ton of anthracite and 3½ barrels to a ton of bituminous, there is not enough low grade Mexican oil in sight to supply the Country or indeed any but a relatively small portion of it.

Costs of oil as compared with coal are insignificant. It is found that running a certain large building on oil costs $73.80 daily while the coal costs used to be $225 a day.

Some automobile manufacturers are making plans for conversion to oil burners. The plan is expected to work out very well but the lack of adequate transportation throws a sizable monkey-wrench into the machinery since the haul would be longer even should a sufficient number of oil-cars be obtained, which is considered doubtful.

Meanwhile, the manufacturers are neglecting no avenue whereby the essential character of the industry may be brought home to those in authority at Washington. It is felt, and rightly so, that the adverse ruling of the fuel administration is not only an injustice to the industry but a grave menace to the Country at large. Especially since hope of settling the railroad strike grows dimmer and dimmer.

Metz Motor in Bankruptcy

Metz Manufacturing Co., Waltham, Mass., was petitioned in bankruptcy on August 17 in Boston Federal courts. The petitioners, all of whom presented small claims, were the Johns-Mansville Co., the Culver-Stearns Manufacturing Co. and Jacob I. Hanflig of Chelsea, Mass.

Last of Ryan Stutz Stock Sold

At a continuation of the sale of the assets of the bankrupt Allan A. Ryan, conducted in New York city on August 23, William J. Hennessey, a friend of Ryan, bought in fifty shares of Stutz stock, the last of the Ryan holdings. The price was unascertainable as the shares were part of a job lot of odds and ends for which Hennessey paid $8,600.

Establish School for Motorists

Alfred E. Smith, former New York governor and president of the U. S. Trucking Corporation, has consented to direct a special campaign in New York by the Safety Institute of America to prevent motor vehicle accidents. The problem of automobile trucks, taxicabs, buses and other commercial vehicles is the most serious accident problem confronting the Public Safety Committee, of which Elbert H. Gary is Chairman, recently appointed by the Safety Institute to conduct a public safety campaign in New York City. A special school is to be established at which drivers of trucks, taxicabs, buses and all commercial vehicles will be taught the fundamentals of safe driving, proper maintenance of motor vehicles, with a view to preventing accidents due to faulty mechanical conditions, and rules of the road. The psychology of pedestrians, the habits of children at play and cooperation between truck drivers and drivers of passenger cars also will be taken up in the school.

Duesenberg Enlarges Its Facilities

Twelve thousand additional square feet of floor space for assembling cars is being provided by the Duesenberg Automobile & Motor Corp., Indianapolis, through the erection of a one-story steel and brick building. The new structure will be erected at the rear of the Duesenberg plant at a cost of $30,000.

FINDS EUROPE POOR MARKET FOR MOTORS

Crawford of Westinghouse Battery Co. Sees Continent in Sharp Contrast

Europe's automobile industry presents striking contrasts to America's motor trade, according to D. F. Crawford, president of the Westinghouse Union Battery Co., who has just returned from an extensive tour made in the interest of the Air Brake industry. While conditions are growing better, Crawford does not look for much of a market until the general business situation is greatly improved, a matter for years of intense work, he believes.

"Germany is making the greatest advances among the States of Central Europe, and the motor car registration in that country equals the previous high water mark of 1914," Crawford reports. "The Italian automobile manufacturers are suffering a slow-up in their production. The war popularized the use of motor trucks, and with an improvement in business conditions there will be a large market in Italy for commercial vehicles. In France there has been introduced a measure to repeal the luxury tax on motor vehicles selling for less than 15,000 francs, which if passed will increase the demand for both passenger cars and trucks. Great Britain has gone through a lock-out in the engineering trades which ended in June. The industry suffered considerably but is now gradually picking up. Industries in this country in all lines seem to be more prosperous and on a firmer basis than abroad, although it was my observation that foreign manufacturers are on the road to improvement."

Ward Electric Makes Record Run

Danger of delay in shipments owing to the two strikes, led the Ward Co. to send a loaded electric truck from Baltimore to Boston last week. The trip was made from Baltimore to Philadelphia on one charging of the batteries for the 103 miles; to New York, 111 miles, on the second charging, and on to Boston with two boosting charges.

Earl Motors Prospers

Earl Motors balance sheet of April 30, after giving effect to the proposed issue of $2,775,000 five-year, six per cent debenture and $2,285,000 seven per cent preference stock to be applied to the settlement of creditors' claims under the plan of reorganization, shows total assets of $5,984,153. Current assets are $1,557,759 against current liabilities of $793,396. Total deficit is set at $1,439,419.

New D. A. D. A. Board Members Named

H. W. Peters and A. L. McCormick, well known to Detroit's retail trade and throughout the industry as dealers, have been elected to vacancies on the board of directors of the Detroit Automobile Dealers' Association, brought about through the resignations of C. A. Triphagen and Charles W. Hathaway. McCormick also has been elected treasurer, a position Hathaway held.

Pageant Honors Mitchell

Officials of the Pageant of Progress at Chicago selected the Mitchell "F-50" as press car. Two of the five cars selected were equipped with radio telephone apparatus and gave daily concerts throughout the city.

STEEL RATIONING NOW AMONG POSSIBILITIES

(*Continued from page 117, third column*)

Meanwhile, receipts of coal by the iron and steel interests have not increased appreciably even with the partial settlement of the labor controversy. Coal piles are playing out, one by one; production of pig and ingot is consequently dwindling. The rate of steel ingot output is now at the rate of about 25,000,000 tons a year, or 25 per cent below recent maximum late in June. How much longer the decrease will continue can only be guessed. The coal settlement, to be sure, releases more fuel but under the artificial rationing steel makers and steel users are not favored.

As a corollary, the talk of steel rationing arises. Already some concerns are rationing their output to consumers. The object is two-fold—to prevent hoarding and to place steel where it will do the most good.

Another feature to be considered by automobile makers is the state of the buying market. Mills are sold so far ahead—to a much more extended date than ever before at this date—that little room is left for the usual Autumn market. The next heavy business will have to be for the early months of 1923. As a result, cases of advances in prices even on steel for late delivery are fairly common.

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SIDES, OF HUPP, FINDS FUTURE ENCOURAGING

Indiana Promises Best Fall Buying Season in Years, He Says—Tobacco Crop Indicates Prosperity in Kentucky with Consequent Sales Values.

In spite of the critical aspect of the railroad strike situation, Fred B. Sides, assistant sales manager of the Hupp Motor Car Corp., on a hurried trip into Indiana and Kentucky last week, found much to encourage the automobile manufacturer. The labor difficulty, in his opinion, is practically the only remaining obstacle in the Country's march toward prosperity, so impressively begun several months ago.

Indiana with splendid crops, according to the information Sides received from Hupmobile representatives, promises one of the best Fall buying seasons in years. In Kentucky, he was told that the tobacco crop will be exceptionally large; that the demand promises to far exceed the available supply, and that there is every reason to expect better prices and more prosperity for the growers.

In Louisville, he was informed that everywhere South of the Mason and Dixon Line, and East of the Mississippi, the situation is more encouraging now than for several years past.

The confidence which the local men, in the territory mentioned, have in the general situation is manifested by the absence of any slowing up in demand such as that which logically might be expected to follow the grave labor controversy and its ramifications.

"The general attitude in the places I visited," he said, "seems much more optimistic than otherwise. The people I talked with, while admitting the seriousness of the walkout involving so many men, give one the impression that they regard it simply in the nature of a mistake and misunderstanding which will soon be corrected.

"In the case of the railroads for example, they can't understand how the contending factions, realizing that the strike means a loss of probably at least $5,000,000 a day to the strikers and billions to the industries of the Country, can much longer continue without some kind of a settlement. And once a permanent settlement is achieved, if it comes in time, they guarantee that they will make the most of their crop abundance in a way that will assure a greater era of prosperity than they have experienced for a long time."

Sales of the Hupp Corp. for the first seven months of this year were 210 per cent in excess of those of the same period of 1921, a statement issued last week discloses. July deliveries show gains of 87 per cent over July, 1921, and shipments and orders on hand thus far in August are 114 per cent greater than a year ago. In fact, shipments to date were greater than any preceding full year, the best of which was 19,000 cars.

As concerns earnings, nothing definite has been given out, but it is known that April, May, and June were the best months in the history of the concern. On the basis of second-quarter shipments, which were nearly thrice deliveries of the first three months, it may be assumed that profits for the June quarter will average more than $2 a share.

Chandler Ready with Special Roadster

Chandler Motor Car Co., Cleveland, has brought its body types up to eleven in number with the addition of a khaki-topped special roadster. Body is finished in maroon, trimmed with polished aluminum and nickel, and is carried on wire wheels. Rear deck is embellished with polished aluminum bars, affording protection to body when top is lowered.

CONSULT THE TABLE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 159-161 of this issue. It is revised to August 22.

In view of the several price adjustments made since the first of the month, the unique arrangement of this table according to the list price will be found exceedingly convenient. Frequent changes make it advisable to consult the latest issue invariably.

Further evidence of the up-to-the-minute accuracy of the table is found in the fact that although it only made its first appearance on August 5, the second rechecking by manufacturers has been completed with this issue. This periodic checking is but one of the efforts being expended in building a better table.

Stutz Tells of Speedway Roadster

Stutz Motor Car Co. of America, Inc., has added a new body type which it styles the Speedway roadster. It is a two-passenger type, replete with special equipment, and is priced at $2,760. In appearance, the body resembles the present roadster except for the extra equipment, prominent among which is a circular trunk set into the rear deck, where spare tires formerly were carried. Extra tires are now mounted vertically at the rear of the body.

Case Making Larger Series "W"

J. I. Case T. M. Co., Racine, Wis., is now producing in addition to its model "X," a larger and higher priced series "W." The larger model has a wheelbase of 129 inches as against 122 inches for the model "X," and in the seven-passenger touring type sells for $2,250. There is a four-passenger sport at the same price, four-passenger coupe at $2,850 and seven-passenger sedan at $3,250. Additional details may be found in AUTOMOBILE TOPICS Table of Passenger Car Selling Points (copyrighted) which appears elsewhere in this issue.

G. M. C. UNITS KEEP ON HIGH LEVEL OF SALES

Buick, Cadillac and Chevrolet Retain Peak Production—Oakland and Oldsmobile Report Big Demand—Inventories Make Supplies Imperative.

With all General Motors Corp. units in what is described as favorable positions in regard to fuel supplies, sales of all five passenger-car lines are reported continuously high. Buick, Cadillac and Chevrolet are making remarkable showings and maintaining operations at peak levels of the year. In a no less degree, Oakland and Oldsmobile report surprisingly good demand for this season.

To date none of the divisions have felt serious delay in receiving parts and materials or in respect to the coal shortage. No fear is felt for interruption of operations due to the latter cause but officials point to the likelihood of congestion if the rail strike continues much longer.

It is explained that the G. M. C. has been keeping inventories at a minimum and placing forward contracts for raw and finished materials only one or two months ahead. This makes it imperative that there be no interruption to receipt of supplies if high operation is to be maintained.

Nash Adds Five-Passenger Sedan

A five-passenger sedan on its six-cylinder 121-inch wheelbase chassis has just been put into production by the Nash Motors Co., Kenosha. Heretofore the Nash six line has included only one sedan, a seven-passenger type mounted on the larger 127-inch wheelbase chassis.

G. M. C. Tightening Lines

It is understood that the General Motors Corp. will soon make a reduction in the number of its production units. Liquidation of one member is apparently assured for the near future. That part of output now in showrooms, it is said, will be disassembled and put into stock for parts. The assigned reason for the move is lack of adequate financial return from the unit.

New Gray Plant Unit Started

Operations have started on a new unit of the plant of the Gray Motor Corp., in Detroit. One new unit has been completed which measures 60 feet wide by 400 feet long. The building now under construction will be 60 by 600 feet. A loading track will run between the two new buildings.

Anderson to Unveil New Car

Anderson Motor Co.'s new aluminum light six was unveiled for the first time at the annual dealers' convention at Rock Hill, S. C., on August 24. More than 200 dealers attended the meeting.

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TIMKENS OFFER STOCK IN BEARINGS COMPANY

Block of 400,000 Shares Placed on Market—Constitutes One-Third of Outstanding Issue—Move Purely Personal Matter with Bankers.

Through what is in reality a personal arrangement between the Timken family and bankers, a block of 400,000 shares of no par value in the Timken Roller Bearing Co., was placed on the market this week at $30 per share. In connection with this, the balance sheet and other financial data concerning the company was made public, thereby showing the excellent condition of the concern. It should be borne in mind that the company has no relation with the Timken-Detroit Axle Co., save that of vender and customer.

The 400,000 share offering constitutes a third of the outstanding stock. Hitherto the securities of the company have been closely held within the Timken family. There will be no change in the directorate, however, no outside members being added. The business will continue in the future just as in the past and the stock offering will have no effect on management or policies pursued.

Examination of the financial statements of the company reveals no secured debt of any kind. The sale of the stock does not cover any refinancing, retiring of bonds, notes and so forth and the company has plenty of working capital without recourse to the proceeds of the sale.

Earnings have been large since the inception of the present company in 1904, when it was organized to take over a business started in 1899. For the past seven years earnings have fluctuated between approximately three million and nearly eight million dollars per annum.

It is worthy of note that earnings for the first six months of 1922 have been well in excess of the average of any entire year of the past seven. This average, before taxes, is $4,677,881, after taxes, $3,519,201. The comparable items for the period ending June 30, 1922, are $4,695,630 and $4,095,630. It may also be noted that these latter figures are nearly as great as the combined earnings of the entire years of 1920 and 1921.

Net earnings for the year of 1922 are estimated at $6,000,000. It is planned to start dividends on the stock at $3 per share per year.

The accompanying balance sheet is self-explanatory. It should be noted that inventories are carried at the "low" of cost or market and have all been purchased at the current lower market. The company has no commitments made at previous high prices. It is furthermore stated that the concern enjoys over 60 per cent of the roller bearing business in the Country but that not more than 20 per cent of its production goes to any one customer, thus assuring stability of output.

TIMKEN ROLLER BEARING CO.

Balance Sheet, June 30, 1922

ASSETS	
Cash on hand and on deposit	$2,106,345.59
U. S. Government Securities and accrued interest	2,783,955.29
Notes receivable—customers	44,688.20
Accounts receivable—customers, less allowance for doubtful accounts, discounts, etc	1,964,237.31
Inventory—raw, in process and finished merchandise and supplies	3,409,267.60
Other real estate investments	728,710.49
Land contracts on real estate sold and accrued interest	1,047,827.87
Investment in and advances to affiliated company	152,108.33
Miscellaneous notes, accounts, investments, etc	84,706.59
Land, buildings, machinery, equipment and fixtures	6,282,691.00
Prepaid insurance, miscellaneous supplies, etc	111,618.01
	$18,716,156.83
LIABILITIES	
Accounts payable—unpaid current purchases, etc	$945,239.49
Federal taxes 1921—unpaid installments	220,000.00
Accrued real and personal taxes, electric power expense, etc	126,028.32
Federal taxes—six months 1922—estimated	600,000.00
Miscellaneous	250,000.00
For plant renewals and replacements	500,000.00
For contingencies	1,000,000.00
Capital stock—no par value 1,250,000 shares to be authorized 1,200,000 shares to be issued Declared capital	6,000,000.00
Surplus after giving effect to reorganization	9,074,889.02
	$18,716,156.83

TIMKEN ROLLER BEARING CO.

Earnings.

	Before Taxes	After Taxes
1915	$4,718,626	$4,671,710
1916	6,307,336	6,184,786
1917	4,560,060	2,453,177
1918	3,759,707	1,821,933
1919	7,710,718	4,778,115
1920	2,955,699	2,449,147
1921	2,733,021	2,275,549
Average	4,677,881	3,519,201
6 Mos. 1922	4,695,630	4,095,630

DIVIDENDS DECLARED

Advance Rumely Co.—Regular, quarterly dividend of ¾ per cent on the preferred stock; payable November 2, 1922, to stockholders of record September 15, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly dividend of 2 per cent on the common stock; payable September 15, 1922, to stockholders of record September 5, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly dividend of 1½ per cent on the debenture stock; payable October 25, to stockholders of record October 1, 1922.

B. F. Goodrich Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Hayes Wheel Co.—Regular, quarterly dividend of 50 cents; payable September 15, 1922, to stockholders of record August 31, 1922.

International Harvester Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 1, 1922, to stockholders of record August 10, 1922.

Lee Rubber & Tire Co.—Regular, quarterly dividend of 50 cents; payable September 1, 1922, to stockholders of record August 15, 1922.

Martin-Parry Corp.—Regular, quarterly dividend of 50 cents payable September 1, 1922, to stockholders of record August 15, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended August 23. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	23	21
*Advance Rumely, preferred	60½	57¼
Ajax Rubber	11⅞	11
Allis-Chalmers	57¾	54¼
Allis-Chalmers, preferred	100	99
American Bosch Magneto	42⅜	39
Case (J. I.) Plow	7½	6¾
Chandler Motor	63⅜	60¼
Chicago Pneumatic Tool	76	69½
Cleveland Motors	28	26¼
Continental Motors, common	8⅛	7¼
Daniels Motor	11¾	11¼
Durant Motors	39	38½
Durant Motors of Indiana	15	14
Fisk Rubber, common	13	12½
General Motors, common	13⅜	12⅞
General Motors, preferred	80½	80½
General Motors, 6% deb	81	80½
General Motors, 7% deb	94½	94
B. F. Goodrich, common	37½	36
Goodyear, common	10½	10
Goodyear, preferred	32	32
Goodyear, pr. pf	65⅛	65⅛
Grant Motors	80	76
Gray & Davis	16	15
Hayes Wheel, w. i	31	30¼
Hupp Motor Car, common	18¾	17⅜
International Harvester, new	113½	111½
*Kelly-Springfield Tire, common	46½	44
Kelly-Springfield, preferred	100½	100
Kelsey Wheel	94½	94¼
Keystone Tire	9⅛	8¼
Lee Rubber	27½	26⅜
Lincoln Motors	2⅜	2⅛
Mack Trucks, Inc	57¾	56
Martin-Parry	29½	28
Maxwell Motors, Class A	60¼	58⅛
Maxwell Motors, Class B	20⅜	19
Mercer Motors	3	2¼
Moon Motors	13¼	10½
Parish & Bingham	13½	11¼
Pierce-Arrow, common	12¾	11¾
Pierce-Arrow, preferred	33½	30
Reo Motors	14¼	13½
Republic Motor Truck	3¾	3½
Saxon Motors	4	3⅞
Stewart-Warner Speedometer	45¼	43⅞
Stromberg Carburetor	54½	49⅛
Studebaker, common	128⅜	125¾
Studebaker, preferred	114¼	114¼
U. S. Light & Heat	1¾	1⅜
U. S. Rubber, common	58⅞	57¼
U. S. Rubber, 1st preferred	106	105½
Westinghouse Air Brake	101¾	95
Westinghouse Electric & Mfg	65⅞	61⅞
White Motors	49	48¼
Willys-Overland, common	7⅛	6⅞
Willys-Overland, preferred	40¾	40

*Par $50.

Prices for automobile securities quoted in Detroit during the week ended August 23 are as follows:

	High	Low
Auto Body	5	3½
Charcoal Iron, common	1¾	1¾
Charcoal Iron, preferred	3	2
Columbia Motors	3¾	3¾
Commerce Motor	6	3
Continental Motor	8⅛	7
Edmund & Jones, common	22	19½
Federal Truck	21	21
Ford of Canada	372	365
General Al. & Brass	12	10
Motor Products	80¼	79
Motor Wheel, common	13¾	13⅜
Packard Motor, common	15⅛	13½
Packard Motor, preferred	88	84½
Paige-Detroit Motor Car, common	22	21½
Reo Motor (new)	14	13¾
Timken Axle, common	32	27
Timken Axle, preferred	89	85¼
Truscon Steel, common	18¼	15
Truscon Steel, preferred	9⅞	9⅛

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U. S. RUBBER SEEN AS IN A STRONG POSITION

National Comment Accords Likelihood of Large Earnings for Year—End of Writing-Down Period Reached—Inventory Decline Indicative.

National comment on the six-months' financial report of the United States Rubber Co., which was set forth in AUTOMOBILE TOPICS under date of August 19, bears out the highly favorable impression conceived by those close to the management. The consensus of opinion is that the end of the writing-down period has been reached and that despite the net of only 41 cents a share in the first half of 1922, prospects for the full year will show earnings of more than $5 a share on the 810,000 common.

President Seger, at this time last year, predicted further adjustments to attain a fully liquidated condition. The 1921 report showed a net reduction in profit and loss surplus during the year of $17,300,000 to $30,048,439. The $46,811,254 reduction in inventory was accompanied by a clean write-off of $18,544,000. Liabilities were reduced $23,200,000. Decrease of $16,800,000 in contractual obligations outstanding made a total reduction in financial obligations of $40,000,000.

The strong position in which Company began 1922, as result of this policy, is now apparent. Because of seasonal nature of the business, the six months' statement must be interpreted as a barometer indicating prospects. It is not a basis for comparison with final year's operations. For instance, the decrease of only $1,220,000 in floating debt, which brought this item from $36,210,000 to $34,990,000, compared with 1920 high of $49,405,000, would be disappointing if it indicated a full year's reduction of two or three million. But, considered in conjunction with the decline of $700,000 in inventory to $75,993,000, it is the feature of the statement. It shows the peak load for seasonal business carried without increasing stocks, and with decreased borrowings, when a reverse process might have been expected.

Much of the first half year is spent in tire accumulation. Peak inventories are reached in June and July. After August 1 there is reduction in tire and footwear stocks, ending in December with inventories at year's low point. Consequently, with highest inventory when the June 30 statement is made up, bank borrowings should, correspondingly, be at their high for the year. Liquidation of bank loans accompanies inventory reduction in the second half year. It would, therefore, be surprising if bank loans at end of the year do not show substantial reduction.

In the past six months there has been a reduction of $970,000 in funded obligations, and arrangements for refunding 7% notes will mean an annual saving in interest charges of $70,000. This places all maturities, aside from short term borrowings, beyond 1930. All new construction and expansion in 1919-20 was paid for from sale of new securities at the time, and no further expansion is called for.

Sales in second half year run normally about 33⅓ per cent above first half. This would indicate gross for the last six months of $100,000,000, and net, after all charges and preferred dividends for the year, of $4,500,000.

New Process Gear Sale Held Up

At the request of a prospective bidder, said to be an official of a subsidiary concern controlled by one of the industry's most extensive operators, the sale at auction of the New Process Gear division of the Willys Corp. was postponed on August 23 indefinitely. Meanwhile an appraisal of this last remaining unit of the Corporation was made, setting assets at $2,766,217 on a basis of active business as follows: Real estate and buildings $790,000; machinery and equipment, $650,000; raw materials and finished and unfinished goods, $588,354, and cash, $622,598. Accounts receivable include $329,717 from the Corporation and $52,000 from Durant Motors, Inc.

Admit Timken to Curb

Timken Roller Bearing Co.'s $1,250,000 capital shares were admitted to the list by the New York Curb Exchange on August 23. The admission states the shares are of no par value and the listing is when, as and if issued.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended August 21 are as follows:

	High	Low
Firestone	80½	75
Fisher, Ohio Body	40	40
Goodyear	10	9⅝
Grant	⅞	¾
Grant, preferred	8½	8½
Jordan, common	200	200
Jordan, preferred	87	80
Peerless	59	56¼
Standard Parts	4½	4
Standard Parts, preferred	20	16
F. B. Stearns	23½	20
Torbensen Axle	27	26
W-S-M, common	50	45
W-S-M, preferred	73	70
Winton, preferred	40	40

Prices for rubber securities quoted in Akron during the week ended August 21 are as follows:

	High	Low
American R. & T., common	30	15
Firestone, common	80	76
Firestone, 6% preferred	90¼	90
Firestone, 7% preferred	87	84½
General Tire, common	300	250
General Tire, preferred	98	92
B. F. Goodrich, common	37½	35½
B. F. Goodrich, preferred	88	85
Goodyear, common	10½	9½
Goodyear, preferred	32½	30
India, common	76	74
Marathon, common	5	2
Mason, common	12¼	11¼
Mason, preferred	58	54
Miller Rubber, common	75	71
Miller Rubber, preferred	100	95
Mohawk Rubber, common	20	10
Mohawk Rubber, preferred	100	75

HAYES AT CAPACITY AS DEMAND KEEPS UP

Wheel Plant Reports August Business in Excess of Any Previous Month—No Indications of Let-Up Seen—July Net Profits Record Increases.

August business of the Hayes Wheel Co. is not only larger than that of August, 1921, but is considerably greater than in any previous month this year. This and the fact that the plant is running at capacity in order to meet the unusually large demand, is the burden of a statement issued this week by C. B. Hayes, president. Hayes sees no sign of a let-up in business in the near future.

HAYES WHEEL CO.

Income Account, Seven Months Ending July 31, 1922

	1922	1921
Gross profits from operations	$967,029	$700,319
Net profits after charges	640,712	309,395
Federal taxes	80,000	.....
Net income	560,712	.....
Total surplus (to date)	3,444,673	.....
Profit and loss surplus	3,077,993	.....

Net profits during July were substantially in excess of July last year and for the seven months ending July 31 the aggregate was about twice as large as that resulting from operations during the corresponding period of 1921. The cash position of the Company is highly satisfactory, current assets as of July 31, last, were $3,764,609, current liabilities $1,139,081 and net after all charges $640,712.

An examination of comparative figures for 1922 and 1921 shows considerable advance in income account items for July. Thus gross profits increased nearly $10,000; and net after charges was something more than one-half that amount. The net after seven months was equal to $3.20 a share on the 200,000 outstanding common and at the annual rate of $5.40.

Gray & Davis Reports Net Profit

Gray & Davis, Inc., reports a net profit of $131,323 for the six months ended June 30, 1922. This was after operating expenses and general expenses, but before depreciation.

Stewart-Warner Calls Notes

Stewart-Warner Speedometer Corp. has called for redemption on September 1, its five-year convertible 8 per cent notes. At 104, stockholders may convert them on or before the call date into common stock at $40 a share.

Moon Increases Net Income

Net income of the Moon Motor Car Co. for the six months ended June 30, 1922, amounted to $236,655 after costs and expenses. For the year ended December 31, 1921, net income, after cost, expenses and taxes, was $99.373.

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A. A. A. LOSES CHANCE TO TEST N. Y. RULING

Traffic Card Case "Nolle Prossed" by City Before Trial—Association Sees Little Hope for Legal Interpretation —Police to Use Discretion.

After going to considerable trouble and some expense in rigging up a test case in connection with the new "traffic card ordinance" in New York city, the American Automobile Association ran up against a blank wall in court. The city attorneys refused to prosecute the case, preferring to center their efforts on another one in Brooklyn. Inasmuch as the Brooklyn case rests more on violation of a traffic rule than on prosecution because the driver had no card, the A. A. A. sees little hope of a satisfactory legal interpretation for or against the law.

As mentioned before in these columns, the New York city law which has roused such a storm of protest, makes it obligatory that the motorist procure a card with his photograph on it, on which police may record minor violations. Five violations bring the culprit into court. The A. A. A. is anxious to test the law, believing it unconstitutional. A "planted" motorist without a traffic card was therefore "arrested" and taken to court for trial.

"It is understood that the traffic police have been given orders to make no arrests for failure to have the warning cards," the A. A. A. comments, "and also not to demand that motorists show their cards unless some other traffic violation has been made, in which case the arrest will be made for the latter violation, and for failing to have the card. As long as the Police Department refuses to arrest for failure to obtain the traffic warning card, the American Automobile Association cannot hope to bring the matter to any decisive issue."

Offers Time-Payment Insurance

Automobile insurance is now being sold on the time-payment plan. "Pay-as-you-ride" insurance as it has been termed by the Standard Automobile Mutual Casualty Co., New York city, its originator, features the following arrangement of payments: One-sixth of the premium on delivery of policy; one-sixth on the first of the next month, and one-twelfth on the first of each following month for eight months. Ten months is thus given for the year's insurance premium payment.

GOOD MANAGERS PLAN STUDY OF GOODNESS

Engineers to Browse on Subject: "What Is a Good Manager?"—October to See Many Meetings to Discuss the Problem from All Angles.

What is a good manager? Is he red-haired? Does he display lots of pep? Does he move like a steam roller or jump like a frog? Is he a tightwad or does he spend money like he owned the mint? What constitutes the best kind of managing?

These and similar questions will be the subject of discussion at many meetings throughout the Country beginning on October 16. Engineers from various national societies will be the debaters.

Although bankers as a rule do not care whether a manager be hard-boiled or bald and meek so long as he makes money for them, they have been invited to be present at all the meetings. Should the results warrant it, the A. S. M. E. or other societies will collect reports on the meetings and a book will be written and published about managing.

The Traffic Problem

WHAT values, positive or negative, may be attached to a scheme of traffic regulation that includes the personal licensing of drivers of automobiles who are not engaged in operating cars for hire?

On this proposition, argumentative theory may be advanced, pro and con, to considerable length. But theories applied to the mass are likely to be doomed. It is a truth too seldom considered, that all laws ought to be based on individuals in the aggregate rather than aggregates themselves. Laws that touch us in our daily lives are not considered by us as generalities, good for most people and, consequently good and just for us. Rather the average man, colliding with a law, sees in it only persecution.

There is little doubt, therefore, that requiring a driver to obtain a license must overcome by right of might the inbred disinclination of Americans to be catalogued, to be indexed, to be "allowed" to use what their money (representing their labors) has obtained for them. Such use of soverign powers ought not to be made unless it is clear that the need for public protection and society's welfare depends, even in part, on such procedure.

It is doubtful if such need exists.

As to what purpose licensing of drivers serves, exponents of the system believe, among other things, that it tends to curb thefts, renders a law-breaker amenable to instant identification, serves as a means of discipline in that the license may be revoked, and enables the City or State to properly inquire into the qualifications of the applicant for use of highways. Certainly an impressive array of defense.

The facts are that licensing drivers makes theft easy. It identifies the driver if he carries his own card. It makes it necessary that a driver losing his license apply for another under an alias, (Indiana is particularly rife with this sort of thing). Finally, with thousands applying for licenses, examinations are a farce, (New York city represents a sterling example).

To the student who brings even a little knowledge of human nature to bear on investigation of the traffic problem, the personal driver license is nonsense. It does no appreciable good. It causes much public dissatisfaction, costs money and it aids the police in nagging and harrassing the already bedeviled motorist.

Naturally the question arises as to a better plan. That suggestion will be considered later.

Meanwhile the idea should be pounded home that the automobile maker must solve this and all other problems of traffic regulation. The matter of licensing seems small at first blush. But when, as in New York city, thousands upon thousands of motorists must wait hour on end while clerks make out cards for them; must spend in the aggregate thousands of dollars; must spend at least an entire day for the privilege of forming a unit in a line of automobiles taken on a silly, useless tour through traffic by a leader-car full of reckless smart-Alecks in order to be called "qualified" for a license—but, why go on?

All these abuses bulk large in the mind of a prospective buyer. Hundreds of solidly entrenched business men assert forcefully "You couldn't hire me to drive a car through traffic and in competition with the fool traffic laws—I'd rather hire a taxi by the month." Doesn't that carry a warning to makers of motor cars to do something constructive towards solving the traffic problem?

You Made It—Help Solve It

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RAIL STRIKE SLOWS UP SOUTHERN TRADE

Alabama and Georgia Dealers Report Orders in Some Cases Ninety Days Ahead of Deliveries—Average Market About 50 Per Cent Above Last Year.

Dodge Brothers dealers throughout the South, in concert with those of other manufacturers, report some break in deliveries due the railroad strike. Demand, however, continues to be good and on the average fifty per cent better than last year at this time. In Alabama and Georgia this condition of affairs is particularly prevalent.

From Birmingham, the Brownell Auto Co., Inc., Dodge Brothers finds business has been "splendid" since last February.

"It is still good in spite of strike conditions," the Company states, "but of course all of us are more or less up against it for new cars to deliver. The outlook is as good as we have ever seen it in this city at this time of year. Our present rate of actual deliveries is much less than in 1920 and 1921 due to lack of cars but in number of orders taken, our business is much greater.

"We have no new cars on hand and are sold ahead sixty days. Our used car stock is lower than it has been in six years."

Likewise, the Kittrell-Milling Motor Co., Dodge Brothers at Mobile, finds that the year has been exceptionally good until the railroad strike slowed it down.

"Notwithstanding the strike, however," H. J. Kittrell, manager, asserts, "we are nearly thirty days behind on orders for most types of cars and on one particular model we are ninety days behind.

"New car sales are running about 50 per cent ahead of last year. Used car stocks are low due to careful buying as the market for such stocks is only moderately good here."

L. V. Williams, Inc., Dodge Brothers dealer at Savannah, Ga., also find sales about 50 per cent above those of last year. No new cars are on hand and orders are considerably in advance of possible deliveries.

TRADE TO DISCUSS USED CAR AT CHICAGO MEETING

Association Secretaries to Gather September 14 to 15 for Conference

Presentation of practical ideas and discussion of association or co-operative handling of the used car problem, is part of the threefold program of the National Used Car Conference to be held in Chicago, September 14 and 15. Under the auspices of the National Association of Automobile Show and Association Managers, all trade association secretaries have been invited to be present.

Methods of preventing individual buying and selling of used cars in any dealer community will also be given attention. The third purpose of the conference is to develop ideas for Fall and Winter sales promotion of passenger cars, with particular emphasis on plans which may be adopted to intensify interest and assure patronage of the Winter shows. Presiding will be Robert E. Lee, secretary of the St. Louis Automobile Dealers' Assn.

30 Makers at Indianapolis Show

Thirty makers will exhibit 51 models of passenger automobiles at the Fall show of the Indianapolis Automobile Trade Assn., which opens September 4 for a week in conjunction with the Indiana State fair. Forty-two accessory exhibits are scheduled and other usual exhibits will be staged.

Stewart-Warner Sales Ahead

Sales of the Stewart-Warner Speedometer Corp., Chicago, for 1922 to date, show an increase of 12 per cent over the entire year of 1921. August sales are reported as running 15 per cent above any month in the history of the organization.

Wickwire Spencer Profits $188,035

Net profits of the Wickwire Spencer Steel Co. for the quarter ending June 30 were $188,035. This may be compared with a net profit of $42,427 for the first quarter of the year.

WESTCOTT MOTOR TELLS OF BEST SIX MONTHS' BUSINESS

Sales During First Half of Year Largest in Its History

Final figures on sales of the Westcott Motor Car Co., Springfield, O., during the first six months of the year reflect the largest business done in the history of the company. Sales charts of the organization began early in the year to reveal returning prosperity in the larger cities in the East and West. This has spread gradually until now it extends to small towns and farming communities.

So far any falling-off has not been evidenced, according to Sales Manager E. H. Gilcrest. "We have recently made a canvass among all our dealers and distributers," he says, "and the consensus of their reports is that the present volume of sales will be maintained at least, and possibly increased, up until actual cold weather sets in."

British Maker to Produce New Light Car

To cut into the field occupied by higher-powered and more expensive motorcycle and sidecar outfits, Austin Motor Co., Birmingham, England, is bringing out a new light car, within motorcycle sidecar limits. Track is 40 inches, overall width 46 inches, wheelbase 75 inches and overall length 104 inches. The complete vehicle weighs just over 700 pounds.

COURIER TAKES OVER FORMER MAIBOHM CAR

New Company to Make Six Body Types —Price Stays at $1,395—Central Tank Chassis Oiling and "Dry Sump" Oil System for Engine Are Featured.

Courier Motors Co., Sandusky, Ohio, which took over the Maibohm Motors Co., this week makes known some of the details of the car it will produce. The Courier company was organized by the creditors' committee of the Maibohm company, and first was known as the Arrow Motors Co. It never operated under that name, however, and soon after its formation changed its incorporation to embrace the Courier name.

As given out by the Company, the Courier line will consist of six body types, listed at the same prices as prevailed for Maibohm. The car itself closely resembles the former product. As produced by the new company there will be a five-passenger phaeton and three-passenger roadster at $1,395, a three-passenger sport roadster and four passenger sport phaeton at $1,495, a three-passenger coupe with extra folding seat at $2,065, and a five-passenger sedan at $2,165.

Little of the chassis specifications are available at this time. That much as is divulged includes a six-cylinder valve-in-head engine and 32 x 4 cord tires. A chassis lubrication system is featured, this operating by pressure of a plunger on the dash, which forces oil under pressure to all spring mountings, springs, steering connections, axles, and other parts. One filling of the central tank is said to be enough for 3,000 miles.

Engine lubrication is by a dry-sump full-pressure system. Oil is carried in a separate tank mounted on the frame next to the engine, from which tank it is pumped to all engine bearing surfaces, drops down into the crankcase and is carried back to the tank where it is cooled, screened and sent on its return journey. Over 500 miles to the quart of oil are claimed with this system.

For the standard open models tan Spanish leather upholstery is used. Color options for exterior finish include dark green, maroon and Princess Pat blue with natural wood wheels. Sport models have either a black or khaki top, the same color options, but with disc wheels. Sport model equipment includes, besides those items mentioned, windshield wiper, Moto-Meter, combination tail and stop light, nickel-plated head and cowl lights, cast aluminum steps and scuff plates.

Moon Seeks Stock Listing

Moon Motor Car Co. has applied to the New York Stock Exchange for listing of 180,000 shares of common stock. The shares are without par value.

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HEADLIGHTS LIGHT UP CALIFORNIA'S SALES

Adjusting Stations Give Opportunity for "Ask 'em to Buy" Campaign—Charge for Fixing Lights Least of Income—200 Stations Have Been Established.

Skepticism of some business and civic organizations on the possibility of establishing official headlight adjusting stations by the California Automobile Trade Association has flickered out. Stations have adjusted over 12,000 pairs of headlights in the past three months, according to Robert W. Martland, secretary-manager of the Association.

"We were confident that the motorists would patronize stations of their own free will if we took pains to see that our stations were properly equipped both in tools and ability," Martland explains. "The Association's engineers have spent seven months appointing 200 stations—but it is worth it, as is evidenced by the large business they are doing and doing with practically no comebacks.

"A Southern California adjusting station employs one man at $250 a month to do nothing but adjust headlights. The average net receipts from this department are in excess of $30 per day. A flat charge of 75 cents is made for adjusting, but that is the least of the profit. The unusual opportunity to 'Ask 'em to Buy' better lenses, new bulbs, wire, sockets, etc., soon runs into real money for the dealer. The average charge throughout the State is about $2.85 which proves that the 75 cents for adjustment drops into the background because the stations are 'Asking 'em to Buy.'

"Motorists are given an official certificate of adjustment which is honored by all authorities. Police officials are really enforcing the headlight law for the first time in the history of the State. This is undoubtedly due to the fact that they know it is now possible for a car owner to have his lights properly adjusted and done at a nominal charge."

Motor Caravans Rescue Passengers

Value of the automobile as an economic factor was again demonstrated last week when a caravan of 50 cars from San Bernardino traveled 250 miles and rescued 200 passengers stalled at Needles by an unauthorized strike of Big Four brotherhood trainmen. Excessive heat nearly caused several deaths and would surely have done so had not the automobiles saved the day, State officials declare.

Project Road Across Florida

Sales of automobiles in Florida are expected to take a decided advance in connection with the new road across the State from Tampa to Miami on which construction has been begun. Part of the road will run through the Everglades and aside from increasing pleasure traffic, will shorten the route between the cities by half for commercial purposes.

Omitting a Letter

Some misunderstanding was cleared this week when the Zenith Carbureter Co. discovered that through error its advertisements had been carrying the name of the Roamer car as one using its product. It was pointed out by the company that the name should have been spelled Romer.

New Plan for Motor Fees

Louis Arnold, Milwaukee tax commissioner, is campaigning for a new system of taxing automobiles in Wisconsin. He proposes a graduated scale of taxes on trucks and trailers, rising from $10 for a one-half ton truck to $90 for those of from 8,100 to 10,000 pounds carrying capacity.

SEES GOOD BUYING SEASON IN NORTHWEST 'TIL SPRING

Rail and Coal Situations Only Thing to Prevent It, Says Don McCord

Returning from an extensive trip through Wisconsin, Minnesota, Iowa, the Dakotas and Wyoming, Don C. McCord, vice-president and general manager of the Standard Motor Car Co., Pittsburgh, paints an optimistic picture of general conditions in the agricultural Northwest. Indications are pointing to a heavy crop, he says, and "the only fly in the ointment is the unsettled conditions regarding railroads and coal mines. If the transportation systems in the Northwest are tied up, the crops cannot be moved and the farmer is going to suffer.

"Anticipating good yields and good prices," he continues, "with a feeling that general labor disturbances will be righted in time, there has developed a deal of optimism throughout the whole territory. The farmer is watching the railroad strike situation with exceeding interest. He is anxious to liquidate his bank obligations. He wants to discharge his indebtedness in sundry other directions—and he wants to buy more and better motor cars. If the coal and rail situations clear in time to permit the normal harvesting and transportation of the present abnormal crops you can depend upon it that this Fall and Winter, and on into Spring, will be good buying seasons throughout the agricultural Northwest."

Ford Enlarges Plant

Further centralization of the Ford Motor Co. at Dearborn is seen in the announcement of the construction of a 3,500-room office building on the site of the present tractor plant. When it is completed all Ford offices will be in Dearborn.

CALIFORNIA RETAIL BUSINESS HOLDING UP

July Turnover 53 Per Cent Better Than That of Same Month in 1921—Volume Falls but 8 Per Cent Below June's—Poor Deliveries Hold Back Dealers.

Retail sales in California continue to hold up their end of the Nation's automobile buying. Only the failure of deliveries held July's business below that of June, the greatest in the history of the State. In some instances receipts by dealers were only 40 per cent of promised allotments, according to *Motor Registration News*' statistics, but nevertheless July trade was 53 per cent greater than in July, 1921, and only eight per cent below that of June this year.

Southern California dealers in 11 counties disposed of 6,915 passenger cars. Distributers and dealers in the 47 northern counties delivered 6,096 new automobiles. Truck sales were divided to 894 in the northern part of the State and 791 in the south. Truck business increased 87 per cent over July, 1921.

Among the leading counties, Fresno's percentage of increased selling was 110 as compared with the same month of 1921. San Diego was second with a gain of 90 per cent. Los Angeles county dealers and distributers sold 4,803 cars as against 3,078 in July, 1921, thus creating an advance of 56 per cent. San Francisco county sold 1,250 cars, a growth of 17 per cent.

California Durant in Production

Car No. 1 was turned out August 1 by the Durant Motor Co. of California. No celebration was held, G. R. Scott, factory manager, being anxious to catch up with production and back orders.

ROAD-GRADING COSTS ON STABLE BASIS, U. S. FINDS

Contracts for Last Three Months Are at Rate of 33 Cents a Yard

The cost of grading for highway construction apparently has reached a stable condition, according to statistics of the Bureau of Public Roads of the United States Department of Agriculture. The average cost per cubic yard for grading on Federal-aid roads rose from 38 cents in 1917 to a peak price of 66 cents in 1920, and has since gradually declined.

On Federal-aid work contracted for in the last three months the average price per cubic yard for the whole United States was 33 cents in April, 32 cents in May, and 34 cents in June. The cost of other items entering into road work also shows a general tendency toward stabilization, although in many cases not as marked as that for earthwork.

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BRITISH TAKE STEPS FOR TRADE RECOVERY

Giving Serious Thought to Regaining Foothold in Foreign Market—Attitude of Labor a Factor in Reducing Prices—Light Car Demand Good.

Serious thought is being given by British car manufacturers to ways and means for recovering some of their lost foreign trade. Whereas high costs of production with consequent high selling prices coupled with the vagaries of exchange are acknowledged handicaps, the producers have declared themselves determined to effect economies of some sort or other that will result in reducing prices to the point where they will be more nearly competitive with foreign makes.

To what measures these efforts will be successful depends upon the attitude of labor. Whether or not the workers will assist by accepting reductions in wages, adjustment of the war bonus and assuming through trade union leaders a more reasonable attitude toward employers is a matter of speculation at the present time. That labor must cooperate, however, in order that the industry may make definite plans for the future, is evident to all those who have made a study of conditions as they exist at present.

Manufacturers are busily engaged in picking up loose ends and increasing production, according to advices received from the Department of Commerce, London representative, and signs of activity are becoming manifest in most branches of the trade. Business in the heavier models is still reported as slack but the demand for light cars from eight to eleven horsepower, particularly the more popular models, is satisfactory.

The Department has summarized foreign developments of the last week in similar fashion to the following:

Sweden: Low-priced and medium-priced passenger cars selling from 3,000 kroner (one kroner being quoted at $0.2627 on August 15) to 6,000 kroner enjoy the best sales at the present time and will undoubtedly have the best market for the next few years. Light trucks of from one and one-half to two tons capacity are also outselling the heavier types. General outlook regarded as favorable for American automotive exporters.

Egypt: Motor transportation of all kinds, particularly with regard to taxicabs and commercial vehicles, received a considerable impetus during 1921. There are over 1,600 passenger cars, of which 234 are taxis and 120 trucks in Alexandria, while in Cairo there are about 2,200 passenger cars, of which number 308 are taxis and 110 motor trucks.

China: Motor car market in Shanghai is showing signs of recovery. The representative of one of the largest automotive manufacturers in the United States has reported that late sales have been better than any time in the past eight months, which is particularly encouraging, as business has been dull in all lines. The greatest demand he reports is for medium-priced passenger cars.

Belgium: The number of motor vehicles in the Province of Antwerp has steadily increased during the past year. The present registration of 4,800 passenger cars and trucks being 60 per cent over that of a year ago. Although there has been little demand in the past for modern garage equipment, the writer believes that American labor-saving devices should find a ready market in Belgium in the future. There is an active demand for all kinds of accessories, which American manufacturers should meet by giving their agencies to independent accessory dealers rather than to garage owners or distributers, who as a rule only sell to their old customers and do not cover the assigned territory.

Russia Gets More Automobiles

Largest shipments of automobiles to Russia in two years were reported forwarded to Petrograd this week from America. The lot consisted of 120 cars of various makes. Only 14 passenger cars and 32 trucks were shipped to Russia in all of 1921. In 1920, 322 passenger and 104 trucks were sent from the United States. In 1916 she got a total of 1,268 passenger cars and 3,909 trucks.

CUBANS LOOK FOR REVIVAL OF MOTOR TRADE SOON

U. S. Loan, if Successful, Will Be Aid to American Automobile Sales

Distinct revival of Cuban automobile trade in American cars in the near future is predicted by C. H. MacKay, manufacturers' representative at Havana. Much depends on the successful outcome of the projected United States loan to the Cuban government. The deflated condition of the national treasury has led to serious curtailment of sales, MacKay points out, through the general tightness of money and the many unpaid government accounts.

Poor roads have also had a bad effect on the trade, it being as yet impossible to drive across the Island although in and about Havana, Santiago and other cities the highways are in excellent condition. The market for light cars is still good, however. Many buses in the shape of converted small cars are in use. Jitney travel is cheap, the rate having been lowered from 30 to 20 cents per ride through each zone, a zone in some cases being as much as three miles in diameter. Truck business is confined largely to out-of-town hauling, MacKay reports, but is certain of increase in that the sugar market has revived to what constitutes an attractive figure.

POOR METHODS PERIL AUTOMOTIVE EXPORTS

Hoepli Issues Warning to American Manufacturers Against Careless Practices—Points Out Growing Interest in Foreign Trade by American Makers.

Growing interest in foreign trade coincident with the constant expansion of automotive exports during 1922 is reflected to a surprising extent in the correspondence of the Automotive Division of the Bureau of Foreign and Domestic Commerce, according to M. H. Hoepli, acting Bureau chief. Hoepli finds that not only are an increasing number of automobile manufacturers and parts makers seeking to enter the field but that those already established in foreign lands are attempting to increase their contact abroad and their markets in the countries they serve.

Hoepli takes occasion to warn against faulty export practices, the thing that has held back all American commerce with the rest of the world from the time our budding industries first tried to sell to "foreigners." The increasing export activity of the automotive world brings the shortcomings of trade methods more strongly to the fore. As a result, Hoepli declares, unfavorable results threaten to impair the goodwill Americans have heretofore built up.

"Replies to a Foreign Trade Opportunity communicated to American automotive exporters through the Automotive Division revealed that failures in exporting are largely accounted for by faulty approach to the foreign buyer," Hoepli states.

"Dividing the correspondence into suitable sections, we find that:

"(1) One-third of the replies were written in an unmistakable tone of condescension—as if the American firms soliciting business were conveying a favor to the foreign inquirer. This method of approach is particularly out of place in Latin countries.

"(2) One-third of the solicitations, while not containing any information as to the standing, size and activities of the concern making the offer, stressed the fact that they had been in business for a number of years, whereby it was assumed that the prospect in the foreign country did either know all about the American manufacturer or would go to the trouble of securing the necessary data.

"(3) One-third of the offers did not contain any information whatever concerning the American firm from which they originated—except in catalogs sent under separate cover.

"(4) One-seventh of the letters of solicitations did inform the inquirer of the goods that were offered.

"(5) While the foreign inquirers requested c. i. f. quotations, sea port (well known in the World Trade), one-fifth of the American manufacturers only were able to give the desired quotations, while an equal number of firms did not quote any prices at all.

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ENGLAND TAKES LARGE SHARE OF U. S. TIRES

Akron Export Figures Show 1922 Will Beat 1921's Totals—Still Not as Great as 1919 and 1920—Mexico Second Largest Market, Statistics Show.

England, Mexico, Argentina and Canada, in the order named, formed the greatest export markets for American tires in the eleven months ended May 31, 1922, according to Akron statistics issued this week. Comparing the figures it is found that England led by far, having consumed nearly five times as many tires as Mexico, according to valuation. In this respect, the British Isles show a surprising growth in consumption for while they have led for the past three years, the ratio to close competitors has not been nearly as great.

Examination of the statistics discloses that American tire exports this year will exceed those of all years prior to 1919 and since the war, they will aggregate far less than that year and 1920. Totals, expressed in dollars, are as follows: 1922 (11 months to May) $14,045,911; 1921, $13,422,266; 1920, $43,899,502; 1919, $28,924,650; 1918, $14,511,621; 1914, $3,943,220.

The accompanying tabulation shows clearly the growth in certain markets and the relative decline of others. Explanations are readily at hand. German and Russian marts closed automatically with internal legislation and decline of buying powers. Chilean nitrate fields suffering as well as other causes obviated statistical data. It will be seen that Great Britain was the only customer whose purchases grew over 1920.

WHERE OUR TIRES GO ABROAD

(Values in Dollars)

	11 months 1922	1921	1920	1919
Belgium	$56,341	$63,582	$1,139,526	$532,582
Denmark	397,818	258,630	825,038	1,254,324
France	316,161	380,985	2,218,026	3,535,178
Germany	.....	11,868	422,171	33,280
Norway	308,233	284,487	1,136,919	845,690
Russia	.....	.....	10,393	1,402
Spain	279,810	270,782	1,625,384	825,007
Sweden	508,564	510,247	2,260,929	1,373,847
England	3,753,527	2,009,245	3,712,987	1,508,460
Canada	729,466	826,613	1,960,826	1,021,014
Mexico	898,309	1,173,826	1,855,833	805,164
Argentina	769,105	739,806	2,792,808	1,788,147
Brazil	249,712	211,553	1,647,066	1,018,055
Chile	.....	92,321	446,764	795,440
Venezuela	153,329	125,595	244,605	226,953
China	67,054	117,597	359,711	245,784
Japan	.....	146,584	417,584	422,432
Australia	262,816	224,731	1,304,950	751,584
New Zealand	465,580	342,145	1,949,089	1,023,807
British Africa	667,562	422,031	1,318,856	525,271
Italy	.....	24,700	972,500	226,245

URGE CONGRESS TO PASS STATUTE AGAINST THEFTS

Association Starts Movement to Aid in Apprehending Thieves

National in scope, a movement to interest Congress in adopting an amendment to the Federal Automobile law which now makes it a felony to take a stolen car across a State line, has been started by the National Auto Anti-Theft Association. The proposed amendment would prohibit the export of any auto, and forbid any steamship line to issue its bill of lading for the transport of any auto, whether or not boxed, until its motor and factory numbers are certified by an Inspector of Customs as intact (and recorded); and further certified not to be on the list of stolen autos to be required to be kept posted in the office of the Collector of Customs of each Port of Entry in the United States.

All trade organizations affiliated with the motor car industry throughout the country and every automobile club are urged to use their influence with their own Congressman to secure the adoption of such an amendment to the present Federal law in order to close an important outlet of professional automobile thieves in exporting their spoils to confederates at foreign ports. About 750 Chambers of Commerce, Boards of Trade and Trade organizations and about 300 automobile clubs have been nominated as associates of the National Auto Anti-Theft Association. The joint co-operation of all for the enactment of legislation for the more uniform protection of car owners in the various states by concentrated effort carefully directed on uniform lines should give good results.

Another Tire Company Starts

The Trump Rubber Co., headed by E. H. and R. M. Trump, is awarding contracts for the erection of a tire plant at Akron, which, when completed, will have a capacity of from 50 to 100 tires each day. Provisions will be made for increased production later. The Trump Company was started a year ago in the plant formerly occupied by the Denmead Rubber Co., in East Akron. The company specializes in belts and has a production of 36,000 belts each day. It is the outgrowth of the Excel Rubber Co., Wadsworth, which passed into a receivership a year ago.

AUGUST TIRE OUTPUT CONTINUES IN "HIGH"

Expected to Equal That of July—No Let-Up Apparent for September—Production Maintained at About 105,000 Daily in the Akron District.

Akron's automobile tire output continues to break all precedents for the "dull" season. Production during August is expected to about equal that of July, which was larger than June, thereby setting up records in defiance of the usual slackening of sales and output in that month. Furthermore indications are that this high level will be maintained well into if not through the month of September.

Orders for equipment for manufacturers continue to pour into the tire makers' offices. A factor in the September market is Ford's business which, since production of that concern is scheduled to break all previous records, will mean a great number of original equipment tires mode for that account.

One hundred and five thousand is the present daily output of Akron makers. Of these Goodrich is said to be turning out 22,000. Goodyear schedules call for more than 26,000 daily, Firestone over 25,000 and Miller something more than 7,000. Mason is somewhat behind in orders due principally to delays in starting the new factory at Bedford into high production. These and other records are being made despite labor conditions in the district which have set a prevailing wage of 40 cents an hour "and workers hard to get at that." The industry has experienced labor shortage for some time.

Miller Rubber Sales Higher

Sales for the first six months of 1922 of the Miller Rubber Co., amounted to $12,119,741 against $9,445,822 in the same period of 1921. This is approximately an increase of 28 per cent in money and 100 per cent in units. Net profits were $1,026,317 after all charges but before Federal taxes.

Brazil Rubber Stages Come-Back

Statesmen of Brazil, alarmed at the decline of their country as a rubber producer, propose to plant 1,250,000 acres at the expense of the State. It is also asked that the government guarantee six per cent interest for three years to five rubber manufacturing establishments and exemption of duties on imported machinery and supplies.

Seiberling Sales Change

Direction of the Boston branch of the Seiberling Rubber Co. has been placed in the hands of the New York City branch management. It is announced that no change in sales personnel is contemplated in either branch.

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"KEEP UPKEEP DOWN" NEW FEDERAL SLOGAN

Truck Buyers Want Service First, Appearance Second, Pulcher Finds—Cuts Costs of Parts—Has Gratifying Effect on Sales, Is Report.

Believing that service is the selling point for truck makers, the Federal Motor Truck Co. has evolved the slogan "Keep Sales Up by Keeping Upkeep Down." Furthermore, working on this theory, costs of spare and replacement parts have repeatedly been lowered by the Company to its dealers and service stations.

M. L. Pulcher, president, has inaugurated a campaign among Federal dealers based on the slogan. Pulcher believes that the owner of a Federal truck is entitled to buy necessary parts at costs as low, if not lower, than might be obtained at garages and shops other than service stations of the Company.

"The Company is endeavoring to carry this policy through the service station by requiring its dealers to establish the lowest rate per hour for service work possible under existing labor conditions in various parts of the Country," Pulcher asserts. "The big idea back of the Federal Company's service policy is its determination to sell transportation—continuous, uninterrupted and economical haulage—instead of just selling trucks and then forgetting the interests of the buyers. Several Federal dealers have written the factory telling of new truck sales that were traced directly to reasonable charges made for repair and service work."

Electric Truck Parade Scheduled

To what extent the electric motor truck has become a factor in the transportation of merchandise about urban centers will be shown in the electric motor truck parade scheduled as a feature of the Electrical and Industrial Exposition to be held in New York city at the Grand Central Palace October 7 to 14. Every manufacturer will be represented and the exhibits will range from 750-pound delivery wagons to five-ton trucks.

MAJORITY OF FARMERS PREFER LIGHTER TRUCKS

Republic Truck Sales Corp. Sets Percentage at 41 Per Cent

That the majority of farmers prefer light trucks for their delivery and hauling work is evidenced from a compilation of figures by the statistical department of the Republic Truck Sales Corp. Machines in the ¾ to one-ton class constitute 41 per cent of those in use on American farms, the Corporation finds.

Republic sales for the past three years parallel the average, it has been found. One and one-half ton jobs form 18 per cent of the total, 28 per cent are two-ton, four per cent are three-ton and the remaining nine per cent are of miscellaneous capacities.

Mexico Exempts Trucks

Importation of tractors, motor trucks and gasoline into Mexico duty free has been extended indefinitely. A presidential decree on August 13 continues the present concession.

Georgia Street Railway Uses Trucks

One hundred and six motor trucks and passenger cars form the fleet owned by the Georgia Railway and Power Co. It is one of the largest fleets in the State. Preston S. Arkwright, president, believes the time will come soon when the Company will use motors where traffic does not warrant building rail lines.

New Atterbury Models Announced

Atterbury Motor Car Co., old-line manufacturer of motor trucks, announced a new series of models this week. The latest additions are 2½-3 and 3½-4 ton capacity trucks. Prices on these range from $3,375 to $4,375.

Truck Hire Cheaper than Coolies

Truck hire has been found cheaper by small Chinese concerns than coolie labor. Expense of operating one truck for a day would be about $31, according to estimates made by a Shanghai newspaper. Sixty coolies at a cost of from $36 to $48 for labor alone would be required for the same amount of work.

French Don't Want American War Trucks

Thirteen thousand American motor trucks—all of them war veterans—are going begging on the French market. The manufacturers see danger in dumping them on the Parisian market. They hope the trucks will be disposed of in England where they have been sent for reconditioning.

Georgia Would Control Bus Lines

Short line railroads throughout Georgia are attempting to have motor bus lines put under control of the State railroad commission. An association composed of 28 of the 29 short line roads has framed a bill for presentation to the general assembly setting forth regulations governing motor bus operations which it wants enacted.

Charlotte to Hold Tractor Show

Preparations are under way for an industrial tractor show to be held September 6-8 in Charlotte, N. C. This exhibit is the first of its kind to be held in the Piedmont section. Fifty or more manufacturers will be represented.

SELDEN-ATLAS BEGINS COMBINING BRANCHES

Industrial Motors Divisions Inaugurate New Policy—Chicago and York Offices Among First to Be Changed—Nine Now Operated by Merger.

Following out new policies inaugurated in connection with the recent merger of the Selden and Atlas Truck Corporations into the Industrial Motors Corp., the management this week began the consolidations of branches. The Hartnett-Stewart Motor Co., Chicago, which has represented the Selden interests since the first of the year, has been taken over by the combine and will be hereafter known as the Selden Sales & Service Co., with James W. Stewart as the local branch manager.

At Philadelphia, Pa., the Atlas Truck Corporation branch has been united with the Selden branch also to operate as the Selden Sales & Service Co. George H. Covert will remain in charge of Selden sales and H. A. Woodruff will continue in charge of Atlas sales.

At York, Pa., the home of the Atlas Truck, another branch operated as the Selden-Atlas Sales & Service Co., has been opened at 127 South Duke street, with H. M. Heiges as manager. There are now nine branches in all.

Indiana Truck Corp. Trade Good

Business has been increasing considerably for the Indiana Truck Corp. during the last three weeks, V. E. Bromley, assistant sales manager, reports. Several large fleet orders have been booked recently and the future promises even greater trade for the Corporation.

OPERATIONS STARTED BY MOTOR CAR ABSTRACT CO.

Prepares to Reduce Theft Hazard by Its Certificates of Ownership

Formed with the purpose of protecting buyers of new and second-hand cars by its certificates of ownership, the Motor Car Abstract Co., New York, is ready to start operations. The Company has an authorized capital of $1,000,000 of which a considerable portion has already been paid in.

Each certificate of ownership the Company issues is backed by a thorough investigation and physical inspection of the car and the establishment of a means of identification in the event that the car is stolen. When a certificate is desired the applicant fills out an application sheet. He then takes his car to the service station where the physical inspection is made. This inspection includes the placing of the secret detection washers, the location of which are shown only on the inspection report and which vary in different cars.

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U. S. FINDS QUALITY OF GASOLINE BETTER

Bureau of Mines' Semi-Annual Survey Shows Volatility Higher Than Two Years Ago—Country's Output Becomes More Uniform.

Results of the semi-annual motor gasoline survey, just concluded by the United States Bureau of Mines, indicate that the average gasoline sold in the Country is of a better grade than has heretofore been the case. Laboratory tests of motor gasolines sold in New York, Washington, Pittsburgh, Chicago, New Orleans, St. Louis, Denver, Salt Lake City, San Francisco, and Oklahoma, during the month of July show that this year's gasoline is much more volatile than that sold two years ago, and that it has a somewhat better distillation range than last Summer's samples.

A comparison of the average figures compiled by the Bureau during the past several years shows that motor gasoline is also becoming more uniform in character. The large seasonal change is disappearing, but "Winter gasoline" still has a lower initial boiling point than "Summer gasoline." This difference in volatility is made intentionally to facilitate starting the engine in cold weather. The end point shown in the present survey is slightly lower either than that of last Winter or of the Summer of 1921.

The average of the entire Country considered as a whole does not show much change from a year ago, but samples from individual cities show some distinct changes. Of 132 samples collected by the Bureau in the present survey, ten failed to meet Federal specifications as regards the initial boiling point of 140 degrees F., and sixty-one samples failed at the 90 per cent point.

Quaker City Owners' Gas Bill Large

Automobile owners of Philadelphia are paying about $1,300 daily for the State tax on gasoline. The total tax in the city for six months ending June 30 amounted to $183,208.

Trucks Increase "Gas" Demand

Increased use of trucks in and around Chicago has stiffened the demand for gasoline which, until recently, had suffered a sinking spell in the district. Motors are supplanting many milk trains because of the lack of coal.

Will Report on Future Fuel Supply

Results of its special study on the future supply of fuel will be made September 4-9 by the Research Committee of the Petroleum Section of the American Chemical Society. Researches have been conducted as to the most efficient uses of the supply now available, the best means of supplementing the supply and other related problems. Reports on its findings will be made at the Pittsburgh meeting of the Society.

Motors Saving Rural Schools

National Automobile Chamber of Commerce figures reveal that 18,000 rural schools are furnishing transportation by automobile to pupils. Through the motor bus the consolidated rural school is made possible and the number of these amalgamations are going forward at the rate of 1,000 yearly.

MAIN STREET BEAUTIFIED

MAIN STREET is being beautified through the automobile. The man who travels retains many memories of civic beauties when he returns from a trip through some other part of the United States. He is anxious to have his own town transformed into a place which invites tourists. He votes for better pavements, boulevard lights and modern school and municipal buildings. His pride in civic affairs can often be traced directly to the trip he took with his wife and family through some town in a different state.

States are becoming neighbors through the motor car. Another great link in our democracy has been welded by the automobile, which brings officials of the state and nation together while solving the problems of good roads.—*H. H. Rice, President Cadillac Motor Car Co.*

'TWAS A PROBLEM BUT TRACTORS SOLVED IT

Italian Test Brings Silver Medals to American Machines

In a difficult piece of cultivation recently attempted to render marsh land fertile at San Dona di Piave in Italy, a number of tractors competed for medals and the honor of conquering the problems presented. Among those who competed were the Cletrac, the Moline, the Fiat and the Romeo. First prize a gold medal was won by the Fiat, a Moline captured second, then followed the Cletrac, Romeo and Moline, all winning silver medals.

The problem was not unique but had hitherto been thought impossible of achievement with mechanical cultivators. The soil was of some consistency for a depth of ten inches. It was desired to cultivate it without breaking through to a soft bog beneath in which men and machines would certainly become embedded. It was found necessary to fit additional attachments to the wheels in order to decrease the pressure per unit of area and the plows had to be hitched within 10 inches of the tractors.

"GAS" STOCKS FALL AS TOURISTS TOUR

June Shows Drop in Reserves as Did May—Production Increases Twelve Million Gallons—Old-Fashioned Refining Retards Output.

With gasoline stocks continuing the seasonal decline started in May when the tourists first began to bloom and motoring in general increased, June figures reveal 824,966,456 gallons on hand as of July 1. This is a decline of approximately 32,000,000 gallons from the amount of June 1.

Consumption for June was 507,000,000 gallons, as compared with 499,000,000 in May and 386,000,000 in April. Production likewise shows an increase in June; 12,000,000 gallons over May. These figures average in the neighborhood of 7 to 8 per cent increase over the similar figures of 1921.

Meanwhile automobile owners seeking cheaper fuel seem to be the motivating force behind the Senate inquiry into price fluctuations. When the committee gets down to business it should learn what many now realize, that America has crude oil "to burn." Enormous stores are above and below the earth's surface. But the old-fashioned methods of distillation convert little of it into gasoline.

That this is a readily demonstrable truth is evident in government figures. More than 22,400 million gallons of crude went into consumption last year—only 5,153 million gallons of gasoline were obtained from it in the refineries. This is little more than 22 per cent. Nearly 10,900 million gallons of crude from which from 10 to 15 per cent of gasoline content have been taken, are now standing in reservoirs unused.

N. Y. Needs 250,000 Buses

There is need in New York State at the present time for 250,000 buses to give the residents adequate transportation, according to H. D. Chapin of York Transportation, Inc., Metropolitan bus line operator. The future is unlimited for motor transportation he believes.

Motor Boosters to Hold Outing

More than 600 motor tradesmen of New York City are expected to attend the twelfth annual picnic of "Motor Boosters" September 7. The affair will comprise breakfast and a clam bake.

Miller Making Low-Priced Cord Line

Miller Rubber Co., Akron, is producing a new line of cord tires, designated the Wedge tread, in a full line of sizes from 30 x 3½ to 35 x 5. The 30 x 3½ sells for $12.50 in the clincher type and $13.50 in the s.s. type; 32 x 3½, $19.25; 31 x 4, $22.20; 32 x 4, $24.50; 33 x 4, $25.25; 34 x 4, $25.90; 32 x 4½, $31.45; 33 x 4½, $32.15; 34 x 4½, $32.95; 33 x 5, $39.10; and 35 x 5, $41.05.

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START WORK ON IDEAL HIGHWAY IN INDIANA

Model Section of Lincoln Road to Be Finished by October—Cost to Be About $100,000 a Mile—Embodies Thought of 15 Engineers.

After practically two years of preliminary research and detail work, the model road known as the Ideal Section of the Lincoln Highway is now under construction in Lake County, Indiana. With all appurtenances, it will cost approximately $100,000 a mile. Thirty-three thousand dollars of this sum will be given by the State, a round sum of $25,000 by the county and the balance will be supplied from a special fund created for this purpose by the Highway association, together with $20,000 a mile allowed by the U. S. Bureau of Public Roads.

In the design of this unique stretch of highway has been embodied the thought of fifteen of the Country's foremost experts in engineering and construction. It will probably come in for more study and discussion than any similar piece of roadway in the Country. It calls for 40 feet width of 10-inch reinforced concrete pavement, capable of carrying a traffic of 20,000 vehicles every 24 hours. One-quarter of this traffic, it is estimated, will be heavily ladened trucks. The width makes for safety and facility of operation. There will be no drainage ditches at the sides. Night illumination will be afforded and the roadside will be beautified eventually.

While it is not expected that many States can undertake, in the near future, improvements embodying all of the principal elements of the Ideal Section design, it is felt by the Association and the officials of the United States Rubber Co., which made the object lesson section possible, that the design will be suggestive. They also believe it will tend to bring to the attention of the American public the vital necessity of adequacy in present-day specifications, if the hundreds of millions which are now going into highway construction are to properly serve the America of today and tomorrow. It is expected that the paving work will be completed by the end of October, many details including the lighting installation, the beautification of the right-of-way, and the like remaining for accomplishment next spring.

Texas Companies Consolidate

More than ordinary local interest has been aroused in Texas automobile circles through the announcement of the amalgamation of the Lone Star Motor Truck and Tractor Association with the Blumberg Motor Manufacturing Co., both of San Antonio. The home of the consolidation will be in the new building of the Lone Star company. Factory supervision will be under the personal charge of H. G. Blumberg.

Texas Dealer "Asks 'Em to Buy"

Borrowing an Automotive Equipment Assn. motor car and an "Ask 'Em to Buy" film, C. O. McCauley of the McCauley-Ward Motor Supply Co., Waco, Tex., is touring his district this month displaying the moving picture as an educational feature. He will have visited 26 towns and cities when he ends his work, September 5.

Kentucky Clubs Unite

Federation of all Kentucky motor clubs was brought about on August 19 when the Kentucky Motor Federation was formed at Lexington. Harvey Meyers, of Covington, was named president.

North Carolina to Let Road Contracts

Twenty-nine projects totaling 186 miles which are to be let out August 30 by the State Highway Commission of North Carolina, will bring the year's total to 1,114 miles. The total obligated expenditure for new construction during the year will be more than $22,000,000.

U. S. DEVELOPS NEW TYPE OF CONCRETE ROAD FILLER

Mixture of Rosin and Crude Rubber Found to Retain Natural Color

Unsightly black lines, sometimes jagged and irregular, which mar the appearance of practically all concrete roads and which are due to the natural color of materials used to fill joints and cracks, will be avoided by the use of a material for the purpose developed in the laboratories of the Bureau of Public Roads, United States Department of Agriculture, if tests by actual use prove as successful as expected. This material has the same color as concrete, and when used to fill cracks and joints the surface has the appearance of a continuous and unbroken slab to the casual observer.

No particular advantage over other good materials is claimed for the preparation other than its color, and it is probable that the cost will be somewhat higher but not prohibitive. The mixture consists of approximately 12 parts rosin, one part crude rubber, with sufficient barium sulphate to give the desired color. In preparation the rubber is dissolved in gasoline, and the rosin is then mixed in with an application of heat, the coloring material being added as required. Any desired consistency can be obtained by varying the proportions.

Advertising Agents Change Name

McLaughlin & Co., announcing the naming of Lloyd Maxwell as president, has changed the corporate title to Maxwell-McLaughlin & Co. The firm offices continue at 30 North Michigan avenue, Chicago.

DEALER TRIED UNDER LAW OF "BULK SALES"

Goodyear Company Obtains Conviction of New York City Firms—Case Has to Do With Selling Tires Below List in Lots of from 10 to 30.

Opinions handed down by Justice O'Malley of the Supreme court, in an action brought by the Goodyear Tire & Rubber Co., Inc., on behalf of itself and other creditors, against Jacob Nosovitsky and Downing Tire Stores Corp., should prove of interest to tire manufacturers and retailers alike. The action was instituted to set aside the sale of certain automobile tires alleged by the plaintiff to have been sold in bulk by Nosovitsky to the Downing corporation in violation of the Bulk Sales law.

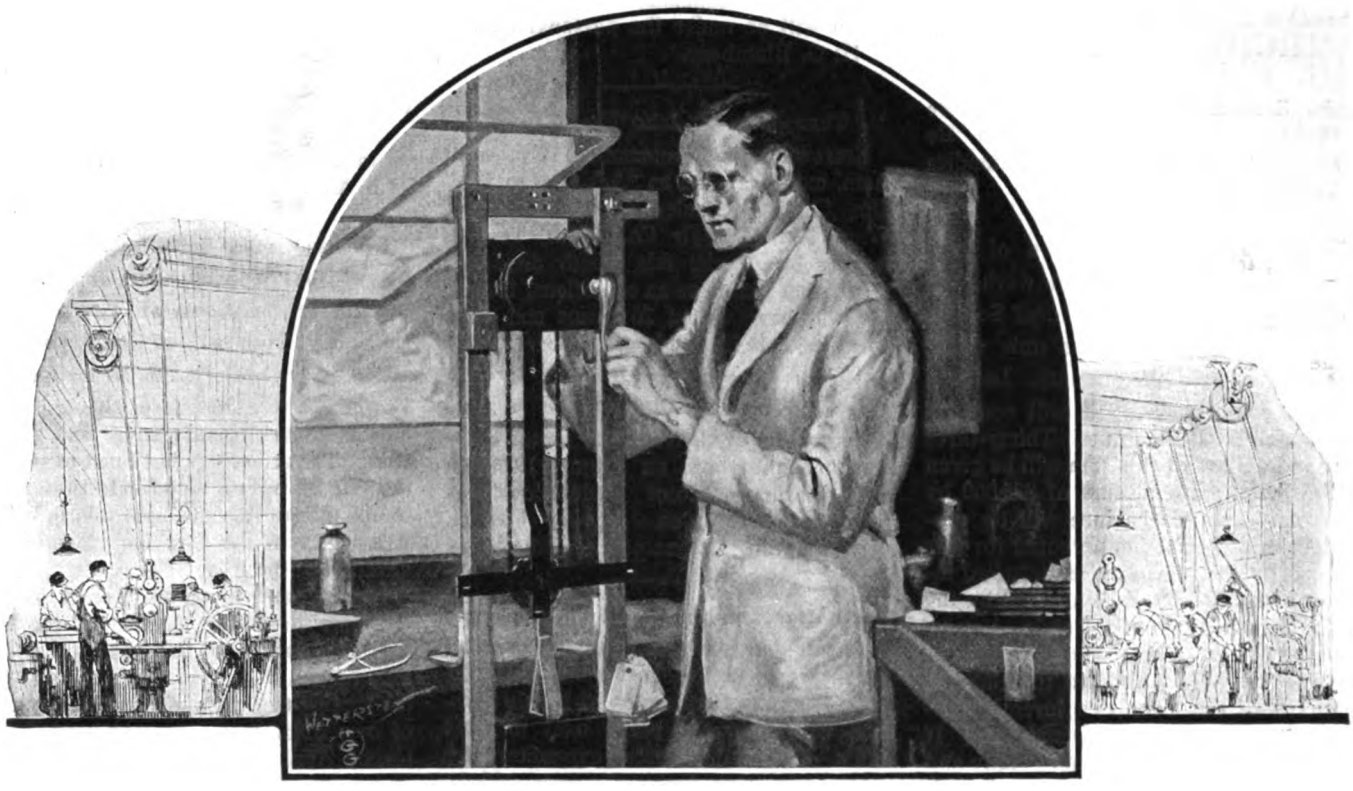
Jacob Nosovitsky opened a retail tire store on upper Broadway, Manhattan, the latter part of February of this year. In a short time he is said to have obtained credit from the leading tire manufacturers to the extent of over $12,000. By the middle of the following April Nosovitsky is alleged to have stripped his store of merchandise and he called a meeting of creditors. This is illustrative of many such instances which have been occurring in the automobile tire trade during the last few years. Its peculiar significance to the tire manufacturers lies not in that they had misplaced their confidence and were actually out of pocket, but in the charge that Nosovitsky, like many others, had obtained his merchandise in good faith and then had sold his stock at prices which were below the list.

A thorough investigation of the Nosovitsky incident revealed, it is charged, that what appeared to be sales in bulk had been made by Nosovitsky to a few other dealers, among whom was the Downing corporation. The action was then instituted by the Goodyear company against some of the larger purchasers in bulk for the purpose of setting aside these sales on the ground that they were void under the Bulk Sales law, and a motion was made simultaneously for a receiver to take over the property so conveyed.

The motion for the appointment of a receiver was vigorously contested by the Downing corporation on the ground that sales of automobile tires in quantities of from ten to thirty are not unordinary or out of the usual course of business. This contention was denied by Justice O'Malley.

The attorneys for the creditors claim that this opinion will have a most salutary effect. It is their contention that any one buying in bulk from a retailer does so at his own peril and responsibility, and that if the result of such sales and purchases is to the detriment of creditors who have given credit on the assumption that business is being done on a strictly retail basis, the purchasers who make possible the wrong-doing of the unscrupulous retailers must be held accountable.

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A *Working* Test for Every Ternstedt Appliance *Before* it Goes into Production

Much of the credit for the success of Ternstedt Automobile Body Hardware must be attributed to the years of experience and ingenuity of Ternstedt engineers.

But, before any Ternstedt design is approved for production, it must pass the severe and exacting requirements of expert analysts. If a flaw shows, it is quickly detected. If a weakness occurs, it is carefully noted and the appliance is turned back for correction.

Then follows the test *in service*. Actually installed in an automobile body, each Ternstedt appliance must prove its worth by successfully meeting demands far greater than would ever be called for in the longest and hardest of usage.

Precautions, such as these, are largely responsible for the well-grounded confidence displayed by representative body men in Ternstedt *proved-in-service* products. Further evidence, too, of Ternstedt *complete* cooperation.

TERNSTEDT MANUFACTURING COMPANY, DETROIT

Division of Fisher Body Corporation

TERNSTEDT

Largest Manufacturers of Automobile Body Hardware in the World

Window Regulators, Curtain Rollers, Sunshades, Cowl Ventilators, Open and Closed Body Door Locks, Door Panels, Door Bumpers, Anti-Rattlers, Windshield Wipers, Windshields, Window Sash, Strap Hinges, Concealed Hinges, Piano Hinges, Rear Deck Hinges, Rear Deck Locks, Rear Deck Lid Braces, Channel and Shapes, Screw Machine Products, Die-Castings. All Kinds of Stampings. Other Miscellaneous Automobile Body Hardware.

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THE TRADE AUTHORITY

Established 1900

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Trucking

It is estimated that motor trucks annually handle 1,430,000,000 tons of freight over an average of four and one-half miles per ton, whereas the railroads haul 1,642,000,000 tons of freight every year, an average of about 187 miles per ton. The temptation to draw conclusions is almost irresistible.

For instance, the latest available tabulation of freight traffic movement on railroads indicates, on the basis of classification only, that about 70 per cent of the total tonnage moved is hauled over streets and highways at one end of the rail, and about 16 per cent is trucked at both ends, making 86 per cent in all. But counting twice the tonnage that is hauled to the railroad at one end, and away from it at the other—that is, doubling the ton-mileage that is double trucked in connection with rail shipments—the tonnage moved over the roads should be at least 102 per cent of the total tonnage carried by the railroads.

Furthermore, if the total tonnage movement over the highways be considered, it is at once seen that a vast proportion of it is entirely independent of rail movement. The grocer delivers his provisions at his customers' doors, the truck farmer hauls his produce direct to market, much sand is dug and delivered locally for building and grading, and so on.

Is it too much to say that until the motor truck tonnage capacity of the Country equals the annual freight movement on rails the market will not have reached half its normal? The figures quoted in the first paragraph indicate a motor truck freight movement only 87 per cent of that of the railroads.

Incidentally, the average truck haul of four and one-half miles, by contrast with the average rail haul of 187 miles per ton, is also suggestive. These are averages, mind; not maxima or minima. One is so far inside the minimum paying haul on rails, and the other so far above the most effective operating radius of the truck, that no charge of direct competition between them could possibly lie.

Maintenance of Way

There are still a few lessons to be learned from the experiences of railroad operators. One of them is that the administration of the Maintenance of Way Department has a profound influence on the cost of maintaining rolling stock. Let the road run down and it isn't long before engines and cars begin to fall apart all along the line.

Application of this thought to the automobile business suggests the conclusion that with better roads, cars are going to last longer. True, better roads induce increased mileage, but with better roads, better cars, and better service, too, the life of the average car should grow longer as time goes on.

"Make 'em cheaper, so they won't last so long," might be the selfish conclusion of the producer who apprehended an ultimate curtailment of his market from this cause. But unfortunately, public patronage has never endorsed a policy of that kind.

Money in the Operating End

It has long been predicted that eventually there would be great money-making possibilities in systematic motor vehicle operation. Apparently the point is rather rapidly being approached where the prediction is to be fulfilled. To the conspicuous success of the Fifth Avenue Coach Co. in New York must now be added the example of the Motor Transit Co., operating a network of stages out of Los Angeles. The Coach company during its last fiscal year did a business of $1,754,833. The Transit company's gross revenue for the same period, namely the calendar year 1921, was $1,618,893.

Looks Improve

A marked improvement in appearance is resulting from the application of permanent tops, instead of the one-man version of the old "cape" top. Better lines and a firm foundation for the top material are advantages that make for a conspicuous distinction between tops of this and other types. Just how far their application will run still remains to be seen; there is nothing so very new about them, save that their use has been gradually increasing for several years and is now standard on several models. Their influence in drawing attention to the outline of the car as a whole, however, is bound to be salutory.

Bargaining Ahead

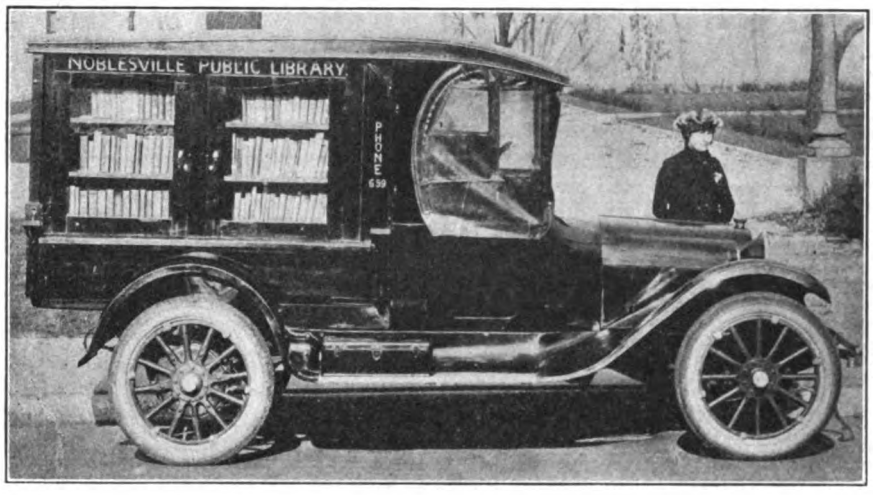
Here is a dealer selling genuinely rebuilt used cars, subject to a 60-day "factory" guarantee, who also agrees with the purchaser, as follows: "If, within one year, you want to exchange this car for a new one of the same make, we will allow you exactly what you paid for it."

That is one way to make real customers out of 'em, isn't it?

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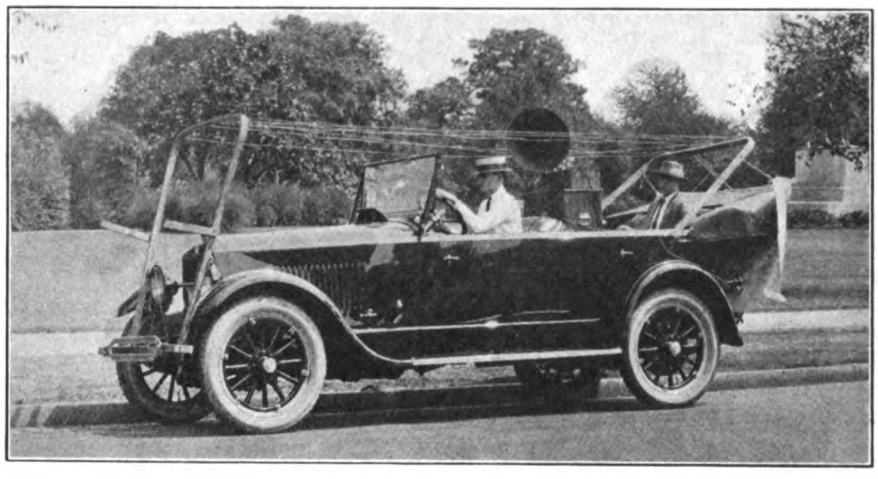
Automobiles Pull Off Stunts at Conventions

Dodge Brothers Portable Library and Radio-Equipped Studebaker Shown



A COMPLETE portable library, used to carry books to the farmer, was one of the suggestions offered at the national convention of the American Library Assn. in Detroit. It consists of a Dodge Brothers business car fitted with racks which carry several hundred volumes. The traveling library is used to circulate books around Noblesville, Ind.

EQUIPPED with a radio receiving outfit, a Studebaker Big Six touring car paraded the streets of Memphis during the convention of the Cotton States Merchants' Assn. The radio apparatus reproduced music broadcasted by the sending station of a local electrical supply house. The car was furnished by the Automobile Sales Co.





AFTER government crews had cleared Tioga Pass of snow this Summer, the new Columbia Light Six was one of the first cars through. It is the practice of J. W. Leavitt & Co., California distributer, to give a thorough tryout to every new model, and A. D. Plughoff of that organization, reported that the car survived the arduous mountain journey in splendid shape

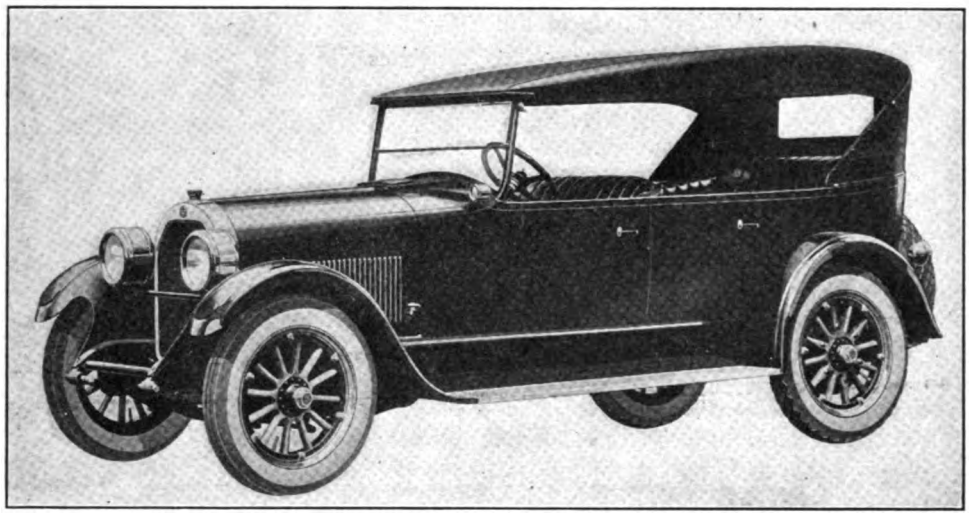
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New Peerless a Typical Collins Triumph

Oversold on Initial Showing— Type "23" Practically New Product—Modish Lines Adopted for Nine Bodies

OVERSOLD on its first showing. Such was the reception accorded the new Peerless this week when R. H. Collins showed to the distributing organization of the Peerless Motor Car Co. and a small group of friends, gathered at Cleveland, his idea of how further refinement and excellent mechanism could be acquired in an already fine motor car.

To those who have taken up the development of the Peerless company, the manner in which branches and distributers, working side by side, welcomed their efforts was most gratifying. Nearly all branch managers and about half of the distributers were present at the private showing. These were unanimous in their approval of the new offering, which approval they expressed in act as well as word. For they placed orders then and there to exceed the factory schedule, with others still to be heard from.

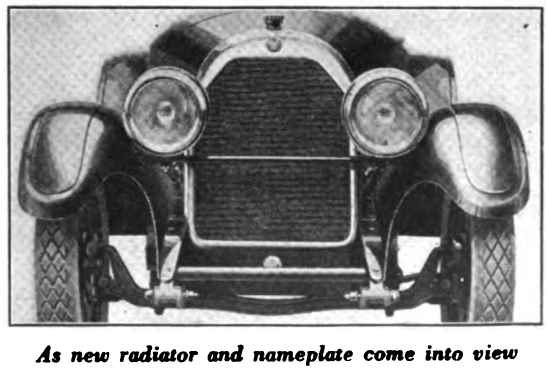


New Peerless seven-passenger touring-phaeton presents entirely changed lines

And this without prices being known! Up to the time of going to press the matter of prices on the new cars was undecided. While this detail hung in balance, however, Sales Manager D. A. Burke revealed a new idea of uniform policies toward owners in the service end by branch and distributer alike. This is still in the embryo stage, though, and is to be developed further.

Tuesday and Wednesday of this week were set aside for the initial exhibition of the type "23" Peerless, during which the retail room was closed to the public. Admittance was through the factory, and as the privileged few came in they were confronted with the central feature of the display—a new chassis stripped alongside a stripped chassis of the series it replaces. Set off by the palm-lined walls were a sedan and two touring models in various paint options.

Since Collins took over Peerless last Fall, the trade has confidently awaited the coming of a new model. That there would be one, those who best know the man and his capabilities were sure. Rumors that the new offering would be an entirely different type, however, are now set at rest. For type "23" bears out his declaration of last November that "we will continue to build the present Peerless model as it stands, adding improvements and refinements of detail as they are developed."



As new radiator and nameplate come into view

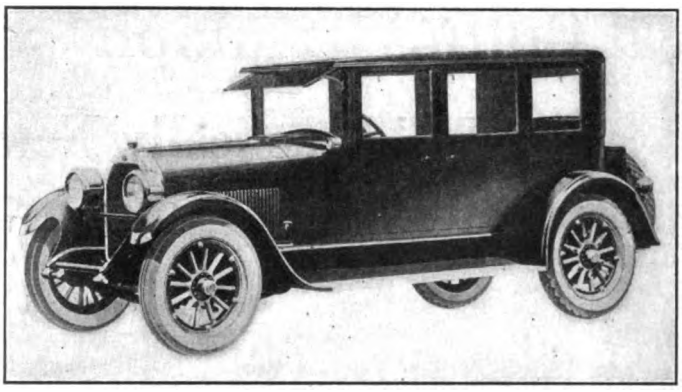
Nevertheless, so extensive have been the developments and refinements that practically speaking the new Peerless is a different car in every sense of the word. It is a larger car, 128-inch wheelbase as against 125, with smaller wheels and larger tires. The gracefully-proportioned bodies, with lines determined by the new, rounded radiator, bear no resemblance to former designs. Even the nameplate carried on the radiator shell is new, it being a circular pattern with the spread-eagle Peerless insignia raised thereon. The only trace of identification with former cars is the inside line of the radiator shell which retains the characteristic outline of former Peerless radiators.

So sweeping have been the developments in the chassis that about the only detail retained is the fundamental design of the eight-cylinder "V"-type engine. Refinements in the power plant, however, are numerous. Other important chassis developments include a new rear end with different drive, in which a novel torque arm is employed, new frame, new lubrication methods, different spring construction, and so on.

As one observer remarked, "Collins has gone the limit on bodies." On the one standard chassis, there are nine body types, two open and seven closed. These are four- and seven-passenger touring phætons, two-passenger roadster-coupe, four-passenger town-coupe, four-passenger suburban-coupe, five-passenger town-sedan, seven-passenger suburban-sedan, five-passenger Berline limousine, and four-passenger opera-brougham.

The open models carry the Peerless permanent top, equipped with dome light. Side curtains

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Five-passenger town-sedan has individual front seats and trunk

for these fit snugly, giving practically the advantages of a closed car. On three models, the four-passenger phæton, town-sedan and suburban-coupe, trunks are mounted at the rear.

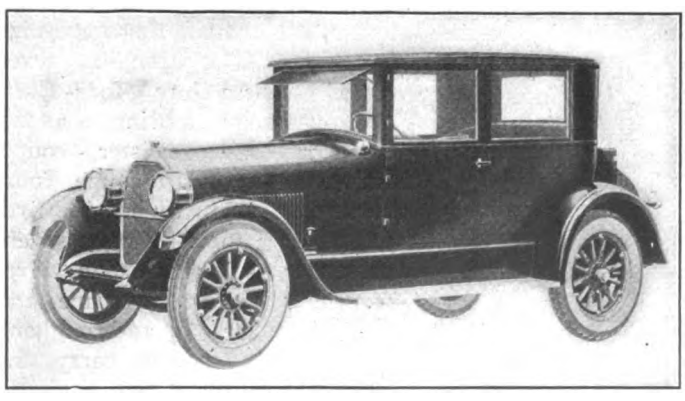
Seven of the new bodies are illustrated here, and their general lines can be taken in with the eye. The chassis improvements are here summarized briefly. These represent a development of the eight-cylinder principle to the point where Peerless officials believe they now have "the most powerful, the fastest, and the most flexible stock car America has ever produced."

Taking as a foundation the former Peerless eight-cylinder "V"-type engine, 3¼-inch bore by 5-inch stroke with two blocks of four cylinders set on a 90-degree angle, many changes have been introduced into the power plant. For one thing, the tire pump has been removed from the front of the engine thereby permitting a shorter fan shaft, allowing engine to be moved forward in the frame. This gives larger space in the front body compartment and greater accessibility to steering gear and connections.

A larger oil strainer screen has been installed as an independent unit in the lower half of the crankcase. This screen can be removed for cleaning without taking down the lower half of the crankcase. An oil drain plug has been installed on the lower left side of the case for purpose of draining oil, and is removed with a special wrench. This eliminates necessity of getting under the car to drain the 2½-gallon reservoir.

Front engine support is now on the frame cross member in a specially designed universal socket, lubricated by means of pressure oiler. Front gear cover has been changed to conform with this new engine support, as well as removal of tire pump.

Redesigned water pump incorporates forced type of circulation by centrifugal pump. A larger packing nut is used, rendering it accessible to take up as wear occurs, and



Four-passenger suburban-coupe has individual tilting front seats

which can be easily removed by taking off two capscrews, as the drive shaft has been fitted with male and female connections.

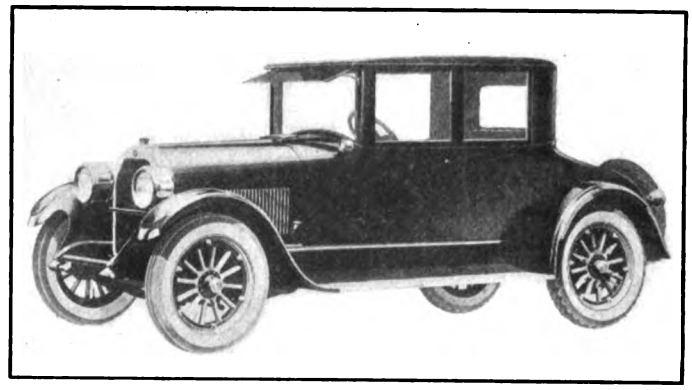
A special Fedders honeycomb radiator with brass shell heavily nickle-plated, has been alopted. Capacity of the cooling system is 7½ gallons. In severe tests near Uniontown, Pa., a temperature of not over 178 degrees was maintained while ascending the famous Uniontown hill.

Exhaust pipes have been carried down at front of engine, instead of at rear. This allows a cleaner engine design, and also insures cooler toe boards.

All former electrical units have been changed. A Delco starting, lighting and ignition system has been adopted, this including starter motor, generator, distributor, coils and switches.

The distributor has been placed in front of engine, being bolted to rear side of timing gear housing and driven from fan shaft gear. All wires have been enclosed in conduits. Distributor is an automatic type. It has a governor to regulate various engine speeds, thus eliminating constant manual spark adjustment. It also has double-breaker contact points, providing perfect spark at all times.

Starter switch is now mounted on toe board. An Exide



Four-passenger town-coupe has usual staggered seat arrangement

6-volt 120-ampere battery is carried in compartment on right side of frame, accessible by removing cover which sets flush with dust shield. Kellogg motor-driven horn is mounted on right rear engine frame. Head and cowl lamps are of a distinctive pattern, made by Guide.

A marked improvement has been made in chassis lubrication. Throughout, parts requiring lubrication have been fitted with Automotive Products grease cups, these being filled with an Alemite pressure gun and periodically turned down as may be necessary. This system has even been applied to spring shackle pins, where a combination cup is used.

Transmission case has been altered to take care of installation of tire pump. A hose connection has been provided at the left dust shield, and pump is started by inserting a screw driver in the slotted head which protrudes through the floorboard, a quarter-turn being sufficient to engage pump gear.

A transmission lock has been set immediately back of the shifting lever, and is protected by a dust cover. A 250-key change has been supplied to meet standards of National Insurance Assn., thereby giving benefit of reduced premium on insurance. Gearshift lever has been redesigned to permit greater ease in shifting; foot brake pedal and emergency lever have been changed in length

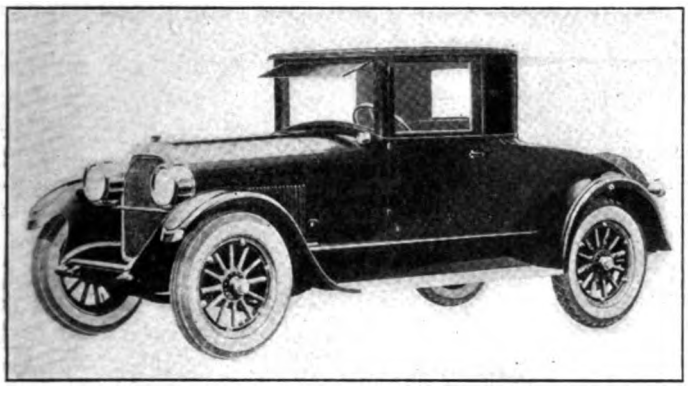
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and shape, making less pressure necessary. Clutch and brake pedals, incidentally, have been changed from adjustable to permanent types. Clutch spring has lower compression, and oilless bushings have been installed for clutch release parts.

Propeller shaft is of heavier construction. It is tubular, equipped with Spicer universals, protected by metal housings, and is lubricated by oilers.

Chassis frame is entirely new. It has straight side members and a maximum depth of 7½ inches. Truss rods are eliminated. To take care of frame twists, tubular cross members, front and rear, are pressed into the frame. There are also a radiator and engine front support cross member, cross member housing brake rocker shafts, supporting front end of torque arm, and rear cross member for front gasoline tank support.

Timken axles have been adopted, front and rear. Front axle is an "I"-beam type. Steering knuckle is fitted with roller thrust bearings at upper end to make for easier steering. Rear axle is semi-floating. Bearings on axle-shafts take care of side thrusts. Pinion gear has a straddle mounting, that is, there are two Timken bearings with the pinion gear in the center, instead of two bearings on one end and the gear on the outer portion. Brakes are 15½ inches in diameter and 2½ inches wide. External brakes



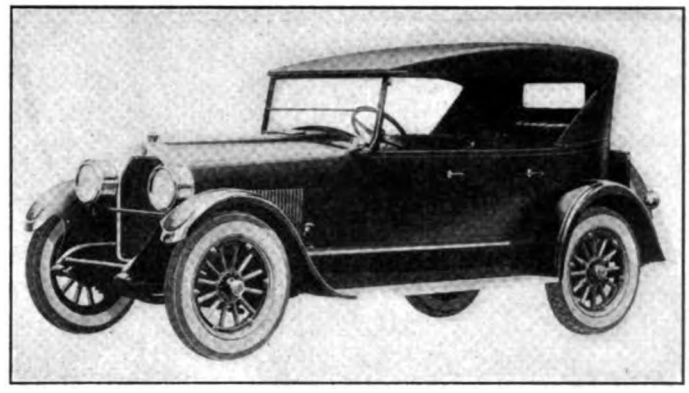
Peerless two-passenger roadster-coupe has but one wide cross-seat

are easily adjusted, while new internal brakes have no adjustment other than the brake rod.

Rear axle is provided with an interesting torque arm. It is a pressed steel type, having an exclusive Peerless fabric connection at the front end, eliminating all adjustment and noise at this point. Rear end is fastened to rear axle by a large pin encased in brass bushings. Lubrication of axle shaft bearings and spring saddles is through special cups and tubes attached on each side of the rear axle near the brake drums.

Thus taking the torque through this arm and the loose spring seats now used are in contrast to the Hotchkiss drive and fixed seats used on the old Peerless. Springs all around are semi-elliptic and considerably longer. Front springs are 41x2¼ inches, with 9 leaves; rear springs are 60x2¼ inches, with 8 leaves for lighter body types and 9 leaves for heavier ones. Springs bolts are ⅞ inches of exclusive design to allow for adjustment without use of spacers or cotter pin for locking nuts when making adjustments necessitated by wear. Springs now are directly underneath frame side members.

Steering gear is a Gemmer product with 9.5 to 1 ratio. This gives easier steering and allows turning radius outside of 41 feet to the right and 44 feet to left. Wheels are Kelsey metal felloe type with 12 hickory spokes. Rims are



Four-passenger touring-phaeton also has permanent top and trunk

32x4½, these being fitted with 33x5 cord tires all around.

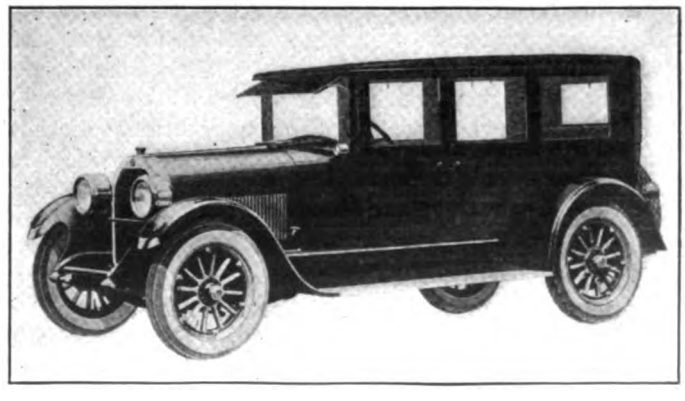
A 21-gallon gasoline tank is mounted at the rear, and is provided with three supports. A large sediment chamber is located in the tank. Filler cap is a bayonet type, unlocked by a quarter-turn. Tire carrier is a ring type, supported by rear cross member. It is designed for two extra tires and has a substantial lock, the barrel of which is integral with the carrier.

Of the nine body types, the open models need no further explanation. The three coupes have individual characteristics.

The two-passenger roadster-coupe, as its name implies, has one wide cross-seat. The four-passenger town-coupe has the conventional coupe staggered seat arrangement, that is, the driver's seat set slightly forward of the rear seat and a folding cushioned seat. The four-passenger suburban-coupe is a two-door design with two individual bucket seats in front which tip forward, allowing entrance to rear seat. This body is larger, of course, than the town-coupe. It also carries a weather-proof trunk at the rear.

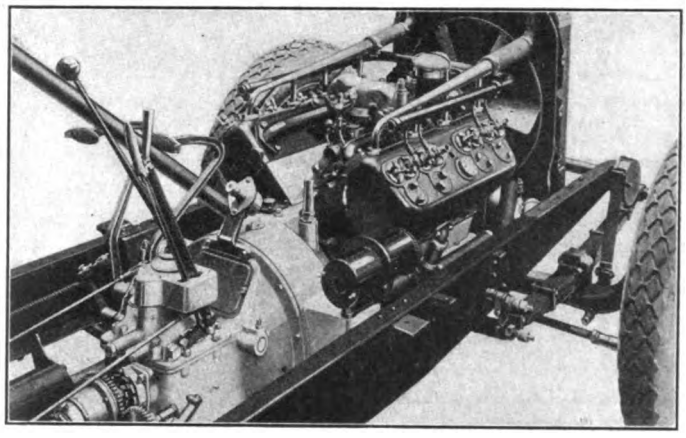
The five-passenger town-sedan is a four-door design with two individual front seats. The seven-passenger suburban-sedan is a conventional seven-passenger sedan type. The five-passenger Berline-limousine actually seats seven, and is similar to the seven-passenger sedan except that there is a partition between front and rear compartments. The four-passenger opera-brougham is a conventional type with driver's seat open.

On all bodies an option of three colors is regularly given, Collins blue (a rich, deep shade), maroon, and dustproof gray. The four-passenger phæton may also be had in a lighter blue, styled Dorothy blue. Maroon bodies have a 1⅛-inch English vermilion striping and hairline; gray bodies are striped in green with two white hairlines; and blue bodies are striped in white. Hood and wheels match



Seven-passenger suburban-sedan is of conventional sedan design

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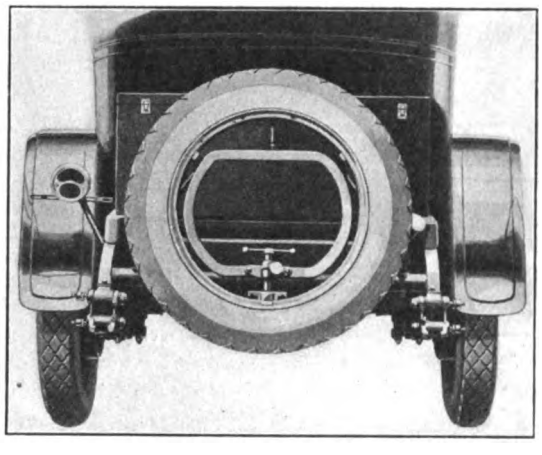


Eight-cylinder "V"-type engine is retained but greatly improved

bodies in color and striping. A new note is touched in the striping which starts and ends at the cowl lamps, but is not carried across the cowl.

Standard equipment on all bodies, in addition to those details mentioned and the usual standard equipment, includes eight-day clock, tool compartment with lock in left front door, snubbers front and rear, windshield wiper, rear-view mirror, automatic rear signal, inspection lamp with reel and cord. As mentioned, open cars have a permanent top, weather curtains and dome light. Closed jobs have visor and either dome or quarter lights, or both. Smoking case is provided in the sedans, limousine and brougham.

An interesting detail of the curtains provided with the open car permanent tops is that upper celluloid panels of the front door curtains open inward and upward, allowing air to be taken into the car without necessity of opening a door or removing an entire curtain.



New tire carrier and combined tail-slow lamp

A quick-acting cowl ventilator is operated from just beneath the instrument board. Windshield on open cars is a two-piece type with very narrow, fixed lower panel and adjustable upper panel. Intersection of the two panels does not come within direct range of driver's vision.

Instrument board contains three symmetrical ovals, two of glass and one of metal. That on the left houses ammeter and oil gauge; center one, somewhat larger than the other two, has speedometer and clock; while that on right, the metal oval, is the switch terminal for ignition and lighting systems. A unique detail of the front door tool compartment is that tools can be taken from door as one unit, since they are fitted into a removable panel.

Head and cowl lights are drum type, heavily nickeled. The combination rear lamp, made by Guide, aside from functioning as an ordinary tail lamp, registers an automatic "slow" sign, illuminates gasoline gauge dial and serves as a license plate holder.

Closed models are the latest word in style and beauty. A variety of patterns are used for upholstery, sedans in mohair velour and the others in cloth. Distinctive hardware of a new pattern is used. Windshield on closed cars differs from that of open models in that both upper and lower panels are adjustable.

Finishing colors have been mentioned. The coupes are painted the predominating body color above the belt line, with the exception of the upper back panel, which is black. Other closed types are black above the belt line, and all carry body striping.

First hand inspection of the new bodies reveals that they are exceedingly comfortable. They are far better looking as to general proportions and the color choices are really handsome.

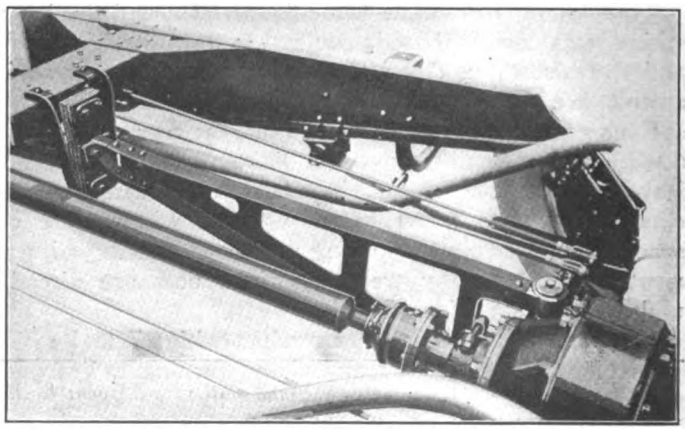
Coming back to the two open cars, these offer in their permanent tops a trend which will bear watching in the car field. The Peerless top is constructed of steel tubing, white ash strips, heavy padding and weather-proof material. While faintly resembling a folding top in appearance, it presents a perfectly smooth surface to the eye and seems to be a part of the car. At the rear the top is fashioned in the shape of gypsy quarter curtains.

Curtains of patented design are quickly attached, giving certain advantages enjoyed in closed models. Right frame of the permanent top is largely responsible for the perfect fit and the non-flapping condition in which the curtains remain. Brackets inserted into each door make entrance and exit an easy matter. A dome lamp lights the tonneau. This is controlled by a switch located on the back of the front seat. On the engine side of the dash there is a trouble lamp of the reel type, with a 16-foot extension cord.

The manufacturer also emphasizes the top construction employed for closed models. No metal is used in building these tops, but in its stead a covering is made of wood strips, padding and glazed top material which, it is claimed, destroys the drumming sometimes found in closed cars.

Carpets used in the closed cars are of wool and in each case match upholstery. While mohair velour and cloth are generally used in the closed cars, the driving compartments of the limousine and brougham are, of course, finished in bright enameled leather, with corrugated linoleum on the floor.

Overall measurement of type "23" is 16 feet 6 inches. All models are 78 inches high from top to baseline. Seat measurements have been standardized, all rear seats being 45 inches wide and all solid front seats 42 inches wide. Road clearance of the new models is 9½ inches.



Torque arm has exclusive Peerless fabric connection at front

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SELLING GOODS AT RETAIL

LAST season was an eye-opener to many dealers who never before had given serious consideration to the advantages of participating in local, county and state fairs.

To many, such an exhibit bore all the earmarks of a "rube" event. And in consequence they remained in the background.

Fortunately, however, any such feeling of superiority that may have prevailed in the minds of some has been dissipated to a large extent by the realization that much cold cash is handed about on these occasions. This year, therefore, promises to mark a change of heart on the part of certain merchandisers, who now regard such celebrations in their true light of real sales opportunities.

* * *

TO what good ends effective publicity can be employed is illustrated in the story of the Lasser Motor Co., Newark, N. J., which appears on the following pages. This Chevrolet dealer gets the most from his tri-weekly driveways from the Tarrytown, N. Y., plant by making of each a veritable triumphal parade accompanied by horns, and banners bearing pertinent slogans.

Nor do the endeavors of the Lasser organization to let the public know it's alive end there. Moving pictures of these demonstrations are shown in the local theatres together with detailed information on the company's "Thrift Plan."

A special "Blue Ribbon Contest" is illustrated by an advertising float which drives through the streets day and night distributing literature. In addition, to bring in a good crop of prospects $10 is offered for every name that results in a sale.

The Lasser method of merchandising is a good example of the fact that it is going out in the highways and byways and "rakin' 'em in" that runs up profits; not sitting back and waiting.

* * *

STARTING out for a tour an ultimate consumer discovered, on the second or third day, that his brakes wouldn't hold. Investigation showed that the lining on one band was hanging by a single rivet. As the car had just been overhauled its owner was mad clear through.

When he got home, therefore, he told his local service man all about it, using fervent and vivid language. But as he was an experienced motorist his surprise may be imagined when, instead of excuses, he received a letter from the head of the establishment, expressing profound regret and enclosing an unsolicited check for the extra repair bill. "Send back the car," said the letter, "and if anything else is wrong we will make it right this time at our own expense."

AUTOMOBILE TOPICS learned of the incident from a friend of the customer. That dealer is being advertised liberally, by word of mouth.

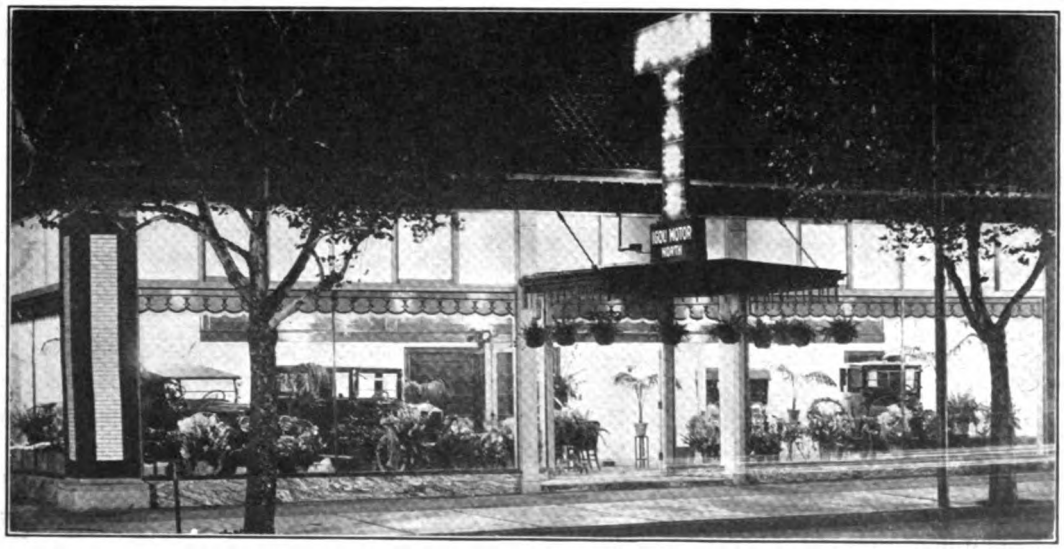
* * *

CONTRACTORS working on big out-of-town jobs are good customers for used cars and trucks. With much of their machinery it is their custom to charge the cost up to the contract, afterward disposing of it for what it will bring. With cars and trucks some are doing the same as with other equipment.

This affords a good opportunity for dealers located near large undertakings, especially in rural districts, to move second-hand stock. Contractors' names can be easily ascertained before the work starts; where they are unwilling to buy they may contract for haulage and passenger service.

One contractor, telling of his experience, speaks of buying a seven-passenger car for $800, using it three or four months, and then reselling it for $800. But he did the buying and selling himself. No dealer, thereabouts, was smart enough to jump in and make a couple of quick turns.

Correct Lighting Turns Night Into Day



Sixty thousand dollars was spent by the Igou Motor Co., which handles the Moon in St. Louis, Mo., in this new sales and service station. Adequate lighting was given careful consideration

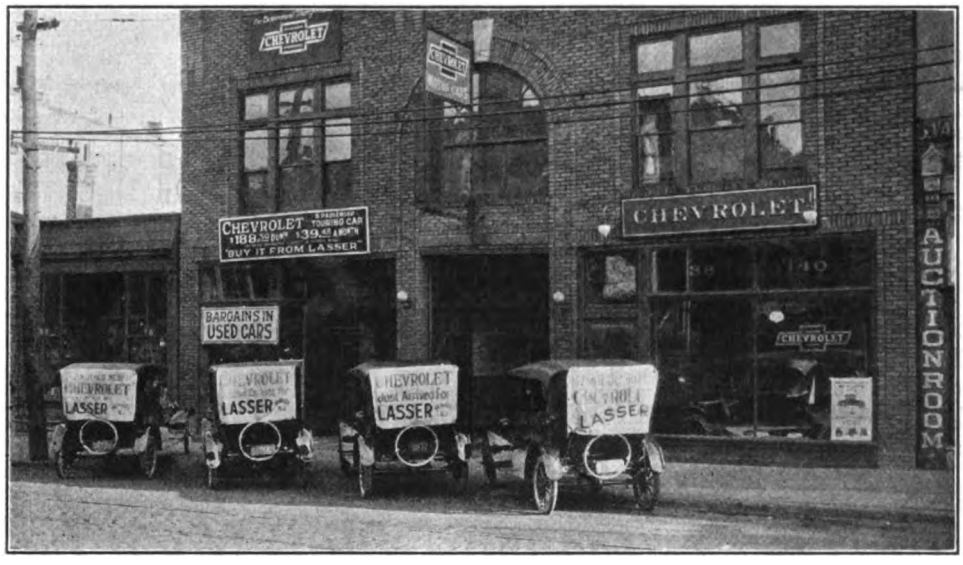
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Publicity Keeps the Wheels Turning Round

Grinds Out Orders More Quickly, Too, Lasser Motor Co. Finds—It Makes 'em "Buy It From Lasser"

EFFECTIVE publicity keeps the wheels turning faster, piling up the orders on top of one another on the sales manager's desk. Lest there be any doubt felt as to the truth of this statement an invitation is extended to observe recent happenings in the hustling, manufacturing city of Newark, N. J., where the Lasser Motor Co., Chevrolet dealer, is busily engaged gathering in the orders which its merchandising mill keeps grinding out.

Before actually investigating the doings of the Lasser organization, let it be said now that here is a company which believes in letting the public in general know it is alive. Further, it believes in heralding this fact through every highway and byway in its territory to the edification of every man, woman and child.



Part of the Chevrolet "Tri-Weekly Driveaways" flaunting its striking slogans

It accomplishes this purpose in various ways. It is a common sight, for example, for residents of the city and the territory lying adjacent to it, to witness triumphal parades made up exclusively of Chevrolets.

The reason for such demonstrations is just this. The company has seen the possibilities of getting some exceedingly effective publicity from its tri-weekly driveaways from the Chevrolet factory at Tarrytown, N. Y.

Consequently, before starting out from the factory, each car is adorned with various pertinent slogans, such as "Another New Chevrolet Sold by Lasser"; "Chevrolet—Another Carload for Lasser"; "Chevrolet Just Arrived for Lasser"; "Who'll Get This Chevrolet from Lasser?" Interested spectators along the entire route look once, look twice, and in some instances are sufficiently impressed to tell the folks at home about it.

When these shipments arrive in Newark, however, they assume even greater importance. They are paraded through the main streets to an accompaniment of horns, thus making their presence known to all vehicular and pedestrian traffic. That part of the public which does not happen to be on the street at the time learns later of what it has missed. Motion pictures are taken of these demonstrations and visitors to the local theatres see the whole event unfold before their eyes, together with additional information on how a Chevrolet can be purchased on the "Thrift Plan."

Another publicity stunt on which the Lasser organization is laying much emphasis is its advertising float, which illustrates the "Blue Ribbon Car Contest." This contest provides four prizes and has been the means of stimulating considerable interest which has been developed into sales.

Coupons are distributed, each numbered and with space provided for the name and address of the individual and the name of the car he owns. On a certain date, which is designated on the coupon, a drawing takes place in the salesroom of the company. First, second and third prize winners are allowed credits of $100, $50 and $50, respectively on the purchase price of a new Chevrolet, any model, and a special prize of $25 in cash is awarded, whether or not the winner purchases a new Chevrolet.

Prize winners in the contest may also take advantage of the "Lasser Thrift Plan," which makes possible the purchase of a new five-passenger touring car for $188.50 as a down payment, and the balance in monthly payments of $39.45 each. These terms include fire and theft insurance, interest, finance, and free driving instructions—an attractive offer.

The float, as shown in the accompanying illustration, reveals the Blue Ribbon Car of 1922, around which are large signs, one of which reads: "Why Walk? Buy This New Superior Chevrolet." Other placards give the details of the contest and the company's thrift plan.

Advantage is taken of the large crowds that gather about the float to distribute advertising literature, including the "Blue Ribbon Car" contest coupon. This float has also been used in parades of civic and fraternal organizations with gratifying results.

Whereas, it is impossible to show by actual figures just what the use of all this publicity has meant to

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the organization in business accomplished, records of the company indicate that it has proved a real stimulus. People have been attracted to the Lasser establishment who otherwise might never know it existed.

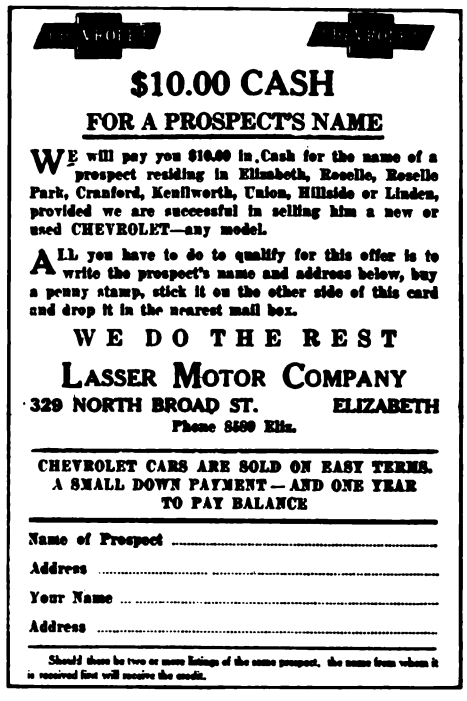
Under ordinary methods of automobile merchandising the dealer must invent some way by which he may get the public into his store, and then trust to arouse his interest. The Lasser method goes further. Instead of wasting time endeavoring to entice the public over his threshold, this dealer mounts a machine on a float and sends it out to spread his sales message. It might well be termed an itinerant salesroom that he thus dispatches throughout his territory.

In addition to the advantages thus offered of bringing a salesroom to the people instead of endeavoring to get the people into the salesroom, this float through distributing the "Blue Ribbon Car" contest coupon has been successful in materially increasing the list of prospects. On the coupon which the recipient must return to the salesroom, it will be recalled, space is provided for the name and address of the individual who thus announces his intention of participating in the competition. He is also requested to furnish the name of the machine he is operating, if any.

These returned coupons which follow in the wake of the float provide, in many instances, valuable additions to the prospect file. Whereas it is obvious that considerable sorting out must be gone through with to eliminate those who are in no position to finance such a purchase, many likely buyers are discovered.

But the Lasser company does not permit its efforts in getting new prospects to end there. This fact was manifested clearly in connection with the opening of its new branch at Elizabeth, N. J., a short time ago.

The territory handled from this branch covers several suburban towns which stretch over many miles.



$10.00 CASH

FOR A PROSPECT'S NAME

WE will pay you $10.00 in Cash for the name of a prospect residing in Elizabeth, Roselle, Roselle Park, Cranford, Kenilworth, Union, Hillside or Linden, provided we are successful in selling him a new or used CHEVROLET—any model.

ALL you have to do to qualify for this offer is to write the prospect's name and address below, buy a penny stamp, stick it on the other side of this card and drop it in the nearest mail box.

WE DO THE REST

LASSER MOTOR COMPANY

329 NORTH BROAD ST. ELIZABETH

Phone 8580 Eliz.

CHEVROLET CARS ARE SOLD ON EASY TERMS. A SMALL DOWN PAYMENT—AND ONE YEAR TO PAY BALANCE

Name of Prospect .....

Address .....

Your Name .....

Address .....

Should there be two or more listings of the same prospect, the name from whom it is received first will receive the credit.

One way to secure likely prospects

Much time could be expended by salesmen in making fruitless calls, the company was quick to realize. Whereupon it got busy to see that those prospects on the salesmen's lists were worth the time involved in reaching them.

Advertising was immediately worked out in the form of a postcard which announced a cash prize of $10 for a prospect's name. "We will pay you $10 in cash for the name of a prospect residing in Elizabeth, Roselle, Roselle Park, Cranford, Kenilworth, Union, Hillside, or Linden," this read "provided we are successful in selling him a new or used Chevrolet—any model.

"All you have to do to qualify for this offer is to write the prospect's name and address below, buy a penny stamp, stick it on the other side of this card and drop it in the nearest mail box. We do the rest."

Summed up briefly, the Lasser organization is pursuing an "Up-and-doing" policy. Not content with waiting for the buyer to come forward and declare himself it is employing every conceivable method for going into the field digging him out from where he lies in hiding and convincing him that he needs a machine.

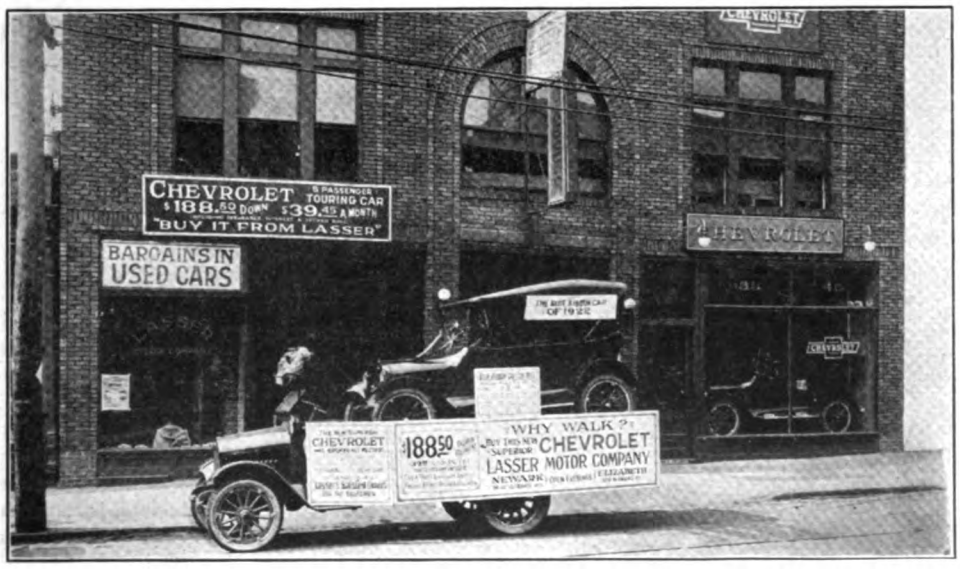
Effective publicity puts red corpuscles into the heart blood of any business. It is an essential factor in any selling organization.

The quicker the automobile dealer realizes this and determines to spread his sales message into every remote corner of his territory the more rapid will be his progress. He may be handling the most attractive proposition on the "row"; he may have the most pretentious salesroom. But unless these facts are brought forcibly to public attention he might as well stretch himself out in one of his latest models and prepare for a long, uninterrupted nap.

To those who still entertain doubts as to the value of good publicity, the following suggestion is made: Get in touch with Sydney Lasser and let him tell you of his experiences. He's had lots of them and promises to have lots more as time goes on.

Then it will be easier to understand why "Buy it from Lasser" has become a slogan of the organization. The reason for it is simple.

They buy from Lasser because they can't help themselves. He makes it his special business to "make 'em buy."



Lasser advertising float all in readiness for an excursion to win new friends

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LATEST OFFERINGS OF THE CAR MAKERS

H. C. S. Series "IV" Better Car All Around

Is Described as Harry Stutz' Finest Creation—Engine and Chassis Embody Many Refinements—Bodies Improved in Details

OFFERED as the finest car Harry C. Stutz has designed and produced, the H. C. S. Motor Car Co., Indianapolis, has placed in the hands of its dealers the new series "IV." The new car embodies numerous refinements and new features in engine, chassis and body. Four body types are included in the new series; touring and roadster, $2,475; sport sedan, a new two-door type, $3,250; and sedan, $3,475. As told in these columns under date of August 19, the new series is priced $75 higher for the open models and $325 for the sedan. The new sport sedan replaces the former coupe.

Series "IV" has greater power and range of performance. Engine bore, for example, has been enlarged from 3⅝ to 3¾, giving from 7 to 10 added horsepower. Gear ratio in rear axle has been lowered. Stutz himself claims his new car will give from 18 to 20 miles to the gallon of fuel, do better than 1,000 miles on a gallon of oil, and exceed 18,000 miles on a set of tires.

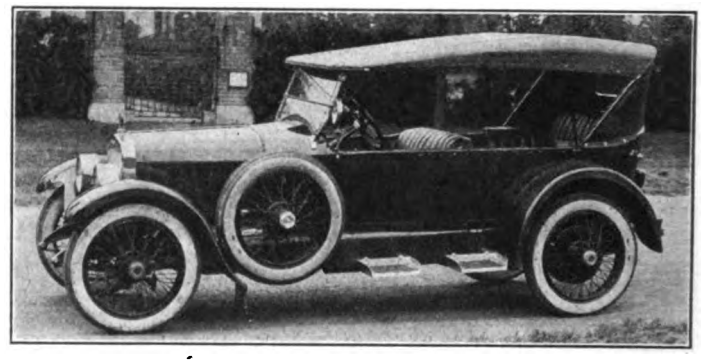
Pistons have been lightened and connecting rods improved. Valve squeaks have been eliminated. Generator has been made more accessible and there is greater accuracy of ignition through an automatic spark advance. New Brown-Lipe clutch and transmission have been adopted. Rear axle is entirely new and stronger, it being a three-quarter floating, spiral-bevel gear type. Torque tube has been strengthened.

Two double rows of annular ball bearings are now used in the rear of main driving pinion instead of one. Braking surfaces have been machined with extra care and precision. Strong pull-back springs are used to prevent brakes sticking. Larger steering gear and wheel have been adopted, making car easier to handle, and there are new spark and throttle controls and an all-wood spider. Muffler is new, too.

By raising the radiator, hood lines have been refined. Front vision from the rear seat has been improved by raising the windshield and front of the top. Radiator shell, large drum-type headlamps, frame of windshield and other metal trim parts are of solid nickel silver. Hood fasteners are more convenient and effective. A rear "stop" light has been coupled with the tail lamp. Anti-rattle collars have been added to foot pedals in the toe board, oil cup covers on rear springs have been improved in appearance and rubber bumpers have been added to rear of the frame.

Latest type of Marshall upholstery springs are used. All seats are wider and backs are higher, with deeper upholstery. Tonneau floor boards have been levelled, adding legroom and comfort. An option is given of black enameled or dual-toned hand-buffed leather in open models and mohair or broadcloth in closed cars. A black-faced 75-mile Waltham speedometer is regularly furnished.

Wire Wheel Corporation's latest type positive-locking wheel has been adopted for this series. Budd-Michelin disc wheels are optional at no extra cost. Painting is optional, too, standard colors being either blue, gray or carmine. Gabriel snubbers are fitted front and rear.



SEVERAL body refinements, as well as chassis improvements, are to be found in the new H. C. S. series "IV," including a higher radiator and hood

Earl's New Closed Car Is Priced at $1,395

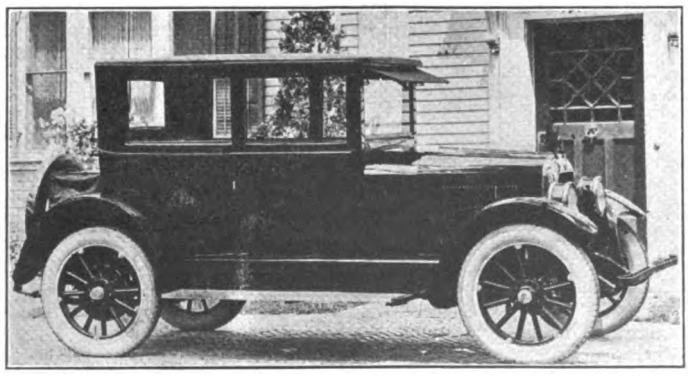
Cabriole Model Is Four-Passenger Type—Resembles Brougham Except for Finish—Upper Part of Body Covered with Black Duratex

EARL dealers are now receiving their first shipments of the four-passenger $1,395 Cabriole which is the bid of Earl Motors, Inc., Jackson, Mich., for low-priced closed-car business. As told in these columns under date of July 22 when this new type was first revealed, the Cabriole is patterned after the four-passenger brougham.

In presenting its new closed car, the Earl company emphasizes that the Cabriole "is of exactly the same high class construction throughout, the body and all, as the brougham," and is not of a less expensive type. The two bodies are practically identical in every respect, except for the finish and windshield.

On the Cabriole, the upper part of the body, including the top, is covered with black Duratex, a weather-proof fabric, whereas the brougham is painted and varnished. Upholstery and interior finish is in gray Spanish leather instead of brocade, as in the higher-priced model. The windshield is straight up and down, in contrast to the slanting type used on the brougham.

The main portion of the body is finished in blue. This forms a pleasing



FOR the first time since its disclosure, photographs of the new Earl Cabriole are available. It will be seen that this $1,395 model is patterned after the more expensive brougham of the line

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contrast with the black upper structure, black enameled fenders and chassis, nickel trimmings, and gray interior trim.

Adequate ventilation is provided, since the plate glass windows in the rear quarters can be lowered, and the door windows regulated by mechanical lifts. The windshield, too, is a one-piece type, hinged at the top, and swings either in or out. An adjustable rain and sun visor is regularly furnished, as are dome light and windshield wiper.

At the rear of the body is a trunk platform fitted with maple slats in natural finish, with protecting nickeled slat irons on the rear body panel. At an additional $50, a trunk, Moto-Meter and front bumper are furnished.

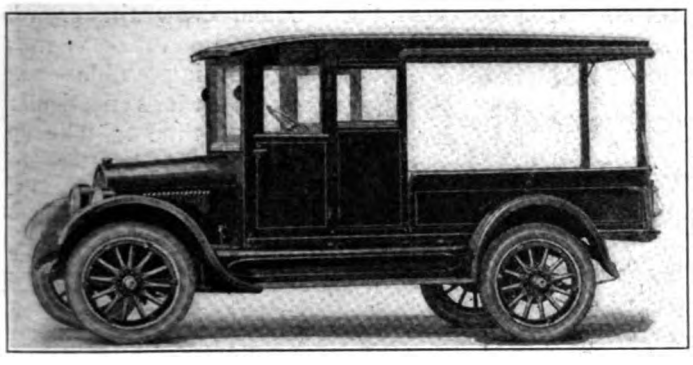
Seating arrangement includes two individual seats and a wide cross-seat. The front seats tilt forward and the backs fold down, affording easy entrance. These seats are 18 inches wide, 18 deep and 12 inches from the floor, with a 3-inch pitch. The rear seat is 45½ inches wide, has an 18-inch deep cushion 14 inches from the floor, with a 4-inch pitch.

Buick Delivery Line Includes Six Bodies

Commercial Types Carry Many Refinements and Lower Prices—All Bodies Furnished with Cab—Insurance Rating Class "A"

SIX body types on the four-cylinder chassis comprise the 1923 line of special delivery cars of the Buick Motor Co., Flint, Mich. These include many mechanical changes as well as entirely new prices.

The commercial line consists of the following types, all of which are furnished at the prices given with driver's cab: open express, $840; panel, $860; canopy top with rolled curtains, $855; canopy top with side screens, $875; de luxe panel, $960; and combination passenger and express, $935.



SIX commercial types are planned by Buick for 1923 on its four-cylinder chassis. The canopy top with rolled curtains and cab is shown here

Changes have been made in these cars along with those recently disclosed on the four-cylinder passenger models. This means, for one thing, that the commercial types have also been placed in class "A" fire insurance ratings. This has been accomplished by the installation of a drip bowl under the carbureter, extra clips on gasoline lines and tail lamp wires, and use of flexible steel coverings on three wires leading from generator to switch. Transmission lock equipment, likewise, lowers theft insurance rate.

Appearance has been greatly improved with the addition of crown fenders, drum-type headlights, and higher and redesigned radiator. Rubber bumpers on rear axle, anti-rattle hood catches, silent over-running generator clutch, new glass switch face, transmission speedometer drive, longer gearshift lever, and transmission lock are other improvements.

Felts have been placed around valve stems to carry oil to stems and guides and a new system of generator brushes and brush arms has been adopted to prevent squeaks. Clutch has been further refined and clutch hub changed from malleable iron to drop forged steel. Size of strut and truss rods has been increased and heat-treated steel is now used. Brakes have been improved. Twelve bolts on every wheel hub give a separate bolt for each spoke.

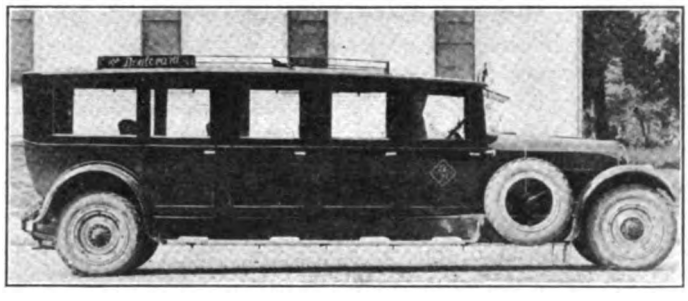
Kissel Coach Limited Is 18-Passenger Bus

Is Really Enlarged Model of Coach Sedan—Has All Fittings and Luxuries of Closed Car—202-Inch Wheelbase Chassis Used

SOME interesting developments in bus transportation are to be found in the de luxe Coach Limited, an 18-passenger capacity job just completed by the Kissel Motor Car Co., Hartford, Wis. To best judge the quality of this bus, it might be considered that it is the Kissel Coach sedan of 124-inch wheelbase and five-passenger capacity lengthened to 202-inch wheelbase and 18-passenger size.

The entire job is built in the Kissel factory. As will be noted in the illustration, entrance is gained through four doors on the right side, each door opening directly into a seat of full sedan width and depth and plenty of leg-room. Seat backs are 24 inches high and are provided with slumber rolls for added comfort. All four doors automatically lock when closed and can be opened only after the driver releases the catches by operating a specially designed lever.

Ventilation is attained by four roof ventilators, two in front and two in rear. There are ten large windows, each of which can be lowered by crank lifts. Lighting is furnished by eight dome lights. For cold weather travel, there are four Perfection heaters distributed throughout the interior to provide uniform temperature. A three-ply veneer top permits one-half ton luggage capacity on roof with luggage guard rails.



KISSEL'S 18-passenger de luxe Coach Limited is really an enlarged Coach sedan with all its refinements and fittings

The chassis follows that of the Kissel passenger car as closely as engineering fundamentals and practices permit. There are several special features, however. The frame is 43 inches wide with 8-inch side rails of ¼-inch gauge and with five cross bars. There is a kick-up for low body design. The Coach limited is only 3 inches higher than the Coach sedan. Springs are semi-elliptic of alloy steel, 38 x 2½ front and 60 x 2½ rear.

The engine is the Kissel six-cylinder 3 5/16 x 5½ type and is said to give the bus a speed of 35 miles an hour. Drive is through two double universal shafts, double-reduction gear and differential to rear wheels. There is one double universal from transmission to self-aligning center bearing, and one double universal from center bearing to rear axle.

Every luxury and comfort of the conventional sedan is furnished. Each door is triple-offset into triple-offset pillar post and equipped with anti-rattlers and bumpers, and hung on four hinges. Spanish leather is used throughout for interior trim.

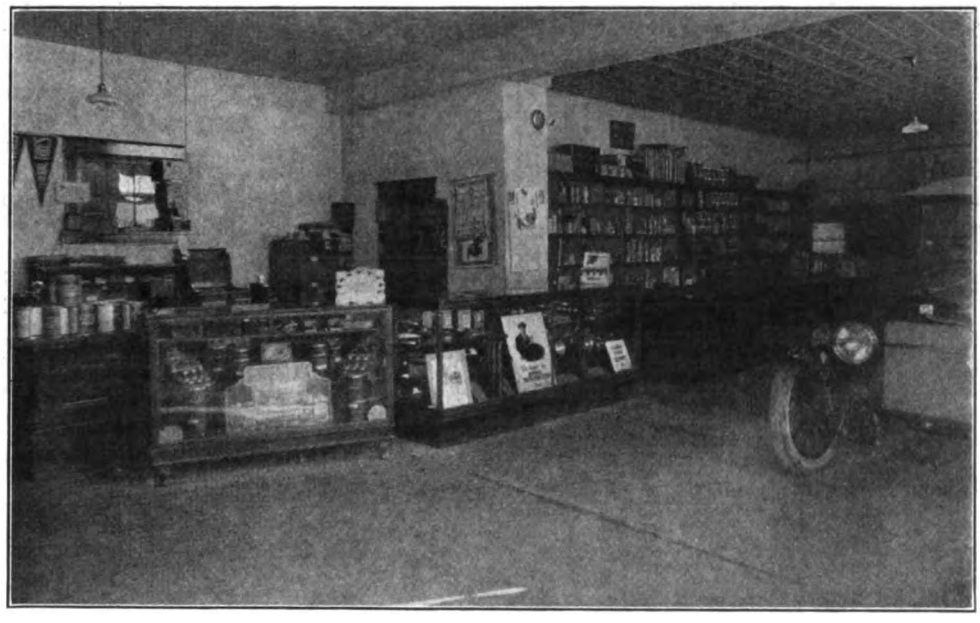
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IDEAS THAT LEAD TO GREATER SALES

Products Properly Displayed—MOVE

SUCCESSFUL dealers and garage men—those who have really made money in the automotive industry—are men who displayed their merchandise properly." Such is the way one man who yearly visits hundreds of accessory stores, sums up his observations.

Whereas his discovery reveals nothing but what must already have been impressed at one time or another upon every accessory merchandiser who has taken the trouble to analyze the "whys" and "wherefores" of his business it is worthy of consideration as coming from a man who with practised eye has regarded retail accessory selling from the sidelines. Moreover, his definition of the successful automotive merchandiser leads to a general discussion of what constitutes effective accessory display.



Practically all the merchandise can be seen by the visitor entering the C. M. Clark Garage, Viroqua, Wis. "My business on equipment and accessories amounts to a considerable sum," states Clark. The picture explains why

Two factors confront the accessory dealer who is aiming to make the most of every inch of show-window and salesroom space for which he is paying rent. First, there is the question of presenting his line to the passer-by in such a manner as to arouse interest to the point where he will be tempted to step in and look around. Second, there is the problem of offering an interior arrangement which will increase the interest thus stimulated.

First essential of effective window display is cleanliness. Evidences of the last rain storm on the glass, for example, represents a handicap at the very start. Not only does the passer-by feel little desire to waste a second look, but in addition he carries away with him a picture of general disorder.

Once convinced that the window must be kept fresh and clean at all times, next comes the problem of what should be placed in it. It is here that mistakes are most frequently encountered.

One merchandiser who has been successful in arranging his products so as to attract attention defines the scientifically handled window display as follows: "It must have just enough in it to assure the passer-by plenty to look at, yet must not in any sense be crowded to the point where it becomes confusing."

Analysis of hundreds of different accessory window displays has led to the conclusion that the temptation is to crowd them. For some unknown reason the dealer becomes possessed with the notion that he must show in his window a bit of everything he happens to have in stock. The passer-by thus becomes bewildered. He sees so much that nothing in particular arouses his interest.

In many instances this trouble may be ascribed to lack of proper arrangement rather than to too great profusion of devices shown. Instead of being grouped with a well defined sense of order the articles have been scattered promiscuously here and there.

Balance in window displays is best achieved by featuring some device as a center exhibit about which the smaller articles may be grouped. Where possible, this device should be shown in actual operation. Here may be repeated for purposes of emphasis, what has become a well recognized fact, namely, that movement never fails to catch the eye and draw the crowd.

Whereas it is impossible at this particular time to take up the matter of lighting, it remains a subject to which the closest kind of study should be given. This is true, both in respect to the window display and the interior of the store.

Interior arrangement should above all else supplement the pleasant impression made by the window display and general exterior appearance of the establishment. As he steps into the salesroom, the visitor should receive the impression of a complete stock, well arranged.

Glass cases and wall shelves form the basis of the well arranged accessory store, with any necessary bins for surplus stock placed well toward the rear. Above all else there must be a sense of order present—a place for everything and everything in its place.

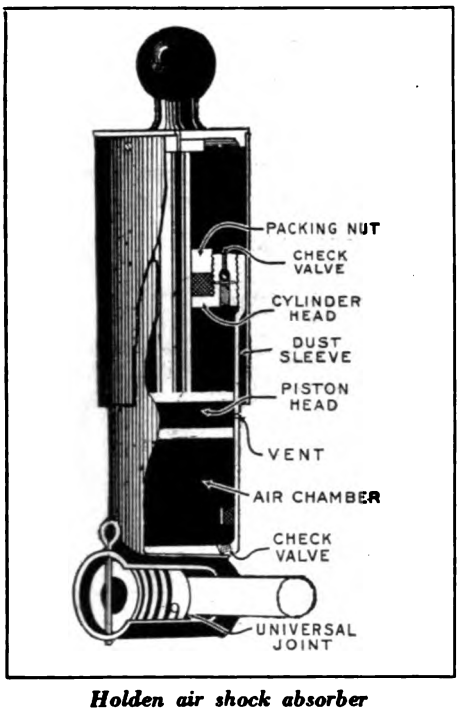
Lest this be carried to an extreme, however, it should be stated that a display of one special device, or even several articles on tables or counters possesses a value which cannot be over emphasized. There is no denying the fact that the visitor likes to take things up in his hands, examine them to his heart's content. His interest thus aroused leads frequently to sales.

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IN THE FIELD OF ACCESSORIES

HOLDEN AIR SHOCK ABSORBER COMPRESSES OWN AIR

A cylinder nine inches long in which a piston operates, constitutes the Holden air shock absorber which is being produced by the Holden Shock Absorber Co., Ltd., 3105 San Pablo avenue, Oakland, California. When this device is installed on the car the brackets hold the



Holden air shock absorber

shock absorber with the piston at the half way point in the cylinder. When the car strikes a bump and the frame is forced downward by the impact, the air is compressed below the piston and cushions the downthrust, thus relieving the strain on the spring. When the frame or body of the car starts back on the rebound, the air is compressed above the piston and thus the rebound is checked.

At the bottom of the cylinder is a check valve which opens and admits air when the piston is on the up stroke. A similar valve located in the cylinder head opens when the piston goes downward. A small hole is located in the cylinder wall about in the middle of the stroke. This relieves the pressure on the piston until the piston has passed the center one way or the other.

Cylinders, cylinder heads, stuffing box nut, piston head, dust cover, bracket and ball are all die cast from a special alloy. The dust cover, bracket, ball and piston head are cast on the piston rod, the latter being made of Cumberland cold rolled steel. The dust sleeve is made of 24 gauge steel. The piston ring is made of leather soaked in a special oil to keep it soft and pliable. The piston ring has two circular springs behind it to force it out against the cylinder walls. The brackets for attaching the absorbers to the car are of the best quality cast steel. Special attention is given by the foundry in casting these hangers and they are designed to give the maximum of strength for their weight. A universal joint at the top and bottom of the absorber allows for all movements of the axle and frame of the car.

These shock absorbers are made in four different diameters, namely, two inch, 2½ inch, 3 inch and 3½ inch. Correct diameter for each particular car has been determined by experiment. The heavier the machine, the larger the cylinder used. The company, at present, is in a position to equip about thirty makes of cars.

Emphasis is laid upon the ease with which installation may be made. Nor is it necessary to mutilate the car in any way. Prices range from $50 to $175 for a set of four.

LUBIN SIGNALS WARN DRIVER AS TO GAS AND STEAM

Signals which may be depended upon to notify the driver when the water begins to reach the danger point from excessive heat, and when the gasoline in the tank falls below the level of one-half gallon are being distributed by the Robert Marcus Co., 1755 Broadway, New York city, and are creating considerable interest as devices filling a real need. The Lubin steam signal warns the driver by emitting a loud whistle. The Lubin gas signal also lets out an unmistakable warning.

The steam signal is attached to the



Lubin steam signal

radiator cap by boring a 13/32 inch hole in the center of the cap. When installed it extends one-half inch above the cap. Price of the device is $2.

In addition to acting as a dependable warning when the gasoline supply reaches the danger point, the Lubin gas signal filters the intake air and keeps the gas free from dust. It is attached easily to any machine having a vacuum system, by boring a 13/32 inch hole in the center of the cap on the gas tank. As in the steam signal, this device when installed, extends one-half inch above the cap. Price complete is $2.

LUBRI-TECTOR AFFORDS ENGINE PROTECTION

Designed to afford absolute protection against burnt-out bearings and scored cylinders the Lubri-Tector which is a



Lubri-Tector

recent product of the Pierce Governor Co., Anderson, Ind., maker of the Pierce Governor, promises to establish itself as a dependable cure for many common engine troubles. It is installed easily on any internal combustion engine with a pressure lubricating system, and contains nothing that will wear out or cause replacement.

The Lubri-Tector is placed as close to the carbureter as possible. The oil line is cut, a tee inserted, and the line from the tee connected to an opening in the top of the device.

Just as long as the engine is running and the lubricating system functioning properly, the oil pressure exerted against the diaphragm of the device will keep the valve in the gasoline line wide open. When the oil supply runs low, however, or the pump fails, the oil pressure ceases and the gasoline valve closes immediately, stopping the engine until the trouble is remedied. Moreover, when the engine is stopped voluntarily by the driver, the valve in the gasoline line closes automatically until the engine is started again, thus preventing gasoline leakage.

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The Lubri-Tector operates under any oil pressure from one to eighty pounds. Diaphragm is of specially treated Australian goat skin and air tight. Price of the device complete for installation is $5.

HAYES PATHFINDER HAS AN INSIDE CONTROL

An outside light with an inside control known as the Hayes Pathfinder has been placed on the market lately by the Hayes Motor Truck Wheel Co., Jackson, Mich. In addition to several interesting points in the construction of this light it recommends itself to the attention of the car owner by reason of the name it bears, which is well known as representing reliability and careful workmanship in the manufacture of wheels for automotive vehicles.

The Hayes Pathfinder is adapted to both open and closed cars. It has an inside control and is designed in such a



Hayes Pathfinder

way as to permit its being adjusted to act as a trouble light in addition to providing an excellent driving spot light.

Reflector is coated with pure silver, resulting in a concentrated white beam of light, and all parts are of nickel on brass. The shell is enameled a dull black.

Any adjustment of light can be made from the driver's seat without lowering the windows of the closed car or without reaching through the curtains of open models. Installation is simple. Price of the light complete for open or closed models is $8.50.

TROJAN SIGNAL DEVICE IS PLAINLY VISIBLE

In offering the Trojan signal device it has been the purpose of the Sweet & Doyle Foundry & Machine Co., Green Island, New York, to combine the tail light, number plate and stop signal in such manner as to have all three on the left rear mudguard. The Trojan device makes it possible for the driver in the rear to see the word "stop" at a distance of 250 feet in the daytime, and easily 100 feet at night, the side lens of the tail light furnishing ample light for illumination.

The blade has white letters 4¼ inches high by 5/8 inch wide, and is controlled electro-mechanically using very little current for its operation. All mechanism is concealed so that neither dirt, rain nor



Trojan signal device

snow can hinder the operation of the blade as has been proven by tests conducted over 15,000 miles in all conditions of weather.

Two switches are furnished with every signal. One, a push button switch operates the blade from the steering wheel; the other, an automatic switch, operates the blade when the car is running between two and thirteen miles per hour.

The push button switch has been especially designed for this signal and presents a neat appearance on the steering wheel, the contact button being of large area so that the slightest pressure of either the forearm, hand, or fingers will operate the "stop" blade.

The automatic switch is operated in connection with the speedometer shaft and requires no attention, it is claimed.

Either switch may be used separately, or both may be installed, the push button switch being used if a quick stop is desired at a speed higher than thirteen miles.

The Trojan signal with two switches, and 12 feet of armored lead wire sells for $15.

STIRLING LOK IS SAFEGUARD TO MOTO-METER

Attractive appearance is combined with efficiency in the Stirling Lok which has been placed on the market by the East



Stirling-Lok

Chicago Manufacturing Co., 4426 Olcott avenue, East Chicago, Ind., as a sure means of preventing moto-meter thefts. It is adaptable to all radiator temperature gauges.

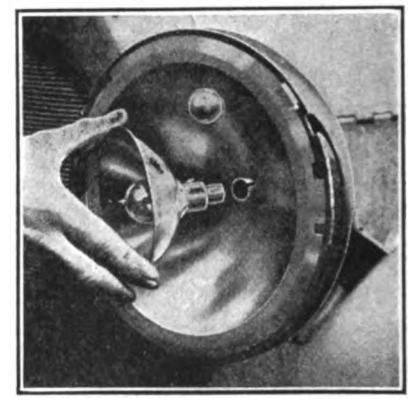
Entire lock is constructed of bronze, heavily nickeled and highly polished. It is designed in the shape of two wings, lending an attractive finish to the radiator. Attachment is but the matter of a few minutes, and once installed on the machine it can be removed only by drilling out the locking screw.

There are two models of the Stirling Lok being produced at present. The large model fits the average car and retails for $5.95. The Junior model which fits Fords, Chevrolets and small machines retails at $4.90.

KAY BEE SUPER HEAD LIGHT IS POWERFUL REFLECTOR

"Kay Bee" Super head lights which are being manufactured by the Kay Bee Manufacturing Co., Los Angeles, Cal., are lighting units which go right inside the head light. These reflectors are scientifically constructed, silver plated and are only 4½ inches in diameter, thus permitting plenty of space for the dimming light to remain in use.

They are installed by removing the lens and globe from the automobile head light.



Kay-Bee Super head light

The reflector and plug is inserted the same way that a new globe would be installed. The lens is then replaced.

Where it is necessary to change the focusing of these reflectors in adapting them to the lens used, the focusing screw is loosened and the reflector moved back and forth until the proper light is procured. The screw is then tightened again. Price of the "Kay Bee" Super head light is $5 a pair.

"Henry" Pump Keeps Ford Engine Cool

Aim of the "Henry" pump which has been placed on the market by the Henry Auto Parts Co., Milwaukee, Wis., is to make impossible even temporary heating of Ford cars and trucks. This pump is designed to start pumping water the instant the engine starts, and maintains circulation just as long as the pump itself is under water. Its oversize bronze bushings and self-lubricating feature insure a long life. It is attractively finished in green enamel and furnished complete with fan belt and screws ready for attachment. Price is $7.50 except in the far West and South where it sells complete for $8.

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WITH THE WHOLESALERS AND RETAILERS

ACTIVITIES OF THE WHOLESALERS

Frank P. Gmelin Co. has been appointed distributer in Detroit and the surrounding territory by the Cole Motor Car Co.

Graves Motor Co., Dodge Brothers distributer for a number of southwestern Kansas counties, has moved its quarters from the Hale building, corner of Chestnut street and Central avenue, to the new Rhinehart building on South Central avenue, Dodge City, Kans.

Jack Barkley has secured the distribution of the Hupmobile for the territory comprising Kay, Osage and Cowley counties, the west half of Chautauqua county and the east half of Sumner county. He intends to establish a salesroom and automobile repair shop in Arkansas City, Kans.

San Antonio Cadillac Co., San Antonio, Tex., Cadillac car agent in southwest Texas, has secured franchise for the distribution of the Durant line of cars in all south and southwest Texas and the northern part of Mexico.

O. J. Watson Motor Co., of Wichita, Kans., Willys-Knight and Overland distributer in Ponca City, Okla., Wellington, Arkansas City, Augusta and El Dorado, has opened a branch office in Topeka, at 1024-26 Kansas avenue. A. E. Root is in charge.

Southern Battery Co., located at Fourth and Center streets, Little Rock, Ark., has secured the local agency for the Presto-O-Lite Storage battery. It will also be distributer of the battery for this city and several counties adjoining Pulaski.

MacCarthy-Archer Automobile Co., distributing agent of the H. C. S. automobile, and electric cars in St. Louis, is making extensive alterations in its premises located at 459 North Euclid avenue, facing Westminster place between McPherson and Washington avenues. Its former quarters at 5143 Delmar blvd. have been purchased by **Harry Newman, Inc.**, formerly at 3147 Locust street, Nash car distributer.

Houston Motor Car Co. will distribute the Cleveland Six in southeast Texas territory with E. T. Barden as president and E. B. Barden as vice-president of the concern.

C. H. Murdock, distributer of Dodge Brothers cars for western Oklahoma, has moved his headquarters from Cordell to Clinton, Okla. Roy McCullough, formerly head mechanic, has been appointed manager of the garage in Cordell.

E. W. Arrasmith, Kansas City, Oakland dealer for six years, has sold his interests to the Oakland Motor Car Co., Pontiac. The factory will manage local Oakland sales through its Kansas City general manager, A. P. Ten Brook, with C. W. Kucker assisting him.

Laser Motor Co., state distributer for the Haynes, Cole and Pierce-Arrow, has moved its offices and salesrooms from West Markham street to 917 Main street.

Tenison & Bair, distributer of Oldsmobile and Marmon automobiles and Republic trucks, has opened three new agencies in the Texas territory at Brownsville, Fort Worth and Cisco.

Hanson-Nash Motor Co. has been organized by Charles E. Hanson to handle Nash sales in south Florida.

Phil. Miler has purchased the tire and accessory business of Hay Brothers, Kewanee, Ill. He will conduct the business as both wholesale and retail.

Moon Co. of Georgia has been formed to distribute Moon cars in Georgia, with Larry Grant as president.

Zell Motor Car Co. has been organized in Baltimore to distribute Packard cars in the greater part of Maryland. It succeeds the Packard Motor Car Co. which has acted as distributer in that territory since 1905. George Miller, head of the old company, is retiring from business. A. Stanley Zell has been made president of the new company.

Kirkmyer Motor Co., Ford agents, at Richmond, Va., will establish another branch. For this purpose it has rented new quarters with 60,000 square feet of floor space, employed four new salesmen and five shopmen.

Platte Co., Minneapolis, Minn., has secured the agency for the Stephens car in the Northwest. B. A. Platte is president of the new company which plans to take over the building on Tenth street.

IN THE TRADE

EASTERN STATES

MASSACHUSETTS—HOLYOKE.—A service station has been opened by the Franklin Holyoke Corp., under the management of H. L. Carroll.

SHELBURNE FALLS.—Charles H. Hellyar has purchased from Gilbert T. Parks the latter's interest in the Trail garage.

SPRINGFIELD.—Fred Darnstaedt has taken over the sale of parts and service business for the Willys-Knight and Overland. He will locate in the Forest Park

(*Continued on page 148, first column*)

CHANGES IN RETAIL PERSONNEL

James C. Fritzen has been elected vice-president and city sales manager of the Tri-City Nash Company, which is distributer for Neenah-Menasha and Appleton counties.

Albert E. Becker, president of the A. E. Becker Company and formerly an officer of the Milwaukee Tire Dealers Assn., died recently after a protracted illness.

A. L. Wilcox, who has been in the sales department of the Cadillac Motor Co., Topeka, Kans., for the last ten years, has recently become associated with the Wood Motors Co. In his new connection, he will again have charge of Cadillac sales.

A. Donohue, Jr., has been employed by W. H. Van Doran, proprietor of the White Cloud garage, White Cloud, Kans., to handle his repair business.

R. T. Cowgill, formerly identified with the Franklin Motor Co., has been placed in charge of the newly organized Clevenger Motor Co., Hupmobile dealer at Topeka, Kans.

F. P. Nusslock has been made general sales manager of the Nelson-Mitchell Co., Milwaukee, Wis., distributer of the Mitchell in that territory.

O. M. Mouse, formerly with Mouse Brothers, has become associated with the Worthington & Weatherbee Service Station as superintendent of service. He will continue to serve Studebaker owners as he has been doing during the past eight months.

W. A. Montgomery, formerly of the Montgomery Motor Co., has become sales manager for the Hutchinson Motor Co., Hutchinson, Kans.

L. L. Parish has taken charge of the Central garage, located at 400 Sixth street S., Minneapolis, Minn. It is Parish's intention to restore the former service system which was abandoned about a year ago.

W. R. Dunn has been placed in charge of retail sales by the McNulty Dafee Co., distributer of the Mitchell automobile at 1526 Hennepin avenue, Minneapolis, Minn.

A. D. Holabird, Maxwell distributer and garage proprietor at Decatur, Ill., has disposed of his interests to D. N. Hansen, who has taken charge of the building on East Wood street.

J. B. Lykke, proprietor of the Jefferson garage at Springfield, Mass., has been appointed distributer for Republic trucks in that territory.

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IN THE TRADE

(Continued from page 147, second column)

garage.—Garinger Motor Co. has been organized to distribute the Auburn. F. D. Garinger, formerly distributer of the Buick, heads the new concern, while his son, C. H. Garinger, is treasurer.

NEW YORK—JAMESTOWN.—Fire totally destroyed the Chautauqua garage together with 105 automobiles. The damage is estimated at about a quarter of a million dollars.

NEW YORK.—A garage under construction at the southeast corner of Whitlock and Bryant avenues, Bronx, 140 x 150, has been leased to Goldberg & Chadkin for a period of twenty-one years, at an aggregate rental of $330,500.—Wheeling & Shropshire have leased the corner store in the building at the junction of Broadway, West End avenue and 106th street as a showroom for the Durant car.

PENNSYLVANIA — PHILADELPHIA.—William Horner, formerly with the Locomobile Co. of America and with the Westinghouse Co., has opened an automobile accessory shop at 2004 Sansom street.

SOUTH

NORTH CAROLINA—RALEIGH.—A loss of approximately $3,000 was caused to the Goodwin-Westcott garage on Sanbury street when the L. N. Davis vulcanizing tire shop was burned.

MIDDLE WEST

OHIO—COLUMBUS.—A large addition to its salesrooms and service station, measuring 70 x 30, has just been completed by the Howe Motor Co., Ford agent.—Lawwell-McLeish Co., Ford distributors, have acquired ground adjoining its present salesrooms and service station on North Fourth street, which will be used to enlarge the present building. The new ground will give the company a frontage of 93 feet on Fourth street and a depth of 187½ feet.

INDIANA—PRINCETON.—Because of the death of A. L. Maxwell, the Wabash Valley Motor Company, one of his properties, has been sold to a partnership composed of John Bass, Marvin Phillips and Lawrence Sullivan. The new firm will operate as the Princeton Hudson and Essex Co.

ILLINOIS—CHICAGO.—Erection of a new automobile salesroom and service station for the North Side Motors Co. at 5719-23 Broadway will be started soon. The structure will have an elaborate frontage two stories high and the remainder will be one story in height. The entire building and land will cost about $125,000.

GALESBURG.—Removal from 199 South Prairie street to larger quarters on 131 North Cherry street, has been completed by the Davis & Culver Motor Co., distributor of the Studebaker in Knox county.

MONMOUTH.—Irey & Allsup have been appointed local territory agents for the Hupmobile.

WISCONSIN — GILLETT. — Fire causing a damage of approximately $10,000 destroyed the Stromer garage.

KROK.—Octave Veraghen has opened a garage and automotive repairing business.

RICHLAND CENTER.—M. McGinley has leased the Dodge garage.

TOMAHAWK.—Frank Burton has leased the Myre garage on South Tomahawk avenue and will operate it under the name of Burton's garage.

IOWA — DAVENPORT. — Roeske Motor Co., located at 420 Harrison street, is to discontinue the distribution of the Maxwell and Chalmers cars and will devote all its sales attention to the Oakland car.

MISSOURI — AURORA. — O. K. Motor Co. has been merged with the Marionville Motor Sales Co. and has secured agency for the Ford. The merger will operate under the firm name of Bredouw-McFall. D. D. Beck of the O. K. Motor Co. is in charge of the repair business.

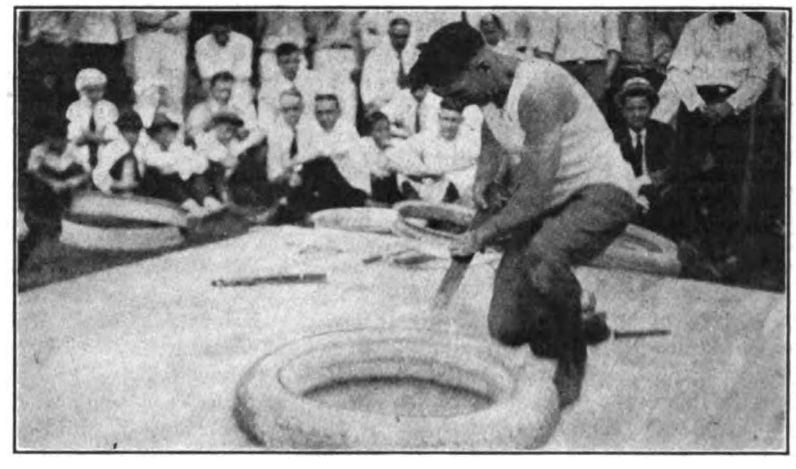
CAPE GIRARDEAU.—Henry Miesner and George B. Gerhardt have purchased the Black garage, located just west of the *Missourian* office on Broadway, from P. Mollenhour. The firm will be known as the Broadway Auto Repair Co.

COLUMBIA.—J. L. and J. M. Allton, who have been operating the Allton garage at 23 South Tenth street, have recently purchased the building and business known as the Old Trails garage, located at 1105 Broadway. The new owners expect to make improvements, especially in the rear of the structure,

Tire Changer Breaks Speed Records



A LOVING cup, awarded by the Automotive Service Assn., and the Automobile Accessories Business Assn., was captured by Charles W. Paine



AN interested audience watched Charles W. Paine demonstrate his claims as the fastest tire changer in America, on the occasion of the first annual outing of the Automotive Service Assn. Paine has frequently beaten in practice some of the records he established

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THE U. S. Tire Dealer finds himself today in an unusually strong position to take competition as it comes.

He always has had the advantage of trading in a *quality product.*

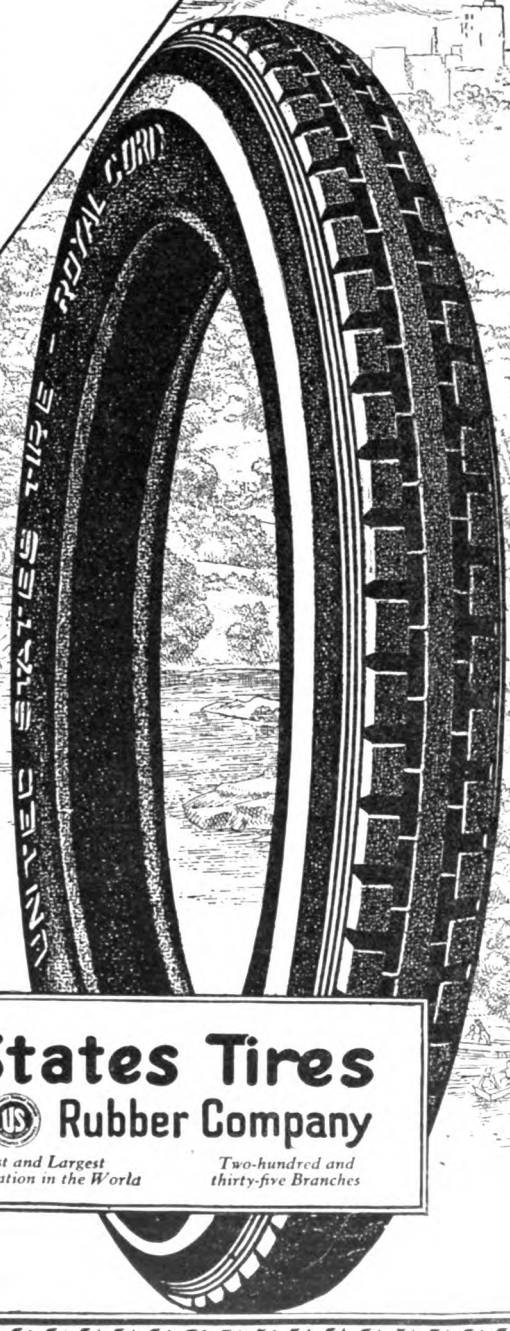
And under the new prices of today he is also equipped to gather in the class of business that looks *first at the price tag* when buying a tire.

The U. S. Sales Relationship brings to the dealer's store the greatest and most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

It is the most sought after Franchise in the whole tire trade.



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two-hundred and thirty-five Branches*

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where a concrete balcony will be installed which will be used as a repair shop.

HARDIN.—Alfred Williams and C. H. Walker have severed their connection with the firm of Sam F. Baker, successor to the Davis Brothers and Child Agency in Richmond, and have taken over the agency for the county for Dodge Brothers cars and trucks.

HIGH HILL.—Irvin Boone and John Smith, proprietors of the East End garage, have purchased the Layer Bros. garage.

QUEEN CITY.—New quarters for the Barclay & Thomas garage have been opened on the south side of the square.

SHELBYVILLE.—C. S. Gatchel & Son have closed their garage and machine shop.

SPRINGFIELD.—A building of brick and stucco, to cost $33,000, has been started at the northeast corner of Park and Boonville avenues for the Ford Sales service station.—Larger quarters have been opened at 810 Boonville avenue by the Stewart Truck Co., formerly located at 419 St. Louis street.

ST. LOUIS.—A new Exchange Car Department has been opened at 3015 Locust street by the Cadillac Automobile Co. of St. Louis.

WINSTON.—Spann & Elder have opened a new garage in the old livery barn building.

KANSAS — ATWOOD. — Chessmore Auto Co. has been purchased by the Cathcart Auto Co.

CANEY.—J. E. McKissick, of Iola, plans to open a tire and vulcanizing shop in the near future.

CHANUTE.—A new battery charging system has been installed by the K. W. Battery Co.

COFFEYVILLE.—As a result of a transaction recently concluded, the A. D. Gise Co., Buick agency on Union street, was transferred to R. W. Arnold, who will continue the business under his own name.

COURTLAND.—R. G. Rexroad's interest in the Morris-Rexroad Motor Co. garage has been purchased by H. K. Morris who will in the future conduct the business under the name of the Morris Motor Co.

DODGE CITY.—Removal from 101 Second avenue to 113 Second avenue has been completed by the Yuncker Auto Repair shop. The City garage and Machine shop is again occupying the entire Hale building.

FREDONIA. — F. P. Barrick has moved his garage to the building formerly occupied by the Fredonia garage and Machine shop, located on North Seventh street at the northeast corner of the square.

GIRARD.—North Side garage has been established as the new home of the Gould Battery station, formerly located in the Coulter building.

HAYS CITY.—A service station has been opened by the Mills Brothers in the room recently occupied by the Runyon Battery Co. J. L. Mills will be in direct charge.

HERINGTON.—Business has been discontinued by the Trail garage.

HERNDON.—A garage will soon be erected for J. R. Kirchner.

HUTCHINSON. — During the first week of September, the new general office and garage building being erected for the Reno-Buick Co. at First avenue and Washington street, will be completed and ready for occupancy.

KIRWIN.—A. R. Cogswell has purchased the garage of R. E. Downing.

MARYSVILLE.—In addition to renewing the Paige contract for the coming year, J. E. Ashbaugh & Sons, proprietors of the Paige garage, have also contracted to sell the Jewett.

PAOLA.—A frame structure on the Robert Sherar lot, south of the Paola Free Library, has been rebuilt and is now occupied by Emmart & Morris as a battery service station.

WAKEENEY.—Perry & Shermerhorn have leased and opened the Jones garage.

BLADEN.—John Jinkinson has purchased the South Side garage.

NEBRASKA — BRADY. — Clarence Coon and Wm. Thanel have purchased the G. L. Travis garage and have assumed the management.

FREMONT.—A Rent-A-Ford company has been opened on Fourth street by A. Kohlmenier.

LINCOLN.—Ben Lampert and F. T. Nelson have purchased the Lincoln Auto Electric Co., at 1514 N street.

MANLEY.—Westley Lane has purchased the automobile supply stock of R. Bergman.

NORTH PLATTE.—Guy Davis has been placed in charge of the service station located at the corner of Loct and Sixth streets, recently purchased by the J. S. Davis Co.

OMAHA.—Harry F. Trumble has been made manager of the new tire store opened at 2018 Franan street which is to be known as the Stephens Associated store.

ORCHARD.—Emil Bach & Sons have opened the Service garage.

PILGER.—Otto Luedeke has recently sold his gasoline and oil business to Kile Martin.

SCOTTSBLUFF.—A reorganization of the Schafer Tire and Battery shop at First avenue has been completed.

STANTON. — Ronald Conkling has purchased the Moritz & Weiboldt garage.

WAHOO.—Eric Samuelson has sold his tire repair shop to Tracie Lungergausen.

YORK.—A repair shop has been opened at 228 East Fifth street by Tom Frederick and Myron Larkin.

SOUTHWEST

ARKANSAS—EVENING SHADE.—Otto Royal and E. Kissinger have purchased the garage building with equipment recently erected by Homer Cathey.

JONESBORO.—G. W. Culberhouse has sold a brick building to Vanden Griffin of the Griffin Motor Sales Co., who will renovate it to be used as a storage battery and tire shop.

LITTLE ROCK.—Harry A. Tschumi succeeds the Little Rock Battery Co., occupying the same location at 112 Main street. G. M. Rudd, president of the old concern, is now managing the S. R. Thomas Auto Co.

PINE BLUFF.—S. R. Hardy has sold his radiator shop to W. A. Hughes and A. B. Cameron.

RUSSELLVILLE.—A dust-proof room is being built in the Ragsdale Auto garage building in which W. V. Jones will operate an automobile painting, upholstery and re-covering shop.

SULPHUR SPRINGS.—A garage has just been completed for the Johnson Motor Co.

OKLAHOMA—ARNETT.—Lupher & Burr have opened the Arnett garage, located in the Moser-McNeely building.

CLINTON.—L. C. Thornbrough will operate an Associated Tire store.

DRUMRIGHT.—Larger quarters with better shop accommodations have been secured and opened by Berry, Stephenson and Co., agents for the Dodge Brothers automobile, in the Richmond building on Fulkerson street. The concern was formerly located at 202 North Ohio street.

FREDERICK.—At the corner of Grand avenue and 12th street the Murrell Service station No. 1 has been opened.

LAHOMA.—A petition in voluntary bankruptcy has been filed by the Lahoma garage and the business is now in the hands of the Farmers State bank.

TEXAS — COMMERCE. — Woosley's Livery Stable is now occupied by the garage of John Heath.

MIDLAND.—W. H. Spaulding has sold his interest in the Western Auto Supply Co. to J. O. Nobles. The firm is now composed of Chas. Kerr, J. O. Nobles and C. S. Karkalitts.

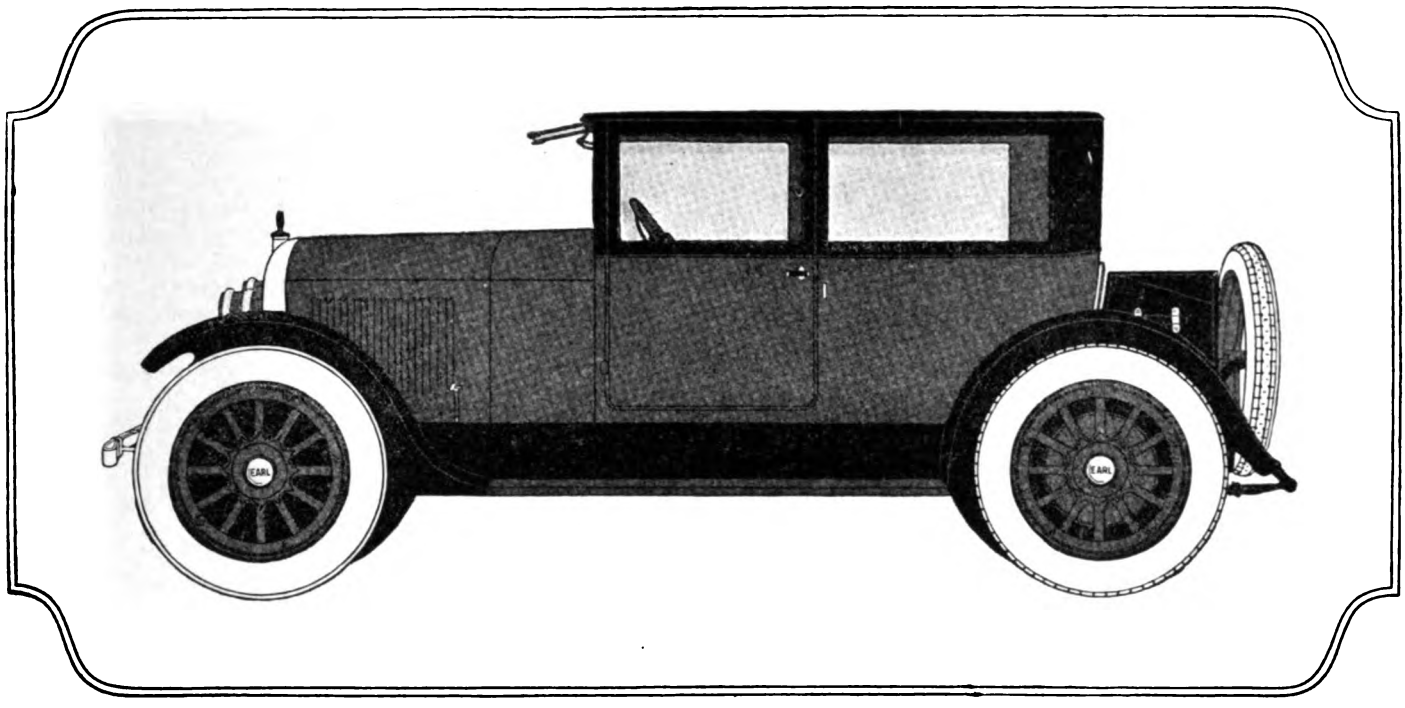
SAN ANTONIO.—Larger quarters at 902 North St. Mary's street have been opened by the Hassler-Texas Co.

WORTHAM.—A fire almost totally destroyed the Wortham garage.

YOAKUM.—A modern brick garage and sales room, to be situated on the corner of Grand avenue and Forrest street, will soon be erected for B. H. Jarmon, sales agent for Dodge Brothers. The new building will have a frontage of 50 feet on Grand avenue and will extend back 140 feet.

NEW MEXICO—TAOS.—Extensive repairs and improvements have been begun on the garage occupied by Lewis and Salas.

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TRUNK, BUMPER, MOTOMETER, SUN VISOR, ETC., INCLUDED IN CABRIOLE'S COMPLETE EQUIPMENT AT STANDARD PRICE, $1395

EARL *Cabriole* Taps huge Farm Market

Performance, appearance, economy, size and full equipment appeal to value-seeking buyers

BROADER and broader grows the demand for the new Earl *Cabriole*—the right-size, *right-price* enclosed car which has created a sensation among prospects and owners of good motor cars wherever it has been shown.

Well-to-do farmers are buying the *Cabriole*, because it combines so many comfort and utility features they desire with the balanced light weight, reserve power, economy and endurance which a motor car must have to make good in fall, winter and spring in the country.

The common-sense character of the rich, gray Spanish leather upholstery, with door panels and top linings to match, appeals also as offering greater resistance to wear, to stains and soiling than any of the ordinary fabrics used in closed cars. Even a fine car on a farm must earn its keep.

Accustomed to close buying, these farm owners appreciate the *Cabriole's* full equipment at the standard price, $1395. Comparison shows them that no other closed car supplies so much equipment usually charged for as extras. Touring trunk, for example, with cover, two suit cases and hat box; bumper; motometer; sun visor; one-piece windshield with wiper, Spartan horn and other essentials to comfort.

If your territory is open, wire or write me for the facts about our dealer contract and the great Earl line.

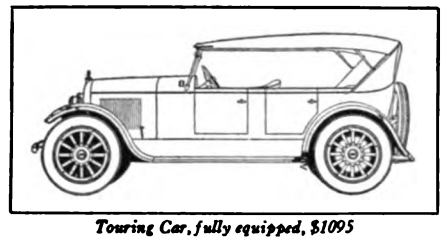
President and General Manager

Touring Car	$1095
Cabriole	1395
Custom Roadster	1485
Brougham	1795
Sedan	1795

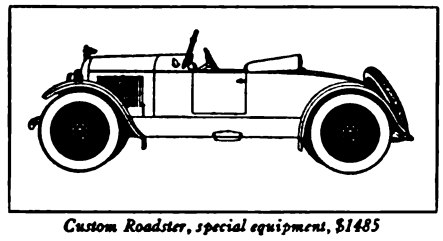
Prices f. o. b. Jackson

EARL MOTORS, INC.

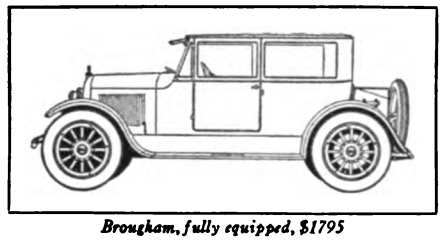
JACKSON MICHIGAN



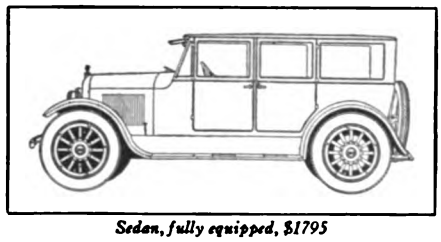
Touring Car, fully equipped, $1095



Custom Roadster, special equipment, $1485



Brougham, fully equipped, $1795



Sedan, fully equipped, $1795

"The right line, at the right price, with the right dealer discount"

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INCORPORATIONS

NEW YORK.—Cameron Motor Car Corp., New York, N. Y. To deal in and manufacture automobiles, motor boats, etc. Capital $5,000,000.—Times Square Auto Supply Co., Inc., New York, N. Y. To deal in automobile accessories, supplies, tires, etc. Capital $200,000. Incorporator: H. L. Fierman.—United States Auto Supply Co., New York, N. Y., has increased its capital from $10,000 to $50,000.

Lee-Dixon Motors, New York, N. Y. Capital $30,000. Incorporators: D. Lavenworth, Henry Albers, Jr., J. Traub.

Cole Motor Co. of New York, New York, N. Y., has increased its capital from $60,000 to $150,000.

Dubin Garage, Bronx, N. Y. Capital $10,000. Incorporators: D. Shapiro, G. and A. Dubin.—E. & R. G. Automotive Corp., Bronx, N. Y. Capital $15,000. Incorporators: E. and R. Gauthier, W. H. D. Pell.

Automotive Exhaust Purifier Co., Brooklyn, N. Y. Capital $100,000. Incorporators: M. Aaronson, M. Horlich, B. J. Lubin.—Classon Pacific Garage, Brooklyn, N. Y. Capital $5,000. Incorporators: J. Fine, C. I. Pearson, N. A. Pearson.

Queensboro Motor Sales and Service, Queens, N. Y. Capital stock $30,000. Incorporators: L. E. Flyn and T. V. Maloney.

Murray Hill Station Garage, Flushing, N. Y. Capital $10,000. Incorporators: J. G. and J. A. and P. G. Morrison.

Hyde Park Motor Co., Hyde Park, N. Y. Capital $5,000. Incorporators: E. Tompkins, B. Hicks, S. Rogers.

Oneonta Buick Co., Oneonta, N. Y. Capital $15,000. Incorporators: M. P. Morgan, A. W. Dreyfus, J. A. Sittz.

C. Schnackels Son, Rochester, N. Y. To deal in automobiles. Capital $50,000. Incorporators: G. Schnackel, L. Schnackel, C. M. Roberts.

Berling Ignition Corp., Tonawanda, N. Y. Capital $100,000. Incorporator: E. J. Jellinek.

NEW JERSEY.—Bender Co., Atlantic City, N. J. To deal in motors. Capital $125,000. Incorporators: John H. Bender, Mae K. Bender, S. Paul Ridgway.—Edward Fell Jardine Co., Atlantic City, N. J. To deal in automobiles, airplanes, ships, etc. Incorporators: Augustus E. and Mary B. F. Jardine and Lee Scott Mills.

Wimple Auto Co., Passaic, N. J. To conduct a general automobile and garage business. Capital $100,000.

DELAWARE.—Van Steenberg Gasoline Process Co., Dover, Del. Capital $1,000,000. Incorporators: B. Van Steenberg, B. X. Dawson, R. L. Merrill.—Western Gasoline Corp., Dover, Del. To engage in an oil and gasoline business. Capital $1,000,000.

Wills St. Claire Delaware Motor Co., Wilmington, Del. To manufacture engines, etc. Capital $100,000.

WEST VIRGINIA.—Camden Motor Sales Co., Clarksburg, W. Va. Capital $10,000. Incorporators: F. C. Devericks, Irene Scott, J. D. Owens, J. L. McVaney, M. R. White.

Curtis Motor Co., Huntington, W. Va. Capital $50,000. Incorporators: J. E. Curtis, E. H. Thornburg, E. M. Curtis, P. L. Thornburg, H. T. Lovett.

Kinkead Auto Accessory Co., Parkersburg, W. Va. Capital stock $5,000. Incorporators: B. N. and Hattie H. and Mary A. Kinkead, E. L. Vinton, Dorus D. Wolfe.

GEORGIA.—Moon Co., of Georgia, Atlanta, Ga. To distribute Moon automobiles.

KENTUCKY.—Strube-Pettit Motor Co., Louisville, Ky. Capital $100,000. Incorporators: Edward B. Strube, John B. Pettit, Riley Ely, Eugene H. Strube.

OHIO.—Reeke-Nash Motors Co., Cleveland, O. Capital $500. Incorporators: A. A. Stearns, C. H. Royan, E. E. Stearns, Harold Zeigler, Elsie Thiele.—Ames Built Sales Co., Cleveland, O. To deal in automobiles and accessories, and to operate a service station. Capital $25,000. Incorporators: S. H. Humphrey, J. P. Reed, J. H. Humphrey, Lois Low, Margaret A. Humphrey.

Edward T. Ash Motor Co., Columbus, O. Capital $10,000. Incorporators: Edward T. Ash, George L. Avery, F. C. Bender, E. Congalton, D. Avery.—Automobile Laundry and Sales Company, Columbus, O. Capital $5,000. Incorporators: Edwin M. Walcutt, K. L. Bayer, John J. Chester, Jr. Frank Spira, W. W. Metcalf.—Russell Motor Car Co., Columbus, O. Capital $500. Incorporators: Mark N. Russell, Ernest E. Eich, C. L. Dierker, Edwin A. Spicer, Jackson A. Taylor.

Oak Hill Rubber Co., Oak Hill, O. To manufacture tires and tubes and other rubber articles. Capital $175,000. Incorporators: W. A. Byrider, G. W. Alden, J. R. Smith, O. M. Roderick, Beulah Hartman.

Toledo Spring Service Co., Toledo, O. To manufacture, repair and deal in springs for automobiles and trucks. Capital $100,000. Incorporators: Henry J. Herman, Earl H. Hunter, Robert Hunter, Scott Stahl, Jeanette MacDougal.

INDIANA.—Yellow Taxi Co., Evansville, Ind., has increased its capital from $10,000 to $60,000.

Highway Service Commission, Indianapolis, Ind. To manufacture and deal in motors, motor parts and accessories. Capital $4,000.

Muncie Nash Motor Co., Muncie, Ind. To deal in motor vehicles and supplies. Capital $8,000.

Thomas D. Lee, South Bend, Ind. To conduct an omnibus and transfer business. Capital $40,000. Incorporators: Edward P. Latowski, J. J. Kovacs, Z. Dekelboum.

ILLINOIS.—Poindexter-McCreery Motor Co., Benton, Ill. To distribute motor cars, trucks and tractors, and carry a line of accessories. Capital $20,000. Incorporators: E. E. Poindexter, Kent Stetlar, J. A. McCreery.

L. & H. Motor Co., Bloomington, Ill. Capital $25,000. Incorporators: Ross C. Hall, James C. Byrne, Benjamin F. Lindheimer.

Reo Motor Bus Line Co., Danville, Ill. To own, equip, maintain and operate a general transfer business. Incorporators: Frank E. Layne, Olive H. Layne, Wilbur R. Hicks.

Oak Park Franklin Motors, Inc., Oak Park, Ill. To deal in and repair automobiles and motor vehicles. Incorporators: Charles Renfer, William F. Schmucker, Earl T. Marquardt.

Reo Motor Bus Co., Rockford, Ill. To convey passengers and goods. Incorporators: O. Ward Orr, John W. Smith, Chorus A. Orr.

Rex Motor Co., Salem, Ill. To deal in motor-propelled vehicles, tractor equipment and machinery. Capital $25,000. Incorporators: H. V. Frankbener, Sam. P. Jones, J. M. Frankbener.

WISCONSIN.—Fox River Motor Car Co., Green Bay, Wis. To deal in automobiles and accessories and to conduct a garage. Capital $100,000. Incorporators: C. Collins, L. D. Joseph, E. M. Stenger.

Milwaukee Automobile Service Co., Milwaukee, Wis., has changed its name to Velie Sales Corp.—South Side Buick Co., Milwaukee, Wis. To deal in automobiles. Capital $20,000. Incorporators: J. A. Piszczek, F. J. Piszczek, R. S. Wasielweski, M. J. Czerwinski.

Tri City Nash Co., Neenah, Wis., has increased its capital to $25,000.

MISSOURI.—Duncan-Buchli Motor Co., Kansas City, Mo. Capital $10,000.—National Lead Battery Co., Kansas City, Mo. Capital $150,000.—Stivers Motor Co., Piedmont, Mo. Capital $20,000.

KANSAS.—Auto Safety Control Manufacturing Co., Wichita, Kan. To manufacture an automobile safety device. Capital $150,000.

NEBRASKA.—Wm. F. Habig Co., Omaha, Neb. To deal in automobile tops and accessories. Capital $25,000. Incorporators: William Habig, Lon. D. Weaver, Marion W. Fritz.

TEXAS.—Cunningham Motor Co., Inc., Dallas, Tex., has changed its name to Trotti Motor Co.—Southwest Motor Co., Dallas, Tex., has changed its name to Neece Automobile Co., Inc., and has increased its capital stock from $30,000 to $55,000.

Auto Parts Co., El Paso, Tex. Capital $50,000. Incorporators: L. J. Trotti, T. B. Cunningham, E. D. Moore.

Fort Worth Gasoline Co., Fort Worth, Tex. Capital stock $10,000. Incorporators: J. L. McCown, P. F. Miles, C. L. Clarke.

Texas Motor Specialty Co., Wichita Falls, Tex. Capital $25,000.

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General Motors Trucks

The advantages accruing to the possessor of a GMC dealership are not to be secured easily in any other contract.

No other motor truck dealer can command the distinctive sales story which can be told about these trucks because of their exclusive improvements—features which have produced more efficient and more economical motor truck operation than has heretofore been known.

Certainly no dealer can hope for a sounder, more substantial backing from the manufacturer than is guaranteed to the GMC selling organization by this exclusive truck building unit of the General Motors Corporation.

Such merit in the product itself and such solidity in the manufacturer are requisite to building a lasting and profitable retail motor truck business.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 ***2 Ton $2375*** ***3½ Ton $3600*** ***5 Ton $3950***
Chassis Only—At the Factory—Tax to be Added

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CALENDAR

Toronto, Ont., Aug. 26-Sept. 1.—National Automobile Show, to be held in connection with the Canadian National Exhibition.

Bay City, Mich., Aug. 28-31.—Northeastern Michigan Fair.

Milwaukee, Wis., Aug. 28-Sept. 2.—Passenger Cars, Trucks, Buses, Trailers, and Accessories Show, auspices of the Milwaukee Dealers' Assn., Fair Grounds; B. J. Ruddle, manager.

Columbus, Ohio, Aug. 28-Sept. 2.—Automobile Show, to be held in connection with the Ohio State Fair.

Detroit, Mich., Aug. 29.—Convention, National Safety Congress.

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Toledo, Ohio, September.—Annual Convention of the Ohio Automotive Trades Assn.

Minneapolis, Minn., Sept. 2-9.—Minnesota State Fair.

Sacramento, Cal., Sept. 2-10.—Automobile Show, auspices of the Motor Car Dealers' Assn., State Exposition Grounds; Royal Miller, manager.

Colorado Springs, Colo., September 4.—Annual Automobile Races, auspices of Pikes Peak Auto Highway, F. C. Matthews, traffic manager.

Hartford, Conn., Sept. 4-9.—Automobile Show, Connecticut Fair Grounds.

Indianapolis, Ind., Sept. 4-9.—Automobile and Accessory Show, to be held in connection with the Indiana State Fair, auspices of the Indianapolis Automobile Trade Assn., Auto Show Building; J. B. Orman, manager.

Spokane, Wash., Sept. 4-9.—Annual Automobile Show, to be held in connection with the Spokane Interstate Fair; B. J. Garnet, manager.

Wilmington, Del., Sept. 4-9.—Automobile Show, to be held in connection with the Delaware State Fair.

Findlay, Ohio, Sept. 5-8.—Automobile Exhibit, to be held in connection with the County Fair, auspices of the Hancock Automotive Trade Assn., Fair Grounds; Earl D. Rummell, secretary.

Charlotte, N. C., Sept. 6-8.—Industrial Tractor Show, auspices of the Ford Motor Co.

New York, N. Y., Sept. 7.—First Fall Meeting, Automotive Service Assn. of New York.

Rio de Janeiro, Brazil, Sept. 7-Nov. 15.—Automobile Show during International Exposition.

Modesto, Cal., Sept. 9-16.—Automobile and County Industrial Show, auspices of the Stanislaus County Auto Tradesmen's Assn.

Louisville, Ky., Sept. 11-15.—Used Car Show, to be held in connection with the Kentucky State Fair, auspices of the Louisville Auto Dealers' Assn.; George T. Holmes, manager.

Syracuse, N. Y., Sept. 11-16.—New York State Fair.

Red Bluff, Cal., Sept. 11-17.—Automobile Show, to be held in connection with the Second Annual Tehama County Fair, auspices of the Tehama County Fair Assn., Fair Grounds; George Wahl, manager.

Buffalo, N. Y., Sept. 13-15.—Annual Credit Meeting of the Motor and Accessory Manufacturers' Assn., Lafayette Hotel.

Chicago, Ill., Sept. 14-15.—National Used Car Conference of Trade Association Secretaries, auspices of the National Association of Automobile Show and Association Managers.

Sioux City, Iowa, Sept. 15-19.—Automobile Exhibit, to be held in connection with the Interstate Fair, auspices of the Motor Trades Bureau, Interstate Fair Grounds; Milton E. Duggan, manager.

The Hague, Netherlands, Sept. 15-20.—Annual Automobile Show.

Rome, Italy, Sept. 18-23.—Second Annual Meeting of the International Chamber of Commerce.

Cleveland, O., Sept. 18-28.—Exhibition of Closed Cars during the Merchants and Manufacturers Exposition, auspices of the Cleveland Automobile Manufacturers' & Dealers' Assn.; Henry Buckman, manager.

New York, N. Y., Sept. 23-30.—Closed Car Show, auspices of Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of German Automobile Manufacturers' Assn., Kaiserdamm Hall.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Ventura, Cal., Oct. 4-8.—Automobile Show, to be held in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

London, England, Nov. 3-11.—Olympia Automobile Show.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Boston, Mass., March 10-17.—Passenger Car, Truck, and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

HOUSE ORGAN KEYNOTES

Many believe that every man has just one opportunity to achieve success and that if he does not grasp it when thus offered, "Dame Fortune" will never pass his way or again smile upon him. Never was there a belief farther from the truth. Every man has thousands of opportunities. He may fail to see them, or circumstances may be such that he cannot take advantage of them as they come, but opportunity will come again and yet again.

Ideas must be put to work to be worth anything.—*Sales Speeder.*

It ain't a senseless hoardin'
Nor stinting of our need,
But efficiency in spendin'
That shall become our creed.

It ain't some money set aside
On impulse once awhile,
But steady savin' day by day
That builds the solid pile.

—*Cadillac Cheer.*

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PUBLISHER'S OBSERVATIONS

GO SLOW

. . . In the bituminous coal fields are vastly more mines than are requisite to the Country's needs, and there are 200,000 more mine workers than are needed to produce in continuous employment the Country's normal requirements. By continuous employment I mean approximately 280 working days in the year. In many instances last year men were employed less than 150 days, in some cases much fewer than that. In the over-manned sections men divide the working time, and high wages are necessary to meet the cost of the barest living. Interrupted transportation, sorely broken employment, the failure to develop storage against enlarged demands and inadequate carrying—all these present problems bearing on righteous wage adjustment, and demand constructive solution. . .

—President Harding's Message to Congress.

AWARE that he commands the entire newspaper circulation of the United States, the Publisher who became President superposes an executive message upon a conscientiously written editorial that deals with an important but limited phase of current history. President Harding writes, however, with his reading glasses on.

Had the President permitted himself a wider latitude it might have been wiser. The more general analysis indubitably would have shown that the underlying cause of strife in the coal fields is the very same that has destroyed the vitality of many another industry.

¶ Not one, but many industries are burdened with vastly more capacity than can be consistently employed. Industrial America has outrun the Country, just as the United States, politically, has outstripped the World. It is a truth infrequently perceived and absolutely unassimilated that over-capacity is the root of national disaster.

From the downfall of Rome to the recent German debacle, history reveals one great misfortune after another arising out of excessive urbanization and excessive industrialism. In the individual, success begets laziness and greed, and in the social or industrial group, as with countries and peoples, the principle holds good.

There is peril in prosperity and the over development of industries invariably fosters all manner of economic diseases.

¶ The world is becoming better civilized, and so its demands are increasing. Over-capacity or overproduction this year, might be inadequate if measured against the demand that may be experienced five years hence.

Seasonal requirements may require spurts of activity. The "business cycle"—the swinging of the pendulum back and forth above the point of business equilibrium—expresses a periodicity in excesses and shortages. But these are confusing issues, which, in time, with more practiced intelligence and more self control may be largely counteracted.

The great problem of the day, the major task that faces this Country, is the adjustment of industries to market. Had Herbert Hoover written President Harding's message he would have expressed this sentiment.

¶ As to coal, a bitter labor dispute is pressing for attention. But with fewer mines being worked and fewer miners engaged in the industry, the present complex would be entirely lacking.

A succession of presidents has pounded at the doors of the Capitol demanding laws for the protection of the foreign born—say rather for jurisdiction over them. But what has lured the alien here? Liberty, equality and freedom? Asylum from righteous and unrighteous enemies?

Yes. And also higher wages. Without the over expansion of industries the unwashed would be more welcome than they are today.

Congress wastes its time wrangling fruitlessly over tariffs. But why do the "interests" crave protection? Why should the very birthplace of modern enterprise demand to be saved from the fruits of its own initiative?

¶ Let it not be thought that the coal industry stands alone. Save in degree, but not in kind, its situation is no whit different from that of many other industries. The rubber industry is well aware of its malady; automobile men feel it coming on. And Congress, as a physician, has often proved a miserable quack.

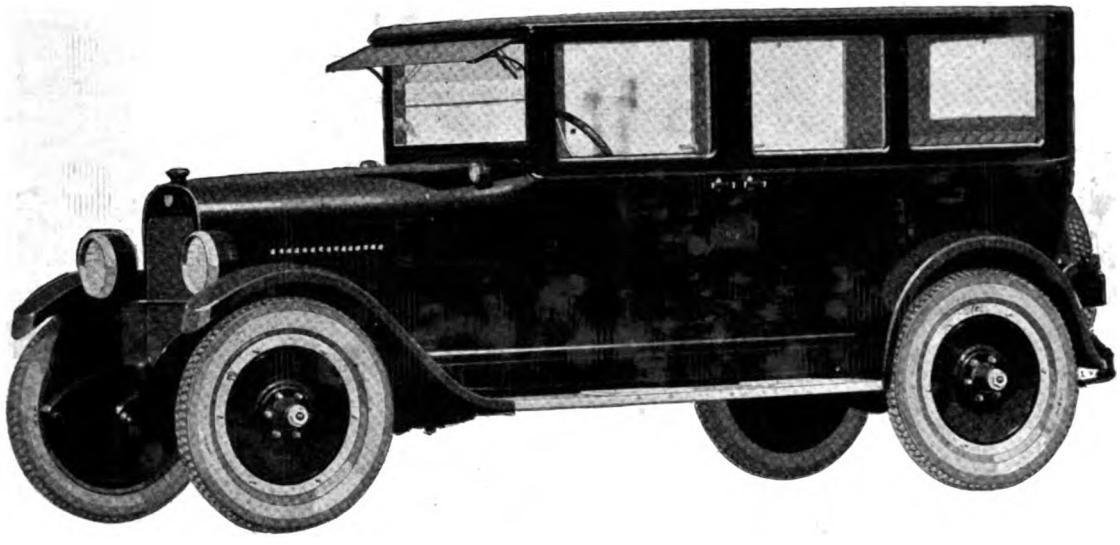
How could it be otherwise? Does not the remedy rest upon removal of the cause? Should not industries govern themselves, just as individuals do, and prosper in proportion to their degree of self mastery? Surely if they do not, then they must suffer the penalties of excess.

¶ Without a rational control of production, diamonds would be worth scarcely more than glass; the measure of their value utterly destroyed. Wisely controlled production affords an abundance of aluminum at prices commensurate with the utility of the metal. Controlled production built up the oil business and laid the foundation for a plenty of gasoline.

Monopoly is not only profitable; it must be broadly beneficial in order to survive. And if monopoly must be altogether extinguished then some other autocracy must govern in its stead. Otherwise industrial anarchy may lead through political distress to some very dire end.

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Close comparison causes the remarkable value of the good Maxwell to stand out unmistakably. It is generally agreed now that only high ideals expressed in fine manufacturing, can produce a car of such beauty, stamina, and economy, at such a price.

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$995

Touring Car at factory

New Prices *on the* New Oakland

New prices—*unusually low*—with unchanged high quality construction throughout the car, makes the Oakland dealer franchise uncommonly attractive.

The permanence of Oakland as a division of General Motors Corporation—the splendid reputation the New Oakland Six is establishing in the hands of many thousands of owners—its special, written, 15,000 mile performance guarantee and the attractive new selling agreement of the factory—all these things are making immediate profits and building sound businesses for Oakland dealers in all sections.

There are still a few desirable territories open—write the factory.

Oakland Motor Car Company, Pontiac, Mich.
Division of General Motors Corporation

New Prices at Factory

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Touring Car	*995*	*4-Pass. Coupe*	*1445*
Sport Car	*1165*	*Sedan*	*1545*

The New **Oakland** **Six**

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	COUPE Price	Seats	*Added Closed-Car Equipment	SEDAN Price	Seats	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Cen.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem. Wheels	$ 580	2	Starter-Dem. Wheels	$ 645	5	3¾x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	Starter—Dem. Rims	645	5	3½x4¼	Con	L	H	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5								760	4	3¾x4	Own	L	H	T		Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "490"	525	5		510	2		840	4	C.	860	5	3½x4	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "490"
Overland	550	5		550	2		850	2		895	5	3¾x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980	2	C, K, N, P	1,440	5	3¾x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	B, D, P	1,395	5	3¾x4¾	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3		1,395	5	3½x5¼	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,265	3	B	1,385	5	3½x5	Lyc	L	H	T		Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell "P"	885	5	C, K	885	2	C, K	1,385	4	C, D, K, T	1,485	5	3½x4½	Own	L	H	T		Eag	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell "P"
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	C, P, V	1,365	5	3¾x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D, H	895	2	C, D, H	1,095	2	C, D, H	1,345	5	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,385	3		1,545	5	3¾x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5		985	2		1,400	3		1,450	5	3½x5	Gry	H	H	T		Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Dixie Flyer	995	5	D, G, O	1,095	4	D, E, G, O	1,395	3	D, G, N, O, V	1,395	5	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, V, Z	1,795	4	C, E, H, N, T, V, X, Y	1,795	5	3¾x5¼	Own	L	H	T		Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3	C, D, H, N, O, P, T, U, b			3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5					1,195	2		1,895	5	3¾x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Halladay	1,095	5		1,095	2		1,990	3		2,085	5	3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5		1,225	4	C, D, M, P, Z	1,595	4	P, V	1,745	5	3½x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,635	4	C, O, N, P, V	1,785	5	3¼x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	4		1,795	4		1,795	5	3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,375	5	B	1,350	2		1,875	4		2,095	5	3½x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
R & V Knight	1,665	5					2,385	4	A, B, G, O	2,475	5	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	G, I	2,175	4		2,650	4	A, H, I, N, V	2,785	5	3¾x5½	Own	H	C	P		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q				2,750	4	3½x5½	Own	H	C	T			Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4		3,450	5	3¾x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	2,900	3	C, 2J, L, O, U, V	3,475	5	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4	B, D, H, J, L, O, U			4¾x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
Handley-Knight	2,650	7	D, G, J, K				3,450	4	D, G, J, K, O	3,450	7	4½x4½	Own	S	C	T		Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800			4,000		3½x5⅛	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z	3,985	2	A, D, G, J, L, Z				4,650	4	4½x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	B, G, 2I, L	5,250	7	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				G	7,000	5	4x5½	Own	S	C	P		Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	B, D, C, G	1,550	5	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	H, J, K, V	1,395	5	3½x4¼	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S		31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5		995	3		1,445	4		1,465	5	3½x5	Own	L	H	T		Str	A-K	Rmy	Det	War	Tim	S	4.43	32x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C, D, K, P, W	1,445	4	N, O, V	1,545	5	2½x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	W-M	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4		1,585	5	3¾x4½	Own	H	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3		1,825	5	3½x4¼	Fal	H	H	T		Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1,145	2	C, K, P	1,595	4	C, D, K, P, T	2,295	5	3½x4½	Own	L	C	P		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P									3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	3	B, C, D, P	1,935	5	B, C, D, G, P, T, V	1,985	5	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4		1,995	5	3½x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Velie "34"	1,235	5	P, Z	1,235	2	P, Z				2,085	5	3½x4¼	Fal	H	H	T		Str	A-K	Wes	B&B	Dur	Col	S	4.6	32x3½	112	Velie "34"
Nash Six	1,240	5	R	1,395	4	R						3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G	1,250	2	B, C, D, G	1,875	4	B, D, G, S	2,050	5	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P, Z	1,275	2		2,185	4	S, U, V	2,185	5	3½x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3½x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	K, J							1,795	5	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	COUPE Price	Seats	*Added Closed-Car Equipment	SEDAN Price	Seats	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)									SIX-CYLINDER PASSENGER CARS—Continued																			(SEE FOOTNOTES)
Elgin "K-1"	$1,295	5	C, D	$1,345	4	C, D, H, K, Z	$1,695	4	C, H, N	$1,695	5	3 1/8x4 1/4	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Liberty	1,295	5		1,495	5	C, D, G, H, K, O, T, Z	2,085	4	C, T, V	2,245	5	3 1/8x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.66	32x4	117	Liberty
Moon "6-40"	1,295	5								1,695	5	3 1/8x4 1/4	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3 1/4x4 1/2	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				B, G, N	2,095	7	3 1/4x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	C D E H I N O P T V a b	1,945	5	3 1/8x4 1/2	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4		2,190	7	3 1/4x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4 1/2	127	Nash Six
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	C, D, H, N, O, P	1,995	5	3 1/4x4 1/2	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Maibohm	1,395	5		1,495	4		2,165			2,165	5	3 1/8x4 1/2	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Maibohm
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	B, C, D, P, G, T, V	2,195	7	3 3/8x4 1/2	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4 1/2	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	A, B, C, D	2,245	5	3 1/4x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	O	1,895	4		2,275	4	O	2,345	5	3 1/4x4 1/2	Con	L	H	P		Ray	Rmy	Rmy	B&B	G-L	Sal	S	5.0	32x4	121	Auburn
Columbia	1,475	5		1,475	4		2,295	4		2,350	5	3 1/4x4 1/2	Con	L	H	P	T	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia
Jackson	1,485	5	G, K	1,685	4		2,985	4		2,985	5	3 1/4x4 1/2	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4 1/2	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	2,355	4	B, G	2,435	5	3 1/8x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4		1,985	5	3 1/8x4 3/4	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Mitchell	1,490	5	A	1,790	5	A C D F H I K T V W	2,050	4	A, G, N, U	2,275	5	3 1/8x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	A, C, G, H, M, O, P	1,995	5	3 3/8x4 1/2	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	B, D, H	2,375	7	3 1/8x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, O	1,545	2	D, G, H, O	2,095	3	D, G, H, O, U, V	2,395	5	3 1/8x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4 1/2	121	Haynes "55"
Pilot "6-45"	1,500	5		1,500	4							3 1/8x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4		2,595	5	3 1/4x4 1/2	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4 1/2	120	Paterson
Velie "48"	1,585	5	H, Z	1,800	4		2,485	4	V	2,485	6	3 1/4x4 1/4	Con	L	H	P		Str	A-K	Bjr	B&B	Dur	Tim	S	4.67	32x4	115	Velie "48"
Davis "61"	1,595	5		1,695	4		2,095	4		2,195	5	3 3/8x4 1/2	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3		2,395	5	3 1/8x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	G, H, P	2,585	5	3 3/8x4 1/2	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	A	2,550	7	3 1/4x4 1/2	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4 1/2	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2					2,645	5	3 1/4x4 1/2	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	C, G, P, V	2,400	5	3 1/4x4 1/2	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.0	32x4 1/2	123 1/2	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	B, C, D, G, O, S	2,475	7	3 7/8x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4 1/2	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, W, Z	2,750	4	B,C,G,H,N,T,U,V,Z	2,790	5	3 3/8x4 1/2	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A									3 1/8x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4 1/2	127	Mitchell
Westcott "A-44"	1,690	5	H, O, P, Z	1,890	5	E H 2I 2J M O P T X Z			E 2I 2J M N O P T U V X	2,890	5	3 3/8x4 1/2	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	4.66	32x4	120	Westcott "A-44"
Elgin "700"	1,695	5	B, C, D, H									3 1/4x4 1/4	Own	H	H	T		Str	Rmy	Wes	Rck	Mec	Col	T	4.25	32x4	118	Elgin "700"
Hudson	1,695	7	B	1,645	4					2,295	7	3 1/2x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4 1/2	126	Hudson
Lexington "23"	1,695	5		2,045	5		2,345	4		2,545	5	3 1/4x4 1/2	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4 1/2	123	Lexington "23"
Stanwood	1,765	5		1,765	2		2,750	3				3 1/4x4 1/2	Con	L	H	P		Str	A-K	Wes	B&B	G-L	S-P	S	4.5	33x4	118	Stanwood
Moon "6-48"	1,785	5	B	1,785	2		2,785	4		2,785	5	3 1/4x4 1/2	Con	L	H	P		Ray	Del	Del	B&B	B-L	Tim	S	4.66	32x4	122	Moon "6-48"
Moon "6-58"	1,785	7										3 3/8x4 1/2	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	....	32x4 1/2	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	A, D, H, N, P, V, b	2,690	5	3 3/8x4 1/2	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	4.66	32x4 1/2	122	Case "X"
Jordan	1,795	5	B, D, G, Z	1,895	2	B, D, G, M, Z	2,785	5	B, D, G, Z	2,785	5	3 3/8x4 3/4	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	C, G, H, V, Z	2,500	5	3 3/8x4 1/2	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
American	1,850	5	P	1,995	4	L, P			P	2,695	7	3 1/4x5	H-S	L	H	P		Str	A-K	G&D	B&B	WrG	Sal	S	4.5	32x4	127	American
Kissel (Standard)	1,885	5										3 3/8x5 1/2	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4 1/2	124	Kissel (Standard)
Franklin	1,950	5	A, G	1,900	2		2,750	3		2,850	5	3 1/4x4	Own	H	H	A		Own	A-K	N-E	B&B	Own	Own	E	4.33	32x4	115	Franklin
Comet "C-53"	1,985	5								2,985	5	3 1/8x5 1/4	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4 1/2	125	Comet "C-53"
Westcott "D-48"	1,990	7	D, H, O, P	2,190	7	D F H 2I 2J M O P T X						3 1/8x5 1/4	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4 1/2	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, O	2,100	4	C, D, E, G, O	2,950	4	C, D, E, G, O, N	3,000	5	3 1/4x5	H-S	L	H	P	T	Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4 1/2	126	Pilot "6-50"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	A, B, C, D, G, O	3,155	7	3 3/8x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4 1/2	131	Paige "6-66"
Case "W"	2,250	7	A D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	A D, H, N, O, P V, b	3,250	7	3 3/8x5 1/4	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4 1/2	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4		3,250	5	3 1/8x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4		3,825	7	3 1/2x5 1/4	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4 1/2	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	F, G, H, 2J, L, O, X	3,075	6	3 3/8x5 1/2	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4 1/2	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, O, X, Y	2,395	2	C, D, H, J, L, O, T, W	3,095	5	A D G H O U V X Y	3,395	7	3 1/2x5 1/2	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4 1/2	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	A, G, H, O, U	3,105	5	3 1/2x4 1/2	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4 1/2	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	C G, O, M	3,275	5	3 3/8x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4 1/2	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,600	7	A, B, C, E, G, H, P	3,300	4	A,B,C,E,G,H,N,P,V	3,600	6	3 1/8x4 1/4	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4 1/2	126	Holmes
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	A, G, H, J, L, U, Y, Z	4,250	5	3 1/8x5 1/4	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4 1/2	128	Roamer "9-N"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	COUPE Price	Seats	*Added Closed-Car Equipment	SEDAN Price	Seats	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)																												(SEE FOOTNOTES)
SIX-CYLINDER PASSENGER CARS—Continued																												
Packard Single-Six	$2,685	7	C, G, O M							$3,525	7	3⅜x5	Own	L	C	P	T	Own	Det	A-K	Own	Own	Own	S	4.66	33x4½	12.	Packard Single-Six
Stearns-Knight	2,700	5		$2,700	4		$3,350	4		3,700	7	3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight
Ferris "70"	2,795	6	A C F G H J K O P T X	2,895	2	A C F G H J K O P T X			A C F G H J K O P T X	3,795	4	3⅜x5¼	Con	L	C	P		Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5		2,975	2					4,500	5	3⅜x5¼	Con	L	C	P		Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S	3,435	4	A, B, G, H, P, R, X, Y	3,985	4	A, B, G, P, R, U, V	4,385	7	3¾x5½	Own	H	H	P		Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4					5,500	5	3½x5½	Con	L	H	P		Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, G	3,100	4	A, B, G	4,300	4	A, B, G	5,100	7	3⅜x5½	Own	H	H	P	T	Joh	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	A, B, G, N, P	4,550	7	3¾x5¼	Own	L	C	P		Ray	Del	Del	War	War	Tim	S	4.91	35x5	132	Winton "40"
Ogren	3,750	5		3,750	4		4,500	4		4,800	5	3⅜x5¼	Con	L	C	P		Ray	Bos	B-L	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4		4,800	7	3¾x5¼	Own	S	C	P		Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H J M O T W Z				4,900	3	A C D G H J M O T W Z	4,900	5	3⅜x5	Own	H	H	A		Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	A, G, H	5,750	7	4x5	Own	H	H	P		Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			A, G, H, O	6,500	5	3⅜x5¼	Con	L	C	P		Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	A B C E G M N O P S U V	7,000	6	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5								6,825		3¾x5¼	Own	H	S	P		Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A, B, C, D, G, J, M, O, Z	6,300	4	A, B, C, D, G, J, M, O, Z	7,500	4	A, B, C, D, G, J, M, O, Z	7,500	7	4½x6	Own	T	H	P		Ray	Spl	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4					8,900	7	4⅞x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X			A, B, D, E, G, 2I, P, Q, U	11,000	7	4½x5½	Own	T	H	P		B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z									4½x4¾	Own	L	H	P		Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
EIGHT-CYLINDER PASSENGER CARS																												
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	D, N, O, P, V	2,145	5	2⅞x4½	Own	L	H	P		Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			G, N, O, P	2,635	7	2⅞x4¾	Own	L	H	P		B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	A, B, D, G, H, N, Y, Z	2,550	5	3x5	Own	L	C	T		B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	B C G J K O P T U V	3,475	7	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Cole	2,485	5	A, B, G, N	2,485	4		3,185	4	A, B, G, N	3,685	5	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Standard	2,500	7	A, D, G	2,500	4	A, D, G	2,750	4	A, D, G	3,200	7	3¼x5	Own	L	H	P		Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Apperson	2,645	7	A, G	2,620	4		3,625	4	A, G	3,695	7	3¼x5	Own	L	H	T		Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Peerless	2,790	7	A, B, C, E	2,790	4		3,500	4	A, B, C, E	3,650	5	3¼x5	Own	L	H	P		B&B	A-K	A-L	Own	Own	Own	P	4.9	34x4½	125	Peerless
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	A, B, C, D, G, P, T, V	4,100	5	3½x5⅛	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	35x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	A, B, C, G, O, T, U, a	4,900	7	3⅜x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	A B C D G H O T U V	5,500	7	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2		5,250			6,000		3½x5½	Own	L	H	P		Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O X Z	5,800	4	A B E G H I J M O X Z	7,150	4	A E G H J M U V X Z	7,650	6	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5		6,500	4		7,800	4		7,800	7	2⅞x5	Own	H	V	P		Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
TWELVE-CYLINDER PASSENGER CARS																												
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	C, G	5,400	7	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—stop signal.

ENGINE: **Ans**—Ansted; **Con**—Continental; **Due**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **Rok**—Rockford; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

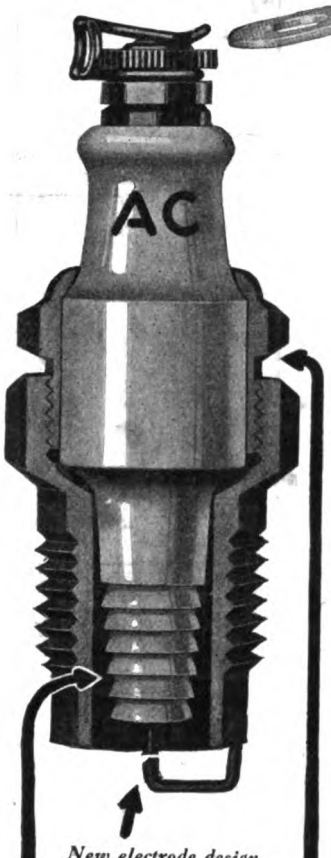
REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

Digitized by Google



Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost



New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain. Saw tooth edges attain sufficient heat to burn oil deposits, thus offering effective resistance to carbon

78 LT



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

SAELT



Long SAE
Durant 4
Oakland
Olds
Saxon

78 DT



Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

78 LBT



Long Body 7/8
Chandler
Willys-Knight

Millions of Car Owners Must Have These AC Plugs!

The fact that most builders of fine cars use AC's for factory equipment year after year is an outstanding proof of AC quality and means that there are millions of car owners who know that AC's are the proper plugs to use. This alone creates a tremendous market.

This quality has built up AC's great list of original-equipment cars and preserved this business for AC throughout the years. The public has learned the quality of AC's through using AC's and through AC's strong advertising.

For these reasons AC Plugs are more easily sold to all car owners, whether their cars were originally AC-equipped or not.

So, you will instantly see, it is to any dealer's best interest to handle AC Plugs exclusively. Then he does not have money tied up in other plugs.

AC 1075

The Best Spark Plug Ever Made for Fords

The famous AC 1075 is AC's answer to the need for a better plug for Ford engines—cars, trucks, and tractors.

The demand for this plug is enormous. Every Ford owner who comes into your store is a prospect for a set of AC 1075's. All you have to do is show this plug to the average Ford owner. Experience has taught him the faults of all ordinary plugs and he can see at a glance that the AC 1075 is designed and built to correct these things.

Think of it—this plug gives you first place in the biggest automotive market! And when you build up an AC trade among Ford owners of your community you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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The Standard Spark Plug of the World

18 MT



Reg. Metric

Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½

Overland 4

SAENT



Extra Long SAE

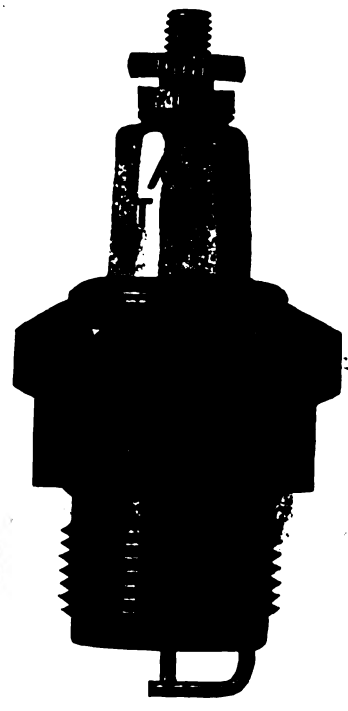
Elgin
McFarlan
Nash

SAET



SAE

Apperson
Durant 6
Mitchell
Marmon
Standard 8



—And There Are AC Plugs For All Other Cars, Too

Of course, the plugs shown here give only a small idea of the many cars that are factory equipped with AC's. But they give you some thought of the great, ready-made market that already exists for the dealer who goes after the AC business of his neighborhood.

And don't forget—there are specially designed AC's for any engine. If you have the complete AC line you can easily meet the spark plug needs of every customer. You need waste no time in "introductions" or long-winded explanations. ALL YOU HAVE TO DO IS SAY "AC."

Here, then, is a second great market for the dealer who sells AC's, for the opportunity to put complete sets of AC's in cars that were not originally AC-equipped offers an opportunity that should not be passed by. SELL ONLY AC's!

Reg. ⅞ T

Cadillac	LaFayette
Chalmers	Liberty
Cleveland	Maxwell
Cole	National
Daniels	Paige
Davis	Westcott
Dort	Winton
Hupp	

and 170 other makers of cars, trucks and tractors

Here, Then, Is the Way to Make Real Money Out of Spark Plugs

More than likely there are many car owners in your vicinity who do not know that hard starting, spluttering, back-firing and other motor troubles usually come from a set of worn-out, or incorrectly designed plugs.

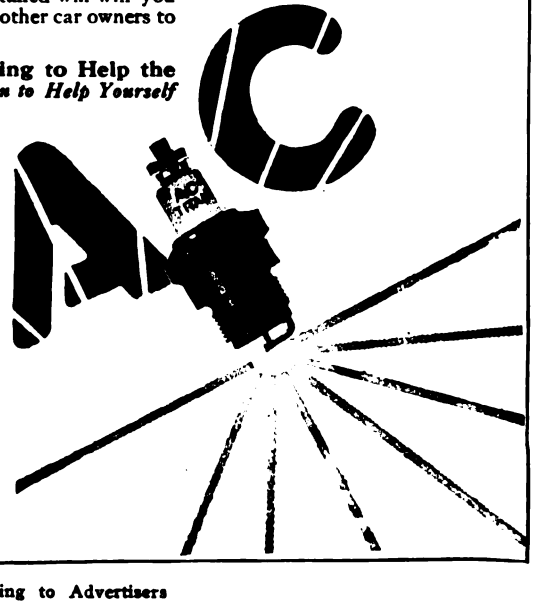
You can easily become the spark plug expert of your community and make real money out of plugs if you will devote more attention to this end of your business.

Sell new AC's to car owners who want to restore their engines' power. Sell new AC's when you find old, worn-out, or incorrectly designed plugs, or plugs of the wrong type. In no time you'll find that you are making real, worth-while profits out of your sales of plugs.

Talk AC's to all customers. Inspect their spark plugs. They appreciate this kind of service and the improved performance that invariably follows when new AC's are installed will win you their thanks. They will send other car owners to you for spark plug advice.

We Are Doing Everything to Help the Dealer—*Now It's Up to You to Help Yourself*

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum—the AC line gives you this opportunity to reduce your plug stock to one line—the best line, the most profitable line. *Sell only AC's!*



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915. U. S. Pat. No. 1,216,139. Feb. 13, 1917. Other Patents Pending

By the Set

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Do not let it be said of you at some future time that you had the chance to acquire a Stutz dealer franchise and did not avail yourself of the opportunity.

Digitized by Google



The Franchise With a Future

As a result of recent developments, the Stutz now occupies an even more commanding position in the motor car industry than it did before.

But what has happened is only an indication of what the future holds in store.

Stutz—with its unlimited financial and industrial resources—has taken advantage of every scientific method of meeting present conditions with a product that is unquestionably the most remarkable value ever offered by the company.

The recent big reduction in prices—with full protection to the dealers on all new and unused cars on hand at the time—is just one of many steps taken to make the Stutz product the most attractive value in its class and the Stutz franchise the outstanding selling privilege in the field.

Dealers with vision who acquire the Stutz franchise now will reap the benefits of their foresight in the augmented possibilities for profit which the near future will bring.

Only rarely does such an opportunity as this present itself in the motor car business. There is no time like the present to take advantage of it. Write or wire for particulars.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

Digitized by Google

MIDWEST

Performance—*and* Price

A NEW schedule of prices on all sizes of Midwest Engines became effective (August 10th).

This new—lowered—schedule is the result of careful analysis of production costs based upon volume production—of a quality product.

On a product of admittedly exceptional *performance* ability—proved in truck—tractor—motor bus—and taxicab service—you will find us *now* able to *out-sell* most any *worth-while* engine commercially available.

Two sizes (of four-cylinder) also ready for passenger car installation containing *all the* distinctively Midwest features.

Complete data promptly sent upon request.

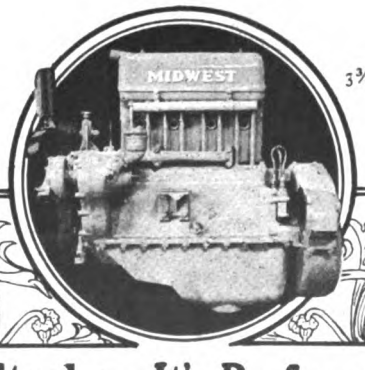
Address Dept. 22.

Very truly yours,

MIDWEST ENGINE CORPORATION
Indianapolis, U. S. A.

Lon R. Smith

LON R. SMITH, *Vice-President*
Directing Sales and Advertising



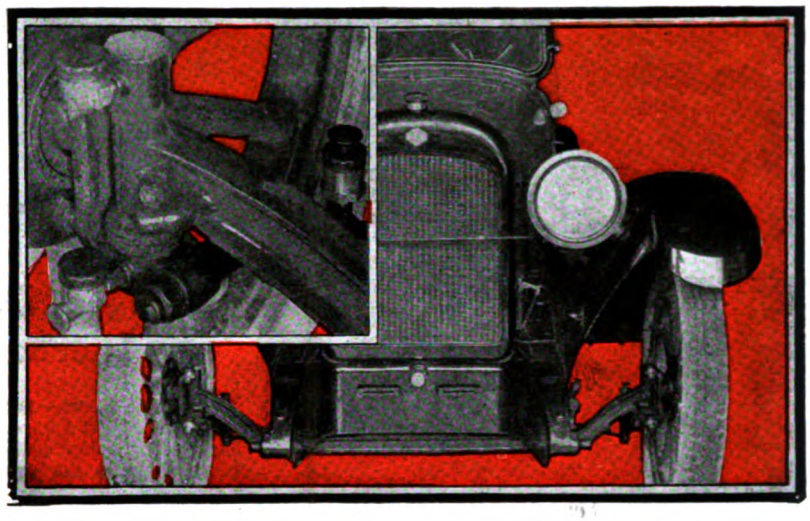
Sizes
3⅜ x 4½ 3⅜ x 5 4⅛ x 5¼
4½ x 6 4¾ x 6

Forget Bore and Stroke - It's Performance that Counts

Digitized by Google

HOW NASH RECOGNIZES THE WOMAN DRIVER.

Steering made unusually easy by new standard equipment on the SIX



New, improved aluminum Oil-Kipps are now standard equipment on the steering knuckles and tie rods of the Nash Six. Over 1200 pounds of pressure can be developed in the Oil-Kipps by merely pumping them with the palm of the hand; almost unlimited pressure is available for clogged bearings.

Backing out of garages, driving in traffic, and taking a trick at the wheel on tours have changed women's buying attitude toward automobiles.

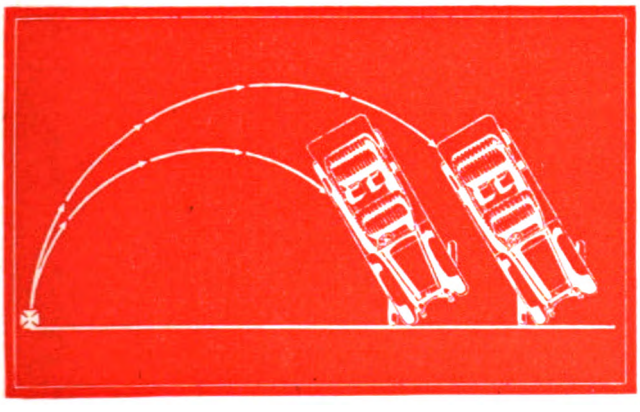
Pleasing her eye is no longer enough. Her hands and arms have to be taken into consideration too.

The steering gear is one mechanical feature in which she will have a lively interest when the family's next car is bought.

Why Nash Chose Oil-Kipps

Hard steering is practically always due to poor lubrication of knuckles and tie rods.

The Nash organization long ago decided that oil was the only thing that could succeed where grease had always failed.



Relative turning radii of a car before and after equipping with Oil-Kipps. With Oil-Kipps on the steering gear, the car turns so much more easily that it can be brought about in a much smaller radius.

To them the problem soon narrowed down to this: What is the right device for lubricating tie rods and steering knuckles with oil?

With the usual Nash thoroughness they investigated, experimented, tested and retested.

After eighteen months they were all agreed that there was one clearly satisfactory solution for their problem.

That solution is the Oil-Kipp—now standard equipment on the steering gear of the Nash Six.

What Oil-Kipps Are

Each Oil-Kipp consists of a complete pumping unit contained in a die-cast aluminum cup carrying several months' supply of heavy oil. No gun or auxiliary pressure booster is necessary.

They are operated by merely pumping the spring plungers or pistons.

Their success in forcing heavy oil all around tight fitting bearings is due to a simple hydraulic principle.

The outstroke of the plunger creates a vacuum in the barrel, so that oil is sucked into it from the cup.

The instroke of the plunger puts this oil under pressure, because the plunger is so small in diameter that each pound of pressure exerted on the handle means a great many pounds in the pump.

What Nash Dealers are doing with Oil-Kipps

With them, tie rods and steering knuckles can be lubricated in one minute, even by a woman.

Because of the size of the new Oil-Kipps, they carry enough oil for several months. They can be easily refilled with an oil can containing heavy oil.

Nash dealers who have seen the new equipment are so pleased with its appeal to women drivers that many are ordering Oil-Kipps to be put on older cars.

A set of Oil-Kipps can be installed on the steering gear in twenty minutes.

A number of Nash distributors are already carrying stocks of them and orders from others are coming in.

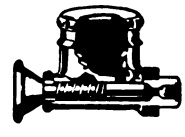
Where distributors have not yet received their stock, we can arrange direct shipments. When writing please give name of your distributor.

MADISON-KIPP CORP., MADISON, WISCONSIN

Nolan Smith & Co., Sydney, Australia. Wm. Coulthard & Co., Ltd., Carlisle, England



Oil-Kipps



MAKE STEERING EASY

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U-LOY STEELS

Giving a Car Real Value by Increasing Its Life

The engine hums,—gears mesh,—and away speeds the Wills Sainte Claire. Abounding with power,—easy riding,—dependable. "As swift and unerring in its flight as the gray goose."

The Wills Sainte Claire Motor is responsible for the car's remarkable power and smooth, silent operation. However, it is the Mo-lyb-den-um steel, developed by Mr. C. H. Wills, that makes for real value. It gives the car durability.

Light in weight, yet great in strength, it enables parts to withstand continuous vibration and hard wear without crystallization. We are naturally proud to state that U-LOY Mo-lyb-den-um steel is used for the manufacture of this splendid car.

U-LOY Steels are enabling many manufacturers to put out products of unusual merit. They might easily improve *your* product.

UNITED ALLOY STEEL CORPORATION
CANTON, OHIO

New York	Chicago	Portland
Syracuse	Detroit	San Francisco
Cleveland	Buffalo	Indianapolis

Open Hearth and Electric Furnace U-LOY Steels are furnished in:—

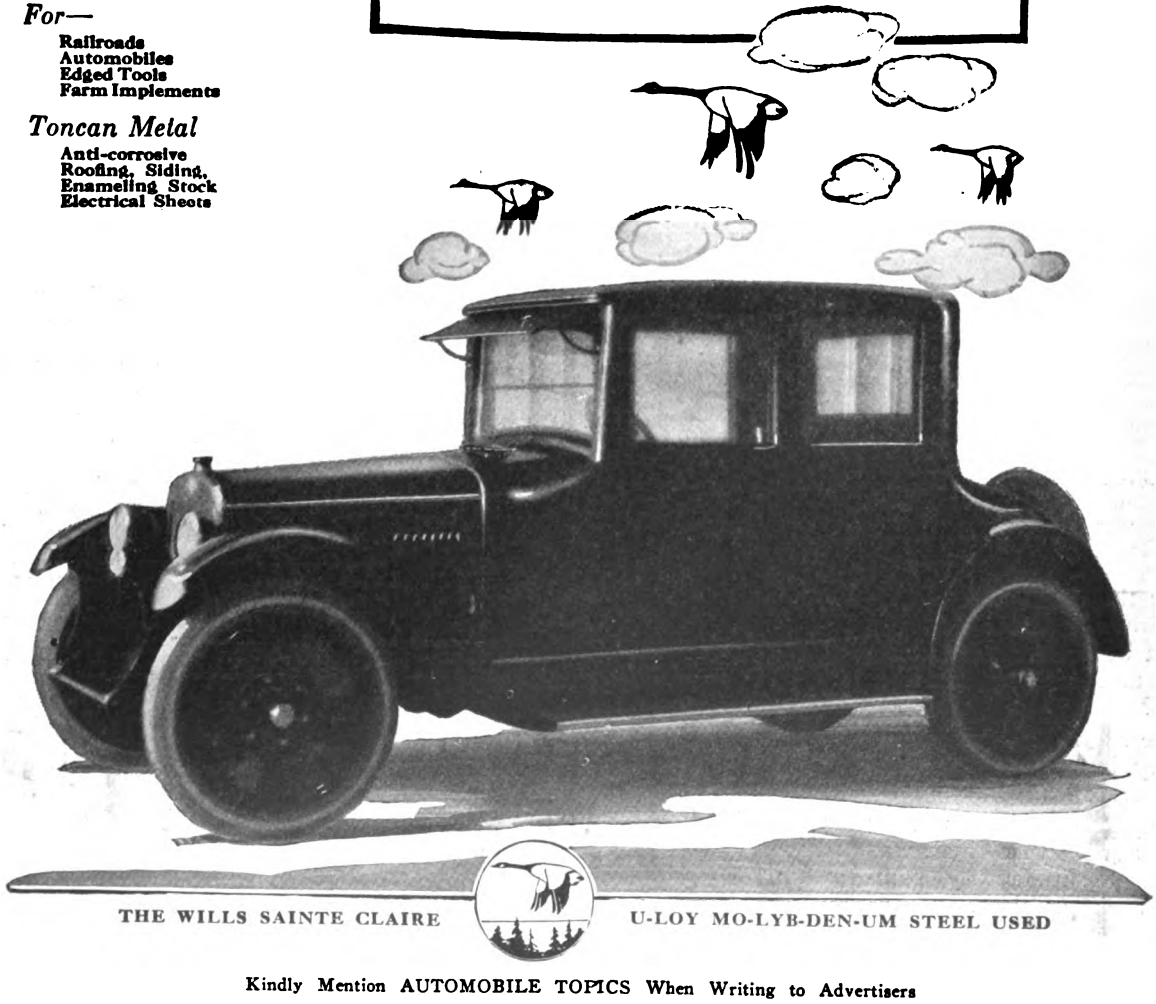
Blooms, Slabs, Billets, Plates, Bars, Rods. Bars Hot Rolled, Cold Drawn and Heat Treated to specifications

For—

Railroads
Automobiles
Edged Tools
Farm Implements

Toncan Metal

Anti-corrosive Roofing, Siding, Enameling Stock Electrical Sheets



THE WILLS SAINTE CLAIRE U-LOY MO-LYB-DEN-UM STEEL USED

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PREST-O-PLATES are establishing new ideals of a battery, and new standards of battery service for car owners.

The reason is clear. The life of a battery is in the plates. Prest-O-Plates last to a fine old age. A matchless combination of hardness, and porosity, they possess heat-resisting sturdiness in hottest summer,—and ready reserve power in freezing winter. Therefore Prest-O-Plates make Prest-O-Lite the long distance best all-around, all-weather battery.

To Dealers: We have a *better* battery proposition—more profit for you—more and better satisfied customers. Write us.

To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

Write us for open territory.

THE PREST-O-LITE COMPANY, INC.

Carbide and Carbon Building, 30 East 42nd Street, New York

Eighth and Brannan Streets, San Francisco, California **In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto**



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Newspaper Advertisement Appearing in 44 Principal American Cities

No Cut in Stephens Price *or* Quality

PRICE reductions have been the main feature of the advertising and selling efforts of several automobile companies in the last ten days. Naturally we have received many inquiries from owners, dealers and prospective buyers as to our policy on Stephens prices.

Our policy is fixed. Stephens prices will not be cut until motor cars of Stephens quality can be manufactured, through lower labor and material costs, for less money.

Our profit is fair—one that any honest manufacturer is entitled to and must have.

Every man and woman who has learned by experience that price is not the chief consideration in the purchase of any article of value—or a safe way ever to measure value—will understand and approve this position.

Stephens motor cars are *manufactured* in limited numbers by a hand-picked organization of engineers, mechanics and expert body builders. Every precision method and factory economy which can be used in the production of a high-grade motor car is employed.

None but the best materials are used. They are forged, machined, fitted and tested with a care and fine craftsmanship unknown today except on a few high-grade motor cars.

Of the units not manufactured by Stephens—Timken axles, Fedders radiators, Gemmer steering gears and controls, full alloy springs—each is of a type and quality found in no other car in the Stephens price group.

With all the current price cuts, therefore, the Stephens stands out — by comparison, by performance, by the experience of 20,000 owners—as the surpassing dollar value today among motor cars. We know this. We are ready to prove it by test or in competition with any other motor car in our price class.

If you are more interested in saving one or two hundred dollars than in securing lasting, dependable, luxurious transportation; high resale value; constant satisfaction and the assurance that the organization behind your motor car will continue in business—you should buy "cut price," not a Stephens.

Yet it has always been a Stephens policy that car prices shall keep step with labor and materials. Within two years, as costs could be lowered, the price of the Stephens touring car has been reduced $805, with proportional reductions on other models. No unit in any Stephens was cheapened, however, or any less care devoted to manufacture or finish.

Stephens standards will not be lowered. You cannot buy a Stephens, now or later, which does not measure up to these standards—which is not just as good a motor car of its type as we can design and build.

We want volume, yes—but not by sacrifice of quality.

George J. Peek
PRESIDENT

STEPHENS MOTOR CAR COMPANY, Inc., *Moline and Freeport, Ill.*

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport
Your territory may be open. Write for our contract terms

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"It iz mutch better not to know so menny things than to know so menny things that ain't so"—Josh Billings

(Henry Wheeler Shaw—1818-1885)

Few read him nowadays; but Lincoln liked to read him; and so did Grant; and Sherman; sham-haters all, as he was too. And wasn't Billings everlastingly right?

The spark-plug which gets its portrait printed here—the "new" extension type—has had a whole lot of talk talked about it in the past few months. Not all the talk was—to speak mildly—gospel truth.

But this identical type of Bethlehem Spark Plug (listed as Ford part 5200) stocked everywhere today as Bethlehem Number 8, and of which more than 5,000,000 have been equipped to Ford cars and trucks and tractors—

—this very same extension spark plug type has been standardized by the Ford experts because it made good as no other plug ever had! It is the type which is firing Ford cylinders today!

bethlehem

Proving, naturally, how much better it is not to know so many things.

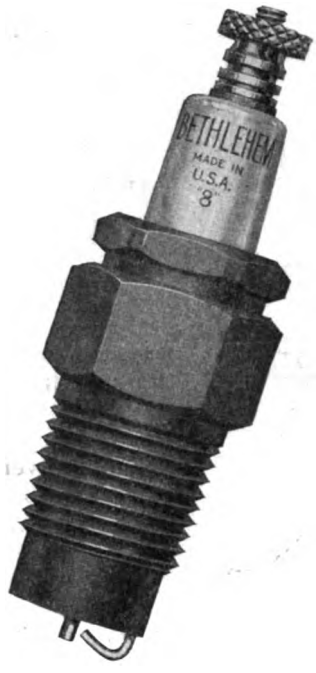
And suggesting—to you, for instance?—that you might profit by knowing some of the things that *are* so nowadays in the domain of spark-plugs.

The pleasantest part of my job is answering letters asking me just such questions as are stirring 'round this minute in your mind.

H. Schwab

President.

BETHLEHEM SPARK PLUG COMPANY
Bethlehem, Pa.



spark plug

PACKARD

rated Bethlehem Spark Plugs as standard equipment this year. Their performance in that outstanding car has more than satisfied the Packard people and the Packard owners.

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One quality—two designs

There is a battery built by Westinghouse for every car and purse. And you may be sure it is a good battery, or it would not bear the name Westinghouse.

WESTINGHOUSE STANDARD. The best battery Westinghouse can build! Oversize plate area—as much as 25 per cent; and warranted under a guarantee new in features and unequaled in liberality.

WESTINGHOUSE "WUBCO" SPECIAL. For lighter weight cars. The best battery a man can buy for the money! Normal capacity. Rubber case. Quality construction. Lower priced.

Westinghouse battery service stations and dealers have always had the undoubted sales-making advantages acquired from association with the name Westinghouse. Now, in the "Wubco" Special they also have a low-priced, quality-constructed, WESTINGHOUSE-BUILT battery with which to secure the patronage of the large percentage of "price" buyers. We invite inquiries from good battery men.

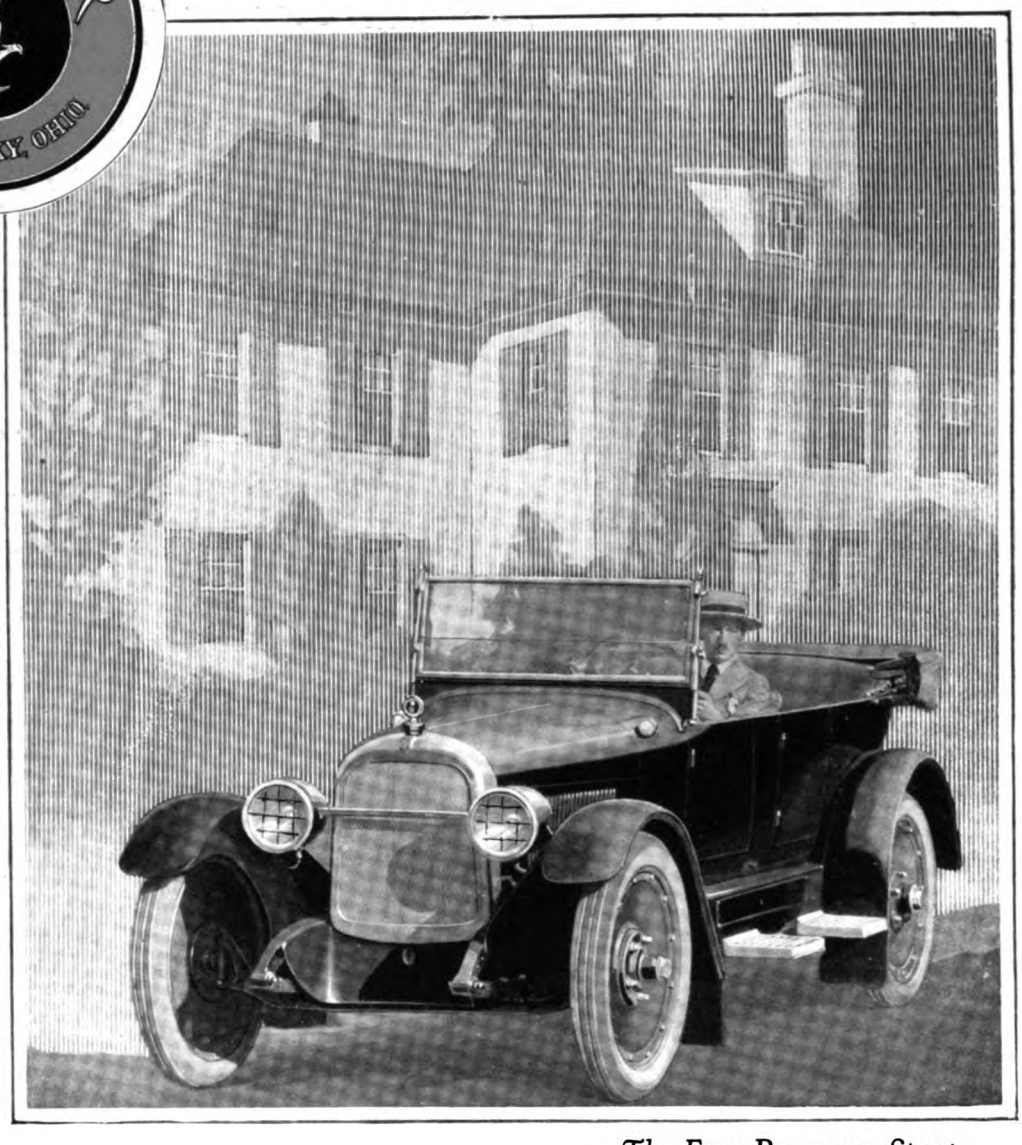
WESTINGHOUSE UNION BATTERY CO., Swissvale, Pa.

WESTINGHOUSE BATTERIES

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THE COURIER

Flood, wind and fire failed to stop the couriers of ancient days. Your modern means of transportation should be just as dauntless, just as dependable and just as trustworthy.



The Four-Passenger Sport

IN taking over the plant, assets and good will of The Maibohm Motors Company of Sandusky, Ohio, we have been actuated by the knowledge that there are numbers of people who want to express, in as great a measure as possible, their own individuality in the motor car they own.

Yet the purchase price must be comparable to that asked by the big quantity manufacturers for their excellent, though of necessity, more or less stereotyped products.

By the same token there are many dealers who are looking for the car that will fill the demands of this type of buyer.

A GOOD LIGHT SIX

Digitized by Google

Your Success is Ours and Vice Versa

OUR AIM is to build a car which has an appearance that sets it apart in any parking space or street and, at the same time, will give more carefree service, with less attention on the part of the driver. This means the proper lubrication of every moving part with a minimum of attention.

The Courier is provided with a complete and positive chassis lubrication system. The pressure of a plunger on the dash forces oil under high pressure to all spring mountings, springs, steering connections, front and rear axles, and other chassis parts. One filling of the tank is enough for 3,000 miles—yet there is no intricate mechanism or series of pumps.

Engine lubrication is by the "dry sump" full pressure system. Oil is carried in a separate tank mounted on the frame next to the engine and cooled by the forward motion of the car. No oil is carried in the engine base. Oil is pumped from the tank to all engine-bearing surfaces, drops down into the crankcase and is carried back to the tank where it is screened, cooled, and sent on its return journey. This system prevents smoking and insufficient lubrication no matter how much oil is in the tank. The oil keeps its original color and lubricating qualities and you get over 500 miles to a quart.

The rigid and scientific cross bracing of the frame practically eliminates body squeaks and rattles. The construction of the bodies, which are built in the Courier shops, also aids in this.

Both brakes are remarkably powerful, smooth, and easily operated. It steers very easily, the gears shift likewise and a slight pressure releases the clutch.

The spring action is velvety. The car holds the road at speed, with no side sway or "jack rabbit" action. You sit *in* the car in a restful, comfortable position—not *on* it.

The lines of the car are smart and trim. Attention to detail is evidenced in even a casual glance. Real tan Spanish leather upholstery is set off by a fine paint job. In fact every part reveals a knowledge of the little things that make for greater ease and comfort.

The car is good to look at—easy to ride in—easy to handle at all speeds—easy to take care of and, in the same measure, should be easy to sell and make money with.

You are naturally interested in permanent increasing profits—a stable business and a quick turnover. We are in business for the same reason. Your success is ours and vice versa. The car is right, the price is right. We have the organization, finance and factory. Our policies will meet with your approval. You will find us conservative in promises but strict in performance.

Our manufacturing schedule is based on a minimum rather than a maximum of sales, yet can be increased on short notice.

The heads of the different departments are all men of good standing in the industry who have proved their ability in some of the largest and best known companies in the country.

The company is financed with provision for future as well as present requirements.

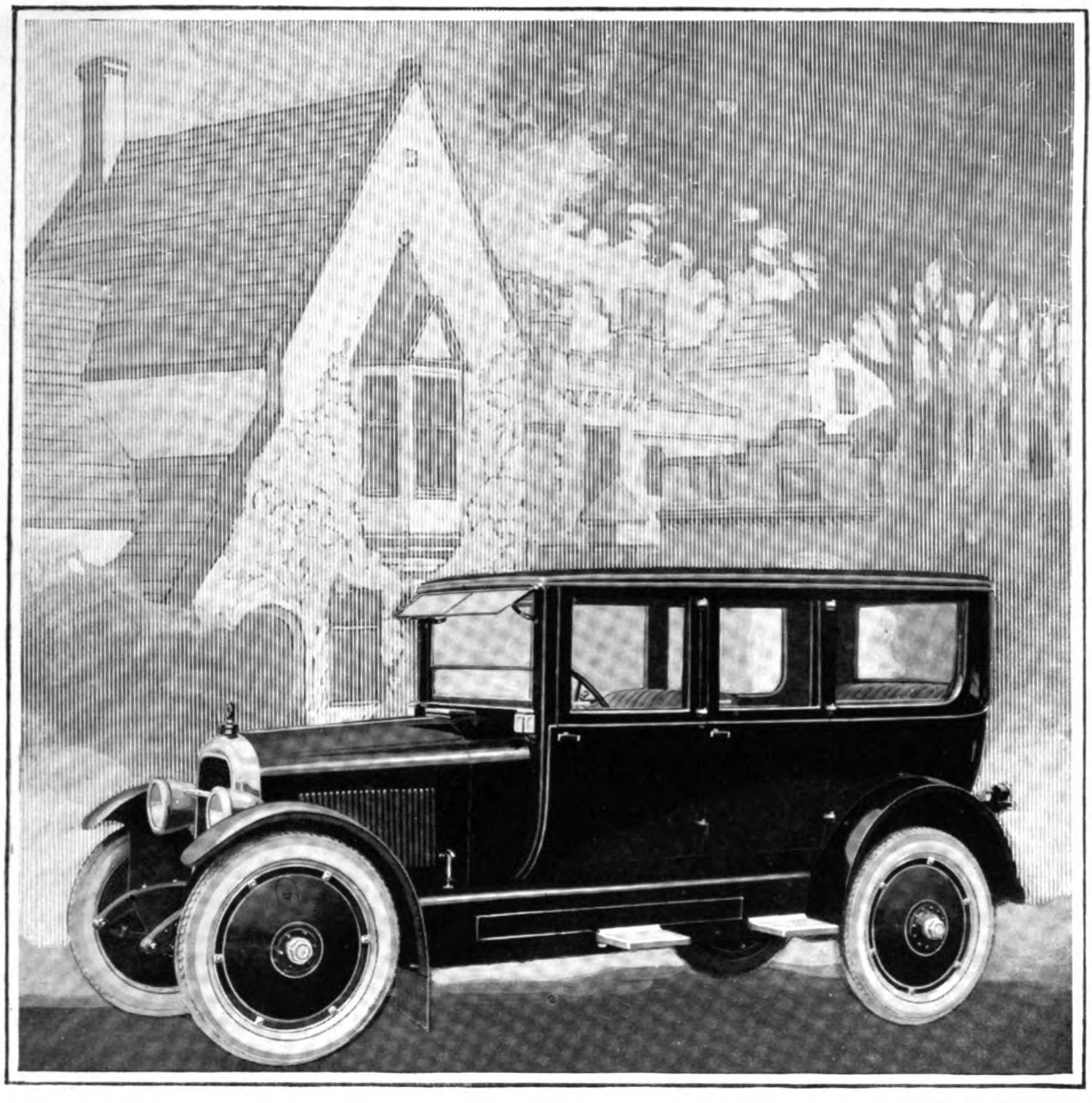
The factory is thoroughly modern—equipped with labor-saving devices and has an unhurried capacity of twenty cars per day with splendid facilities for expansion.

From your standpoint you are interested in three things: Will the car sell—stay sold—and can I get them? The best answer is to come to Sandusky—see the car—go through the factory and meet the men who are building the Courier. You probably know some of them already. Then we will all be in better shape to talk intelligently. We will pay your transportation to Sandusky provided you make arrangements as to time, etc., with us before coming.

The selling season is on. We are making deliveries now.

THE COURIER MOTORS COMPANY

Digitized by Google



The Sedan

WITH the increasing demand for closed cars it is essential that the dealer have a car neat in appearance, comfortable, luxurious, sturdy and moderately priced.

The realization of this aim is the Courier Sedan. It stands apart from the ordinary closed car.

Simple harmonious lines lend a dignity duplicated only in the highest priced makes. This same impression is strengthened by the appearance of roominess, resulting from its well proportioned design.

The body is built in the Courier shops. Deep cushioning of the seats and backs, with room for an occasional shift of position, make for comfort even on the longest drives.

Plate glass windows are easily moved. Equipment includes curtains, visor, and controlled heater. Fittings are of burnished silver.

The Coupe has the same general appearance and workmanship as the Sedan. There are seats for three, with a fourth seat which folds out of the way. This model is particularly suitable for the woman who drives, or for the professional man, business man or salesman.

If there is a market in your town for a car that expresses individuality without going to extremes — if you wish to cater to the closed car trade with a larger margin of profit — if you care to sell closed cars that call forth favorable comment on their first appearance, do not overlook the Courier.

SANDUSKY — — — — — OHIO

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COURIER SPECIFICATIONS

SPORT MODELS

BODIES—Our own make complete; seasoned lumber; joints mortised and tenoned; glued and screwed; covered with specially selected prime sheet steel, welded at seams and file-finished.

UPHOLSTERY AND TRIMMING—Real Tan Spanish Leather upholstery throughout. Seat cushions Marshall-type construction.

TOP—Black or Khaki with top boot, side curtains and trimmings to match. Side curtains swing open with doors. Curtains carried in handy compartment in back of front seat.

PAINTING—(Color Options)—Dark Green, Moleskin, Maroon, Princess Pat Blue. Disc wheels painted to match body colors.

STANDARD EQUIPMENT—Disc wheels with demountable rims; dummy disc carrier mounted on rear of body; windshield wiper; motometer; combination stop and tail light; nickel-plated head and cowl lamps with non-glare lenses; bicycle-type fenders; polished cast aluminum steps (no running boards); scuff plates; 75-mile speedometer driven from transmission; spare rim; tool kit; tire repair kit; tire pump; jack; starting crank; rim wrench.

STANDARD OPEN MODELS

BODIES—Our own make complete; seasoned lumber; joints mortised and tenoned; glued and screwed; covered with specially selected prime sheet steel, welded at seams and file-finished.

UPHOLSTERY AND TRIMMING—Real Tan Spanish Leather upholstery throughout. Seat cushions Marshall-type construction.

TOP—Black with top boot, side curtains and trimmings to match. Side curtains swing open with doors. Curtains carried in handy compartment in back of front seat.

PAINTING—(Color Options)—Dark Green, Moleskin, Maroon, Princess Pat Blue. Wooden wheels, natural finish

STANDARD EQUIPMENT—Natural wood wheels, extra demountable rim mounted at rear of body. Headlights with non-glare lenses; tail lamp; running boards covered with linoleum and bound with aluminum; 75-mile speedometer driven from transmission; spare rim; tool kit; tire repair kit; tire pump; jack; starting crank; rim wrench.

COURIER FEATURES

46 horsepower 6-cylinder valve-in-head engine. Full pressure engine lubrication. Transmission ball bearings throughout. Powerful, easy-acting brakes. Low-hung chassis with ample clearance. Automatic chassis lubrication—pressure on plunger forces oil to bearings. 32x4 nonskid cord tires. Large headlights with anti-glare lenses. Bright nickel-plated radiator shell. Custom-built bodies, made complete in Courier plant, roomy, yet smart-appearing. Anti rattle proof doors. Choice of four bright colors. Real Spanish leather upholstery on open cars. Several fabric options on closed cars. Approximately 20 miles to the gallon of gasoline; over 500 miles to quart of oil, and 12000 to 15000 miles on a set of tires.

EXPORT MODELS

Specially equipped with Khaki top, 5 wire wheels, right-hand drive, special speedometer, etc.

Phaeton—5 Passenger, $1495 *Sport*—4 Passenger, $1595
Roadster—2 Passenger, $1495 *Sport Roadster*—2 Pass., $1595

Export Department: No. 2 RECTOR ST., NEW YORK

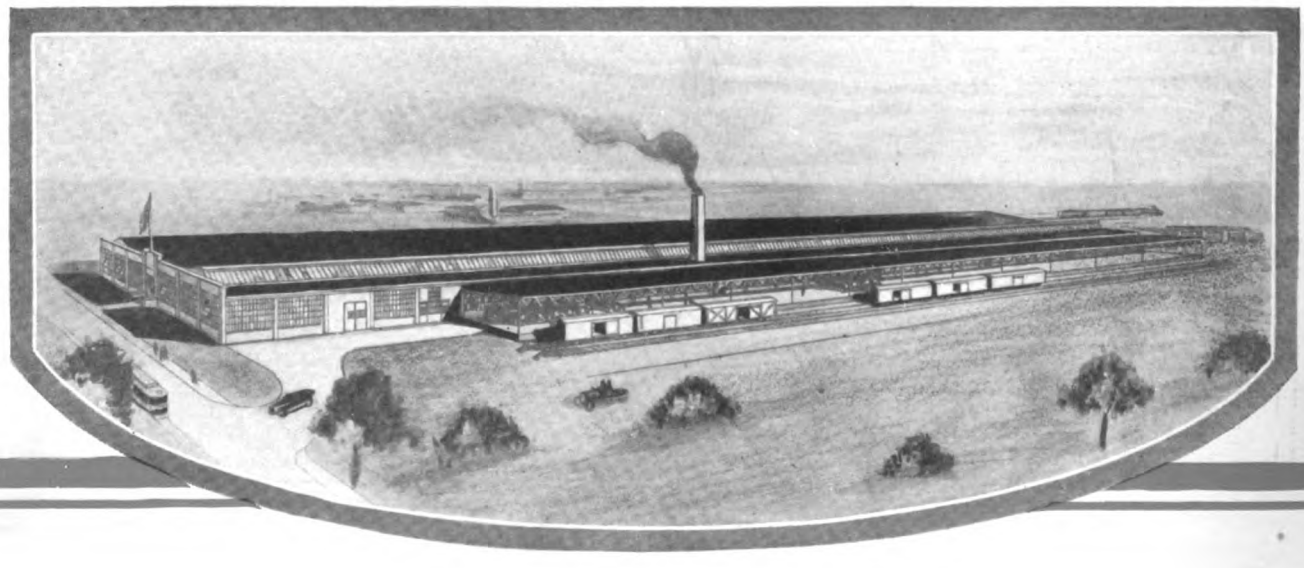
PRICES

Phaeton — 5 Passenger	$1395	*Coupe* — 3 Passenger, extra folding seat	$2065
Roadster — 3 Passenger	1395	*Sedan* — 5 Passenger	2165
Sport Roadster — 3 Passenger	1495	*Sport* — 4 Passenger	1495

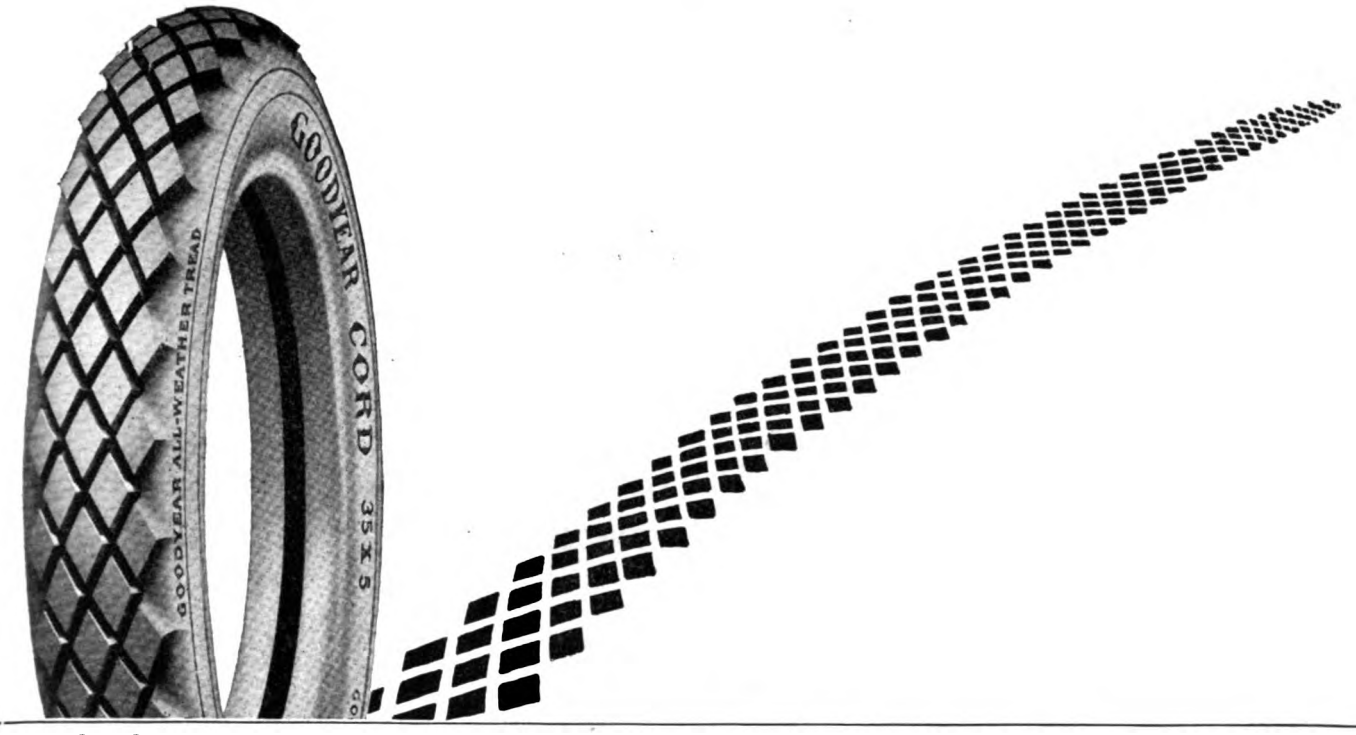
All prices are f. o. b. Sandusky—Revenue Tax to be added

THE COURIER MOTORS COMPANY

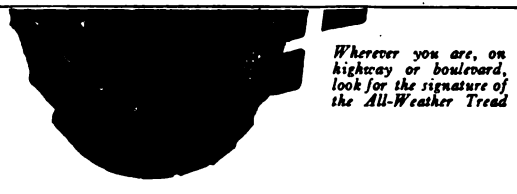
SANDUSKY OHIO.



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GOODYEAR ADVERTISING SELLS TIRES



Wherever you are, on highway or boulevard, look for the signature of the All-Weather Tread

Behind all Goodyear Dealers is an untiring, powerful force that is working day and night, year after year, to help sell Goodyear Tires. It is Goodyear Advertising.

No matter where motorists live, no matter where they may travel, Goodyear Advertising is continually reminding them of Goodyear quality and the Goodyear Dealer.

No matter where the Goodyear Service Station may be, in crowded city street or on country road, its sign is recognized instantly as a symbol of tire quality, honest price, and good service.

The Goodyear Dealer is known. He is trusted. And his full line of Goodyear Tires enables him to meet the needs and price of any car owner. More and more car owners come to him when they need new tires, for Goodyear quality keeps him his old customers and Goodyear Advertising brings him new ones.

This same effective force works for the motor car dealer who sells Goodyears. Goodyear Tires upon an automobile are proof that the man and company behind that car are desirous of providing the owner with economical operation.

If you want to be a Goodyear Service Station and enjoy the profitable assistance of Goodyear Advertising, write today to Goodyear, Akron, Ohio, or Los Angeles, California.

Goodyear Means Good Wear

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

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Filling the Gaps

"Standard Equipment" Is Given Away

But 51% of the Leading Lines Carry Added Equipment as a Sales Inducement.

That makes a market for similar goods on every car that is Standard Equipped.

Wideawake dealers sell more cars at higher profits by adding extras of their own selection. Alert manufacturers are constantly studying the demand for new features. A chart of equipment specifications is a map of the market for accessories.

AUTOMOBILE TOPICS'

Table of Passenger Car Selling Points Shows the Alignment of Accessories.

The Gaps in the Columns of "Added Equipment" Indicate Open Territory for the Sale of Products that Are Growing More Popular.

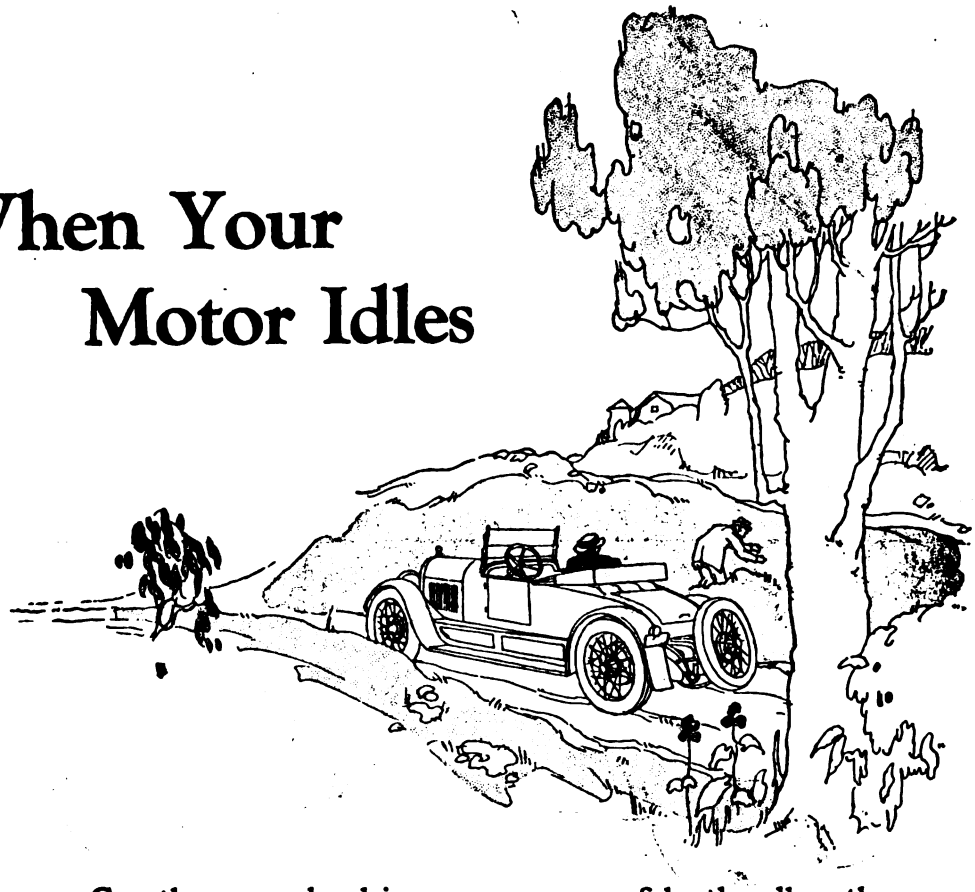
This illustrates but one of many useful and suggestive applications of this new table (see Page 159 of this issue) which appears every week (revised weekly) in

AUTOMOBILE TOPICS
The Trade Authority

1790 Broadway New York City

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When Your Motor Idles



Can the man who drives your car confidently allow the motor to idle, assured that only a soft, smooth, sustained purr will mark its pulse?

That is when the merits of a Morse Silent Chain in the front end of your motor are most impressive. Doing away with clattering gears, it drives cam shaft and accessories quietly—it gives silent testimony to the inherent excellence and refinement of your motor.

Morse Chain does its work thus silently and smoothly because of the technical excellence of its "rocker-joint" design, and because of the rigorous care with which Morse standards of accuracy are maintained in its making.

Refine your motor with this silent, flexible, durable cam and accessory drive.

MORSE CHAIN COMPANY

Main Office and Works ITHACA, NEW YORK

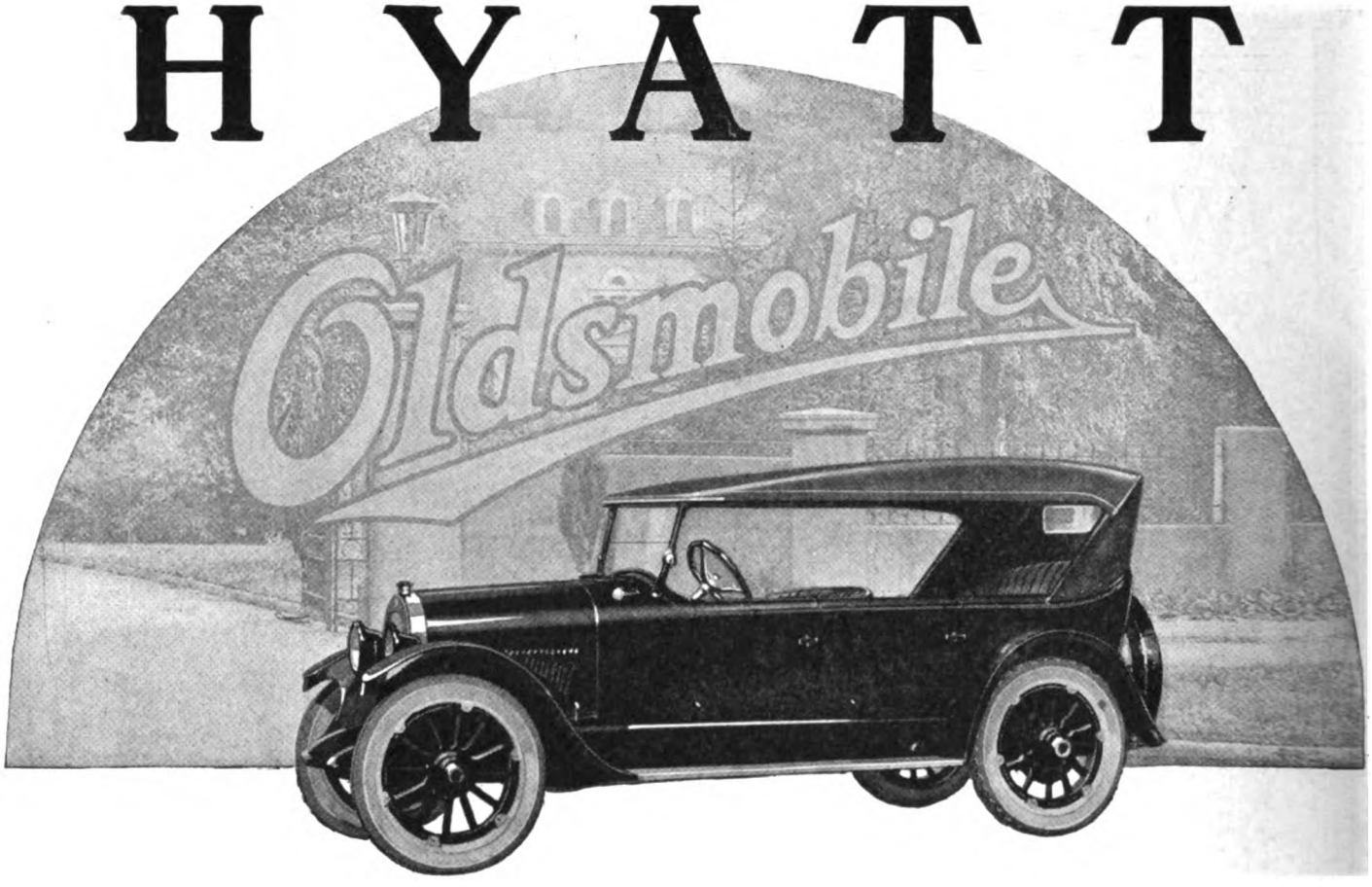
Sales and Engineering Office DETROIT, MICHIGAN

MORSE

GENUINE SILENT CHAINS

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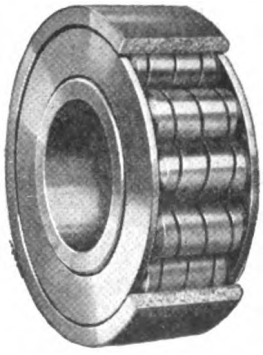
HYATT



THE most casual glance at an Oldsmobile reveals it to be a car of unusual and distinctive beauty. Closer knowledge of Oldsmobile reveals further that its mechanical excellence is on a par with its exterior appearance.

Today, as in the past, Hyatt Roller Bearings play a prominent part in contributing to Oldsmobile dependability. In both the new four and eight cylinder Oldsmobile models, four Hyatt Roller Bearings are used in the rear axle construction.

These bearings have helped to assure the sturdy, quiet, and trouble proof rear axle characteristic of Oldsmobile motor cars by carrying the gear load at the differential and the car's weight at the hubs.



A Hyatt bearing with part of outer race removed to show the spiral rollers.

HYATT ROLLER BEARING COMPANY

Motor Bearings Division: **Detroit, Michigan**

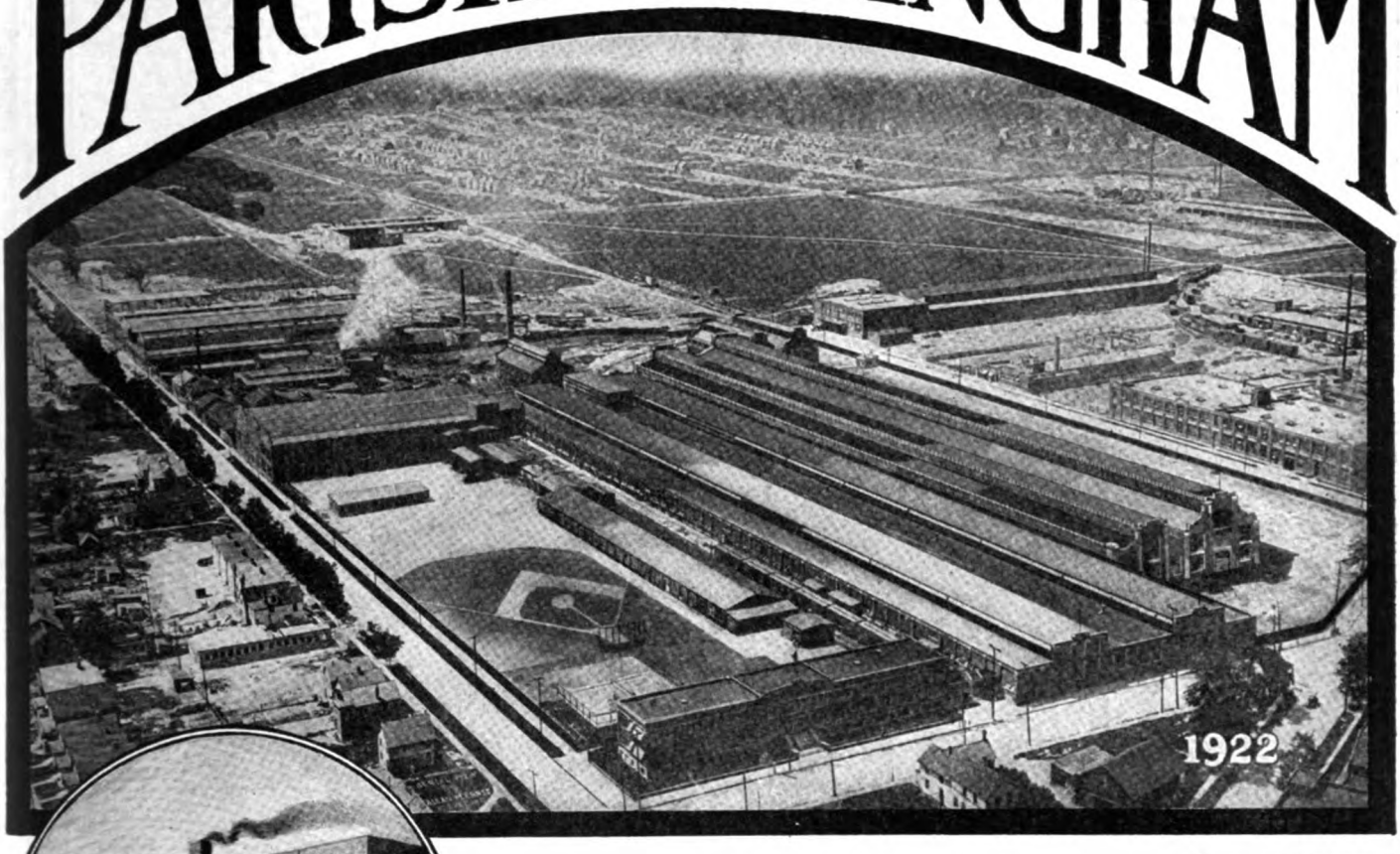
Tractor Bearings Division	*Pacific Coast Division*	*Industrial Bearings Division*
Chicago, Ill.	San Francisco, Cal.	New York, N. Y.

HYATT QUIET BEARINGS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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PARISH & BINGHAM





PRESSED STEEL

FRAMES

PASSENGER CARS MOTOR BUSSES
TRUCKS TRACTORS TRAILERS

MISCELLANEOUS STAMPINGS

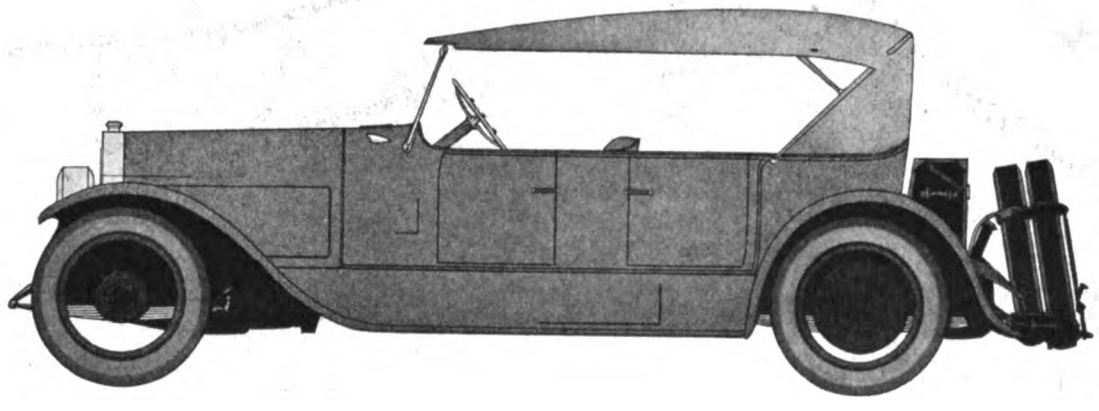
BRAKE DRUMS—AXLE HOUSINGS AND COVERS
RUNNING BOARDS—STEP HANGERS
MOTOR SUPPORTS—TORQUE ARMS
FENDER BRACKETS—TIRE CARRIERS
BODY BRACKETS, ETC.

Our Engineering Dept. is at your service in helping you select suitable designs to meet your requirements. Write us.

PARISH & BINGHAM CORPORATION

CLEVELAND, OHIO

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Four-Passenger Touring $6,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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Enduring Standards

THE sword-makers of Damascus gave to the world the famous blades of watered steel that are, even today, unsurpassed for their fineness.

Loyalty to only the highest ideals of craftsmanship has, from time to time, produced other similar standards of worth.

Firestone Cord Tires are the accepted criterion of fine tire service; a standard of quality that has gained public confidence in the comparatively short space of twenty-two years.

Most Miles per Dollar is as great a source of pride to the army of owner-workers in the great Firestone factories, as the cherished reputation of their metal and skill was to the sword-makers of old Damascus.

For all who use and know tires, the name Firestone must always mean the highest attainment in cord tire building.

Firestone

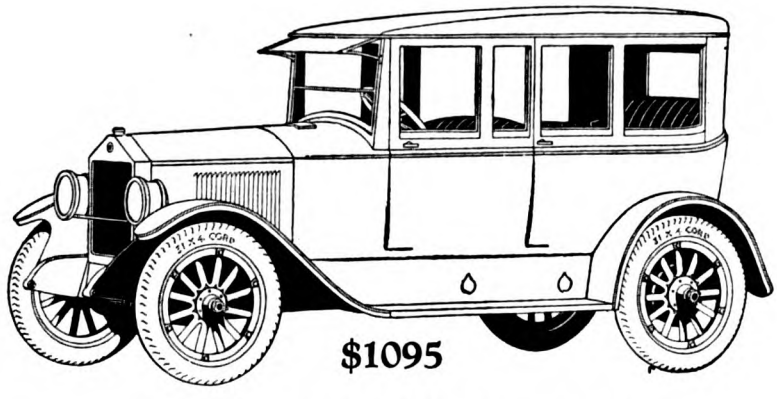
Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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DORT

Quality Goes Clear Through

New prices of $1095 for the Dort Yale Sedan and $1045 for the Dort Yale Coupe emphasize more than ever their great value. And the widespread demand for these cars, which this year has been largely responsible for an increase of 319 per cent in closed car production, assumes even larger proportions.



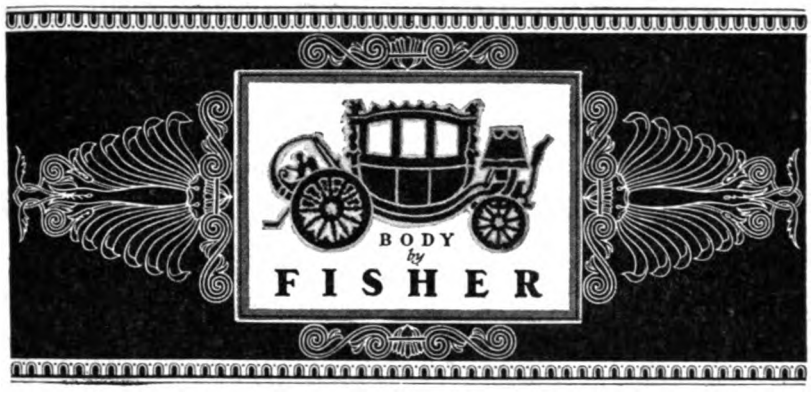
$1095

Six models from $885 to $1385; Light delivery car, $825; at Flint

Dort Motor Car Company, Flint

(1435)

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FISHER BODIES

The simple result we seek to obtain is that you shall be proud that the coach-work on your car is of Fisher origin. It is our good fortune to be able to dedicate to that end facilities which are not even approached by any other body-building organization in the world.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT.



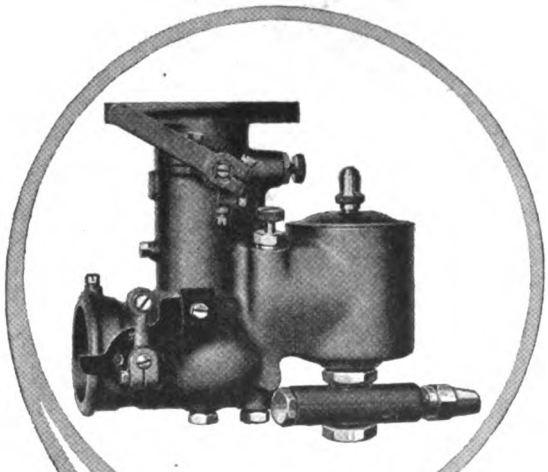
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This



is the secret of Holley success—a better product than others can produce at a price that is lower—a factory, the most modern of its kind, capable of meeting the most pressing production demands of *all* its customers—a will to study and serve the needs of its clients far beyond the ordinary customs of business. These are the services that Holley offers *you*.

HOLLEY CARBURETOR COMPANY, DETROIT



The new HOLLEY CARBURETOR

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Everyone will use Chains more when they discover

OFF'N'ON CHAINS

For you can put them on and take them off in a hurry. And you can put on a new cross chain quickly anywhere, any time.

This means more chain sales—*more OFF'N'ON Chain sales*—more profits for dealers.

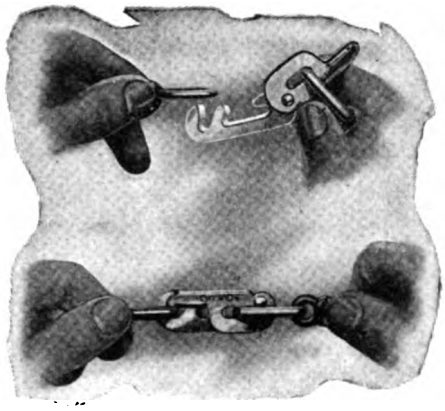
Order from your jobber today. At the same time, spare cross chains should be ordered. You can sell an extra set with every chain.



Write at once for further particulars, giving the name of your jobber.

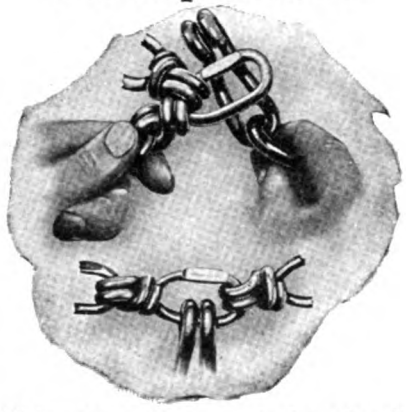
When your fingers close the lever lock the slack is taken up and the chain is absolutely secure.

The Positive Lock



This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.

The Slip-on Link



This patented slip-on link makes it easy to take off the old cross chain and put on a new one. A child can do it.

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers

520 Belmont Ave., Newark, N. J.

BRANCHES:

CHICAGO—17 So. Jefferson Street
ATLANTA—24 Nassau Street
KANSAS CITY—1712 Grand Avenue
SAN FRANCISCO—977 Mission Street

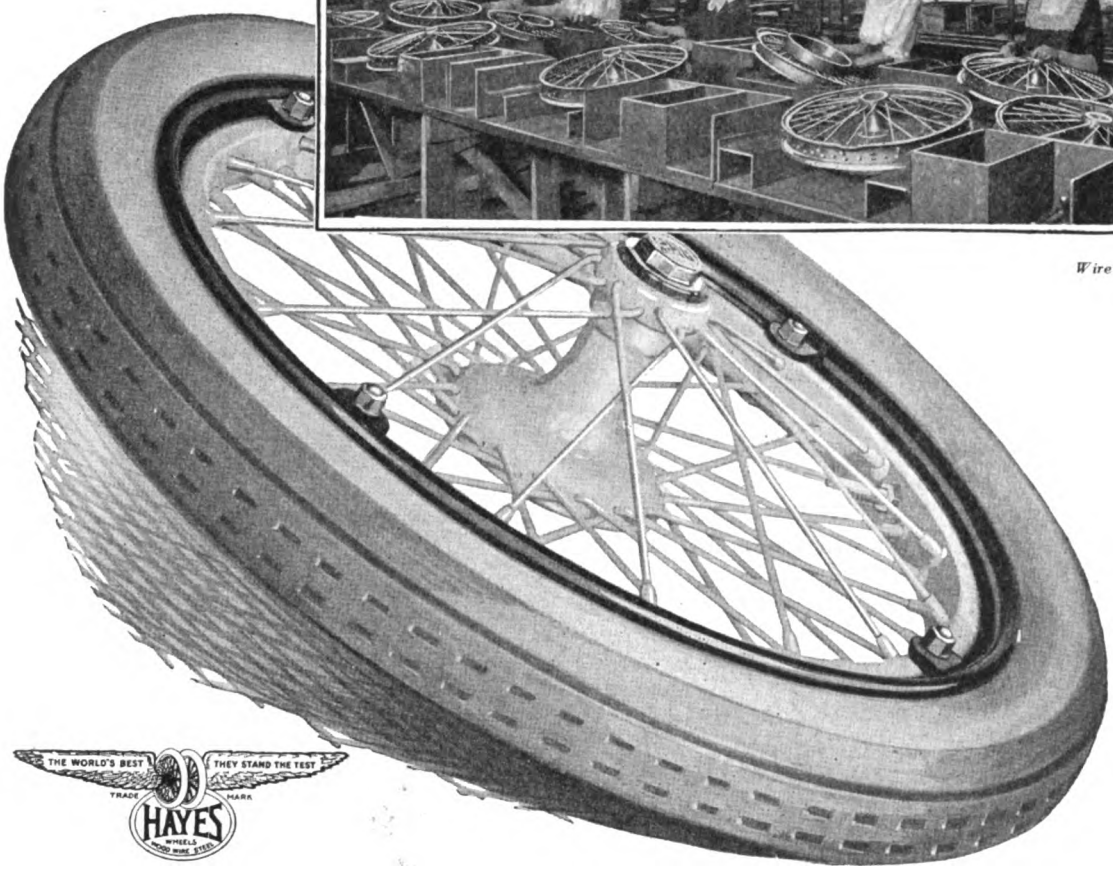
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HAYES

DEMOUNTABLE AT THE RIM



Wire Spoke Assembly.



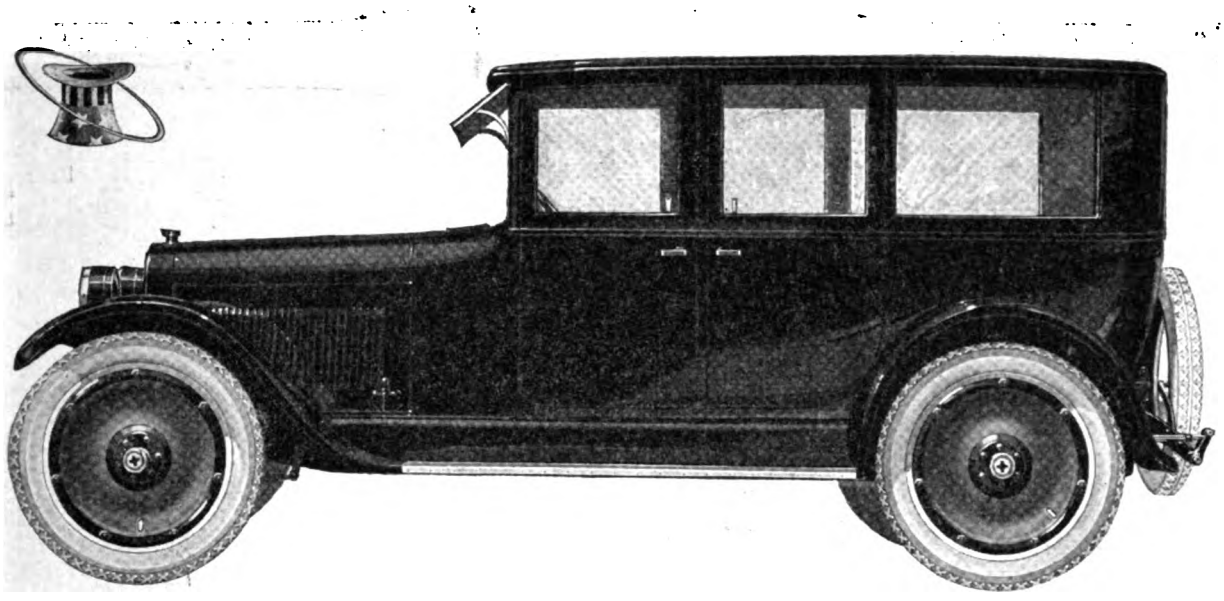
NO other manufacturer can approach the high standard of quality of Hayes Demountable at the Rim Wire Wheels at anywhere near the same price. No other manufacturer has the tremendous manufacturing facilities, the immense production and the enormous purchasing power of the Hayes organization—builders of wheels for over half of all the cars produced in America. Every possible economy in material and manufacturing cost, made possible by the magnitude of Hayes operations, is passed on to the motor car manufacturer. The entire Hayes organization is constantly at his service in planning Hayes wheels to meet his particular requirements. Thus he, in turn, is enabled to offer to his customers the added buying inducement of Hayes Wire Wheels at the lowest possible price and without a moment's delay in production.

(52)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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Here are two great sellers—in addition there is the very popular touring phaeton.

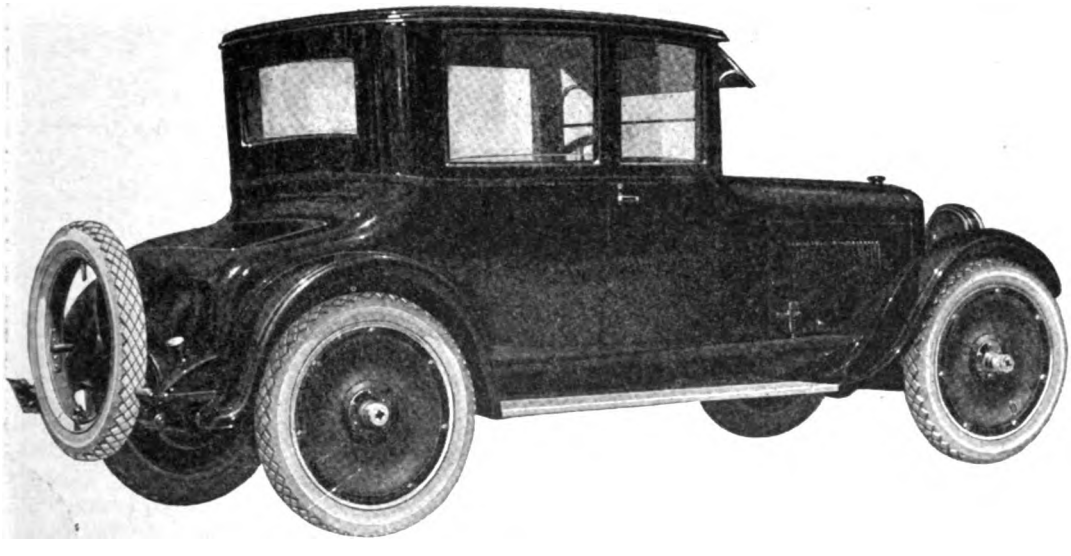
Why great sellers?

The sedan is unusually comfortable—only $1985.

The coupe is unusually large—only $1885.

Write at once for full particulars.

Rickenbacker Motor Company
Detroit Michigan



Organization Builds Success

Prices f. o. b. Detroit

Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME

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CARRIES THE LOAD



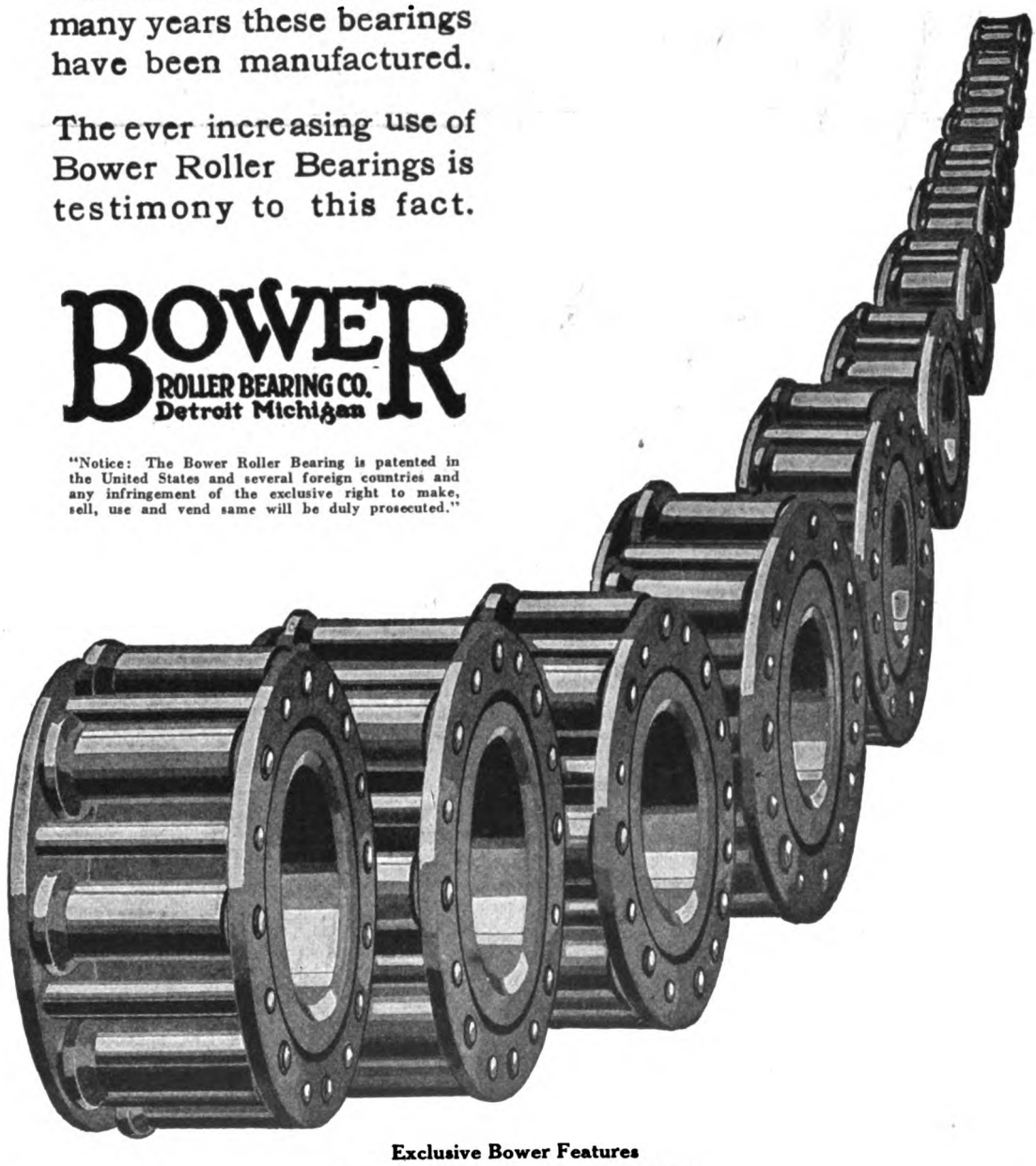
TAKES THE THRUST

BOWER Roller Bearing quality has never once varied throughout the many years these bearings have been manufactured.

The ever increasing use of Bower Roller Bearings is testimony to this fact.

BOWER
ROLLER BEARING CO.
Detroit Michigan

"Notice: The Bower Roller Bearing is patented in the United States and several foreign countries and any infringement of the exclusive right to make, sell, use and vend same will be duly prosecuted."

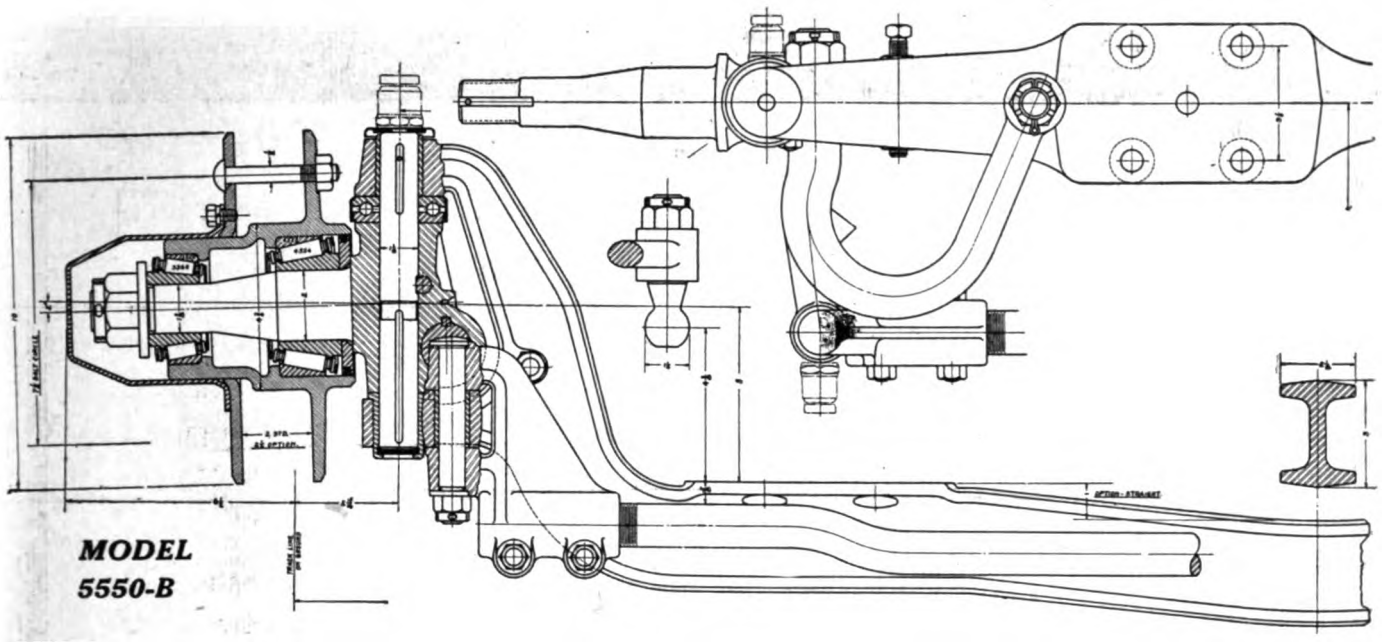


Exclusive Bower Features

Separate bearing surfaces for load and thrust. Parallel raceways. Self-aligning. Never need adjusting. Does not develop end thrust under loads. Will not bind or end-slip.

BOWER SAVES POWER

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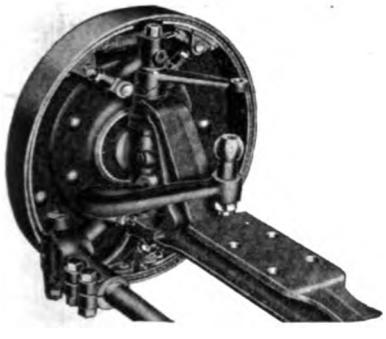
SHULER FRONT AXLES

New Light Model to Meet the Specialized Requirements of the High Speed Interurban Motorbus

The low floor and low steps possible with this new front axle bus model mean easier and quicker loading. A 5-inch drop from spindle line to spring pad permits a floor height of only 26 inches, while at the same time, there is ample road clearance below. The exceptionally wide tread range of 56 to 68½ inches permits a wide body floor, which, together with the low center of gravity, guarantees maximum stability in operation.

Though designed for the comparatively light work of the high-speed interurban motorbus of 18 to 25 passenger capacity, this axle is heavy and sturdy enough in construction to provide an unusual degree of safety. The axle center is SAE Spec. 1035 30-40 carbon steel drop-forged in one piece and thoroughly heat treated. The steering knuckles and arms are SAE Spec. 3135 chrome nickel steel, drop forged and thoroughly heat treated. Ball thrust bearings are used in the knuckle heads to insure easy steering. Timken tapered roller bearings are standard wheel-bearing equipment.

Substantially the same axle can be furnished in a heavier model for motorbuses of larger size and greater carrying capacity. Further information and specifications will be forwarded on request.



Shuler Front Wheel Brake

permits simultaneous braking on all four wheels, brings tremendous factor of added safety and practically eliminates danger of skidding. The SHULER FRONT WHEEL BRAKE is designed into the standard line of SHULER FRONT AXLES for Motorbuses, Motor Trucks and Trailers. Manufacturers are invited to write us for more detailed information.

We solicit correspondence with manufacturers of motorbuses, motor trucks, trailers and tractors, with a view to offering our cooperation in designing SHULER AXLES into your specifications. We make front axles exclusively.

SHULER AXLE COMPANY
INCORPORATED

Front Axles for Trucks, Tractors and Trailers

3008 Jones Street **Louisville, Kentucky**

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The Six Factors in Raulang TRADE MARK *Responsibility*

The Sixth Factor—

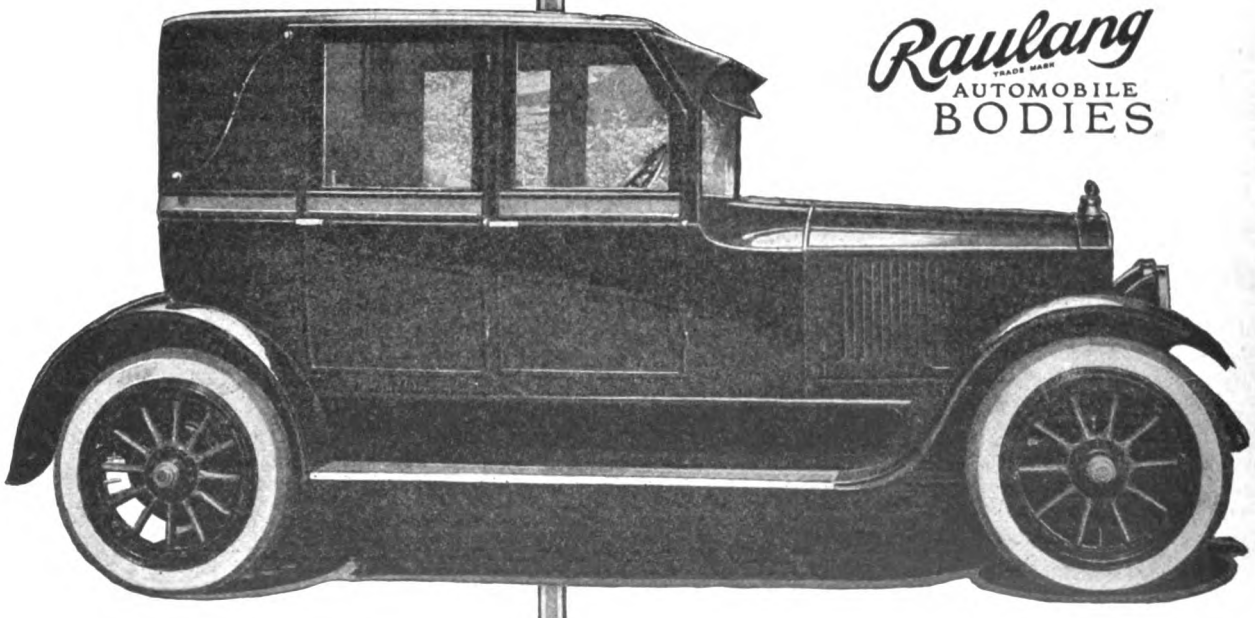
Our Dependability—Your Insurance

THE soundly-founded responsibility of the Raulang organization insures against contracts unfulfilled in quality or delivery, while the prestige built by years of sustained quality, nationally advertised, assures tangible sales-assistance.

Raulang Enclosed Bodies are nationally known. This prestige, a real sales asset to you, has been accomplished less by our consistent advertising (although that has done its share) than by the building of solid substantial quality into the bodies themselves.

All of these factors combine to offer you in the Raulang product and service a time-tried responsibility upon which you can absolutely depend year in and year out.

RAULANG BODY DIVISION
The Baker R & L Co.
CLEVELAND, OHIO. U.S.A.



Raulang TRADE MARK AUTOMOBILE BODIES

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VACUUM CUP CHRONICLE

VOL. II JEANNETTE, PA., AUGUST 26, 1922 No. 9

"Sound of Safety" Music to Mrs. Dearborn

STEADILY larger and more and more prosperous has grown the Dearborn Cigarette Company, 220 West Forty-second Street, New York City.

About ten years ago, at Sheepshead Bay Speedway, Frank Dearborn, prominent in automobile racing circles, ran his last race—a contest in which he hadn't the shadow of a chance against the Grim Reaper.

Frank's widow, shortly thereafter, undaunted by the necessity for bucking a cold, hard, calculating business world, launched the cigarette manufacturing company which bears her name.

Naturally, at the start, she encountered somewhat tough sledding; but as time went on and the quality of her individual mild Turkish blends became known, the business flourished and prospered, especially among the automobile trade, with the courageous widow at the steering wheel.



Today, Mrs. Dearborn visits her customers in an Essex. That same quality ideal which has stood her in such good stead for a decade has actuated her in the selection of her tires. Full equipment and a spare give her new Essex distinctive appearance, and the low-purring "*Sound of Safety*" generated by the Vacuum Cups is sweet music to Mrs. Dearborn's ears.

First Over the Top

THE opening of the famous Tennessee Pass every spring is an occasion of much rejoicing and jubilation, for it marks the passage of traffic which has been held snowbound during winter months.

FIRST TRIP MADE BY AUTO OVER ICY TENNESSEE PASS

Leadville, Colo., May 4.—The first automobile trip of the spring over Tennessee pass, has been accomplished. I. L. Horner and F. L. Turley, salesmen, successfully made it over the top en route to Grand Junction Wednesday.

They reported the road open, altho they had to shovel out in several places. The entire trip was made over the pass with the exception of a heavy drift encountered above Mitchell. They were aided then by Eagle county road teams.

The first car to venture over the top finds the going somewhat treacherous and hazardous, and the tire equipment naturally is relied upon to see that the trip is made as safely as possible.

It therefore is not surprising to learn that Vacuum Cup Tires, always taking the initiative in hard-to-do traveling, lived up to their reputation of being first "over the top" at Tennessee Pass on May 3.

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VACUUM CUP CHRONICLE

Published monthly by the Pennsylvania Rubber Company of America, Inc. Jeannette, Pa.



VOL. II AUGUST 26, 1922 No. 9

Service!

By C. P. McDONALD

SERVICE!—A word that will make you or break you,
That carries a wallop and packs a bouquet;
That's willing to work with you, eager to take you
Along on the road to the heights of to-day:
Only demanding a smile and a greeting
Whenever a customer enters the door,
Letting him know you are glad of the meeting
And happy to know that he's come in the store.

Service!—A word that the merchant can play with,
A salesman can use in promoting his wares;
One that a seller can quickly make hay with
And lift from his shoulders a burden of cares:
A word that was coined for the pride of the buyer,
To tickle his vanity, gladden his soul;
To prove that with you he's not taking a flyer,
But planks down his coin as a regular role.

Service!—The one thing that brings men together—
The one with the gold and the one with the goods;
That clears up the skies and creates sunny weather
And steers the retailer right out of the woods:
Service—a cheery, whole-hearted endeavor
To please and to build and to make good the name;
Completing the quality line forever
And keeping them coming for "more of the same!"

Celebrate First Anniversary at Goldsboro



THE large picture shows the thriving store of the Automotive Supply Company, Pennsylvania dealers at Goldsboro, N. C., with the industrious executive, sales, and service staff of the company happily guarding their latest liberal assortment of Vacuum Cup Tires and "Ton Tested" Tubes—assortments, by the way, which are becoming more and more frequent as these enterprising hustlers acquaint the tire users in their territory with the fact that Vacuum Cup Tires of highest quality now cost no more than *ordinary* makes.

They also are confirmed believers in and users of local advertising. We reproduce one of their advertisements here, the original of which occupied a full page in the Goldsboro *News*. Perhaps the most significant feature of this advertisement is the announcement in the center of the page, signed by the company's president, G. C. Southerland, Jr. It is a straightforward statement of the policies and ambitions of the company which effectively inspires confidence and promotes business:

To the Motoring Public:

It has been less than a year since we opened our doors displaying the most up-to-date line of auto accessories, tires, batteries, and battery supplies ever shown in this state. We have endeavored to give those who favored us with their patronage every possible advantage for the dollar.

Our policy has been and will continue to be to sell the best, to give service, and to maintain a fair margin of profits.

It is with pleasure and satisfaction that we close our first fiscal year. May we take the opportunity to thank those who have favored us in the past and to assure all of our earnest desire to cater to their interest in the future.

WHERE YOU MEET

Service, Price and Quality

FACE TO FACE

You Know This Store—Its Reputation—Make it Your Store



Look For The Big Sign Situated in The City—Convenient to All

To The Motoring Public:

Remember---We Specialize in Battery Work of All Kinds.
Let Your Next Battery Be a Prest-o-Lite.
The Next Tire a Vacuum Cup
AS THE MAN THAT KNOWS

THE AUTOMOTIVE SUPPLY CO.

ANYTHING FOR THE GASOLINE MOTOR DRIVEN VEHICLE

139 Center Street

Just a Ninety Day Supply for Ruffins

In Wilson, N. C., Vacuum Cup Tires are pronounced favorites. Here is a carload lot stacked up in front of the high-class, modern salesrooms of the Ruffins Accessory Shop, Pennsylvania dealers who overlook nothing in popularizing and keeping popularized Vacuum Cup in their territory. Are they cashing in? Well, judge for yourself from the footnote which accompanied this photograph: "This carload shipment will last us just about ninety days."



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Chester Knappenberger and His Boss



C. W. KNAPPENBERGER, who runs the Trumbull Tire Service at Warren, O., knows how to sell Vacuum Cup Tires and "Ton Tested" Tubes with the best of them. Chester keeps the fur flying in and around Warren simply because he's got a never-failing supply of energy, optimism, enthusiasm for his line, and a strong faith in publicity as a sales-producer.

Here are three pictures that we recently received, showing Chester's tidy headquarters at 102 West Market Street; a well-painted sign which occupies one side of his store and which is visible for blocks, and—well, who do you reckon the little fairy in the big tire can be? None other than the chubby daughter of Chester, boss of the Knappenberger household, and a future debutante of Warren's most exclusive and best-known "set."

Read How They Stack Up for H. C. Laflam

WHETHER on pleasure cars or on heavy-duty trucks, on good roads or on rutty trails, the reports that reach us covering the performance of Vacuum Cup Tires chronicle exceptional service. In Minneapolis, Minn., the Northern Tire Service Company, a year ago last May, equipped the 2½-ton Oneida dump truck of H. C. Laflam with Vacuum Cup Tires. What they had to do and how they have done it is told by Mr. Laflam himself:



"Two 38x7 Vacuum Cup Tires were put into service on my truck in May, 1921," says Mr. Laflam. "They have been handling gravel, 2¾ to 2½ yards per load, the average weight being 2,750 pounds to the yard.

"The tire on the right front wheel has gone over 20,000 miles without once being off the rim. I will absolutely use no other make of tire."

Mr. Laflam is to be seen in the picture standing in front of his outfit. To the left is J. E. Kennedy, a Pennsylvania salesman connected with the Minneapolis branch.

Save Your Flowers



Whenever a dealer coins an apt phrase that packs a pertinent sales wallop, we believe in passing it along with due credit for possible use by other dealers who realize and appreciate its value.

A. M. Smallwood, proprietor of Smallwood's Tire Store, Pasadena, Cal., incorporated the accompanying trite bit in a recent issue of *"Smallwood's Tire News."* It's snappy and brief and delivers a message that is well calculated to make any tire buyer think and think hard.

Pastor Haffen Happy

From Santa Fe Springs, Cal., the Rev. G. W. Haffen, pastor of the First M. E. Church, sends us the following letter, which is well worth passing along to our many friends:

"I am writing you because I believe I have an unexcelled tire record. For about four years I have been driving a Ford touring car, being on the road almost every day. During the first eighteen months while using tires that were highly recommended (none of them being the Vacuum Cups, however), there were six blowouts and as many punctures, under circumstances that were very trying indeed. On November 5, 1919, I had Vacuum Cup Tires put on my car. These were purchased at Long Beach, Cal. They have given me service of more than 10,000 miles up to January 6, 1922, without having one solitary puncture or blowout. (A place cut by glass, though not serious, I vulcanized on one occasion.) The new tires placed on my car January 6, were gotten of Chas. I. Cushner Company, Los Angeles, Cal."

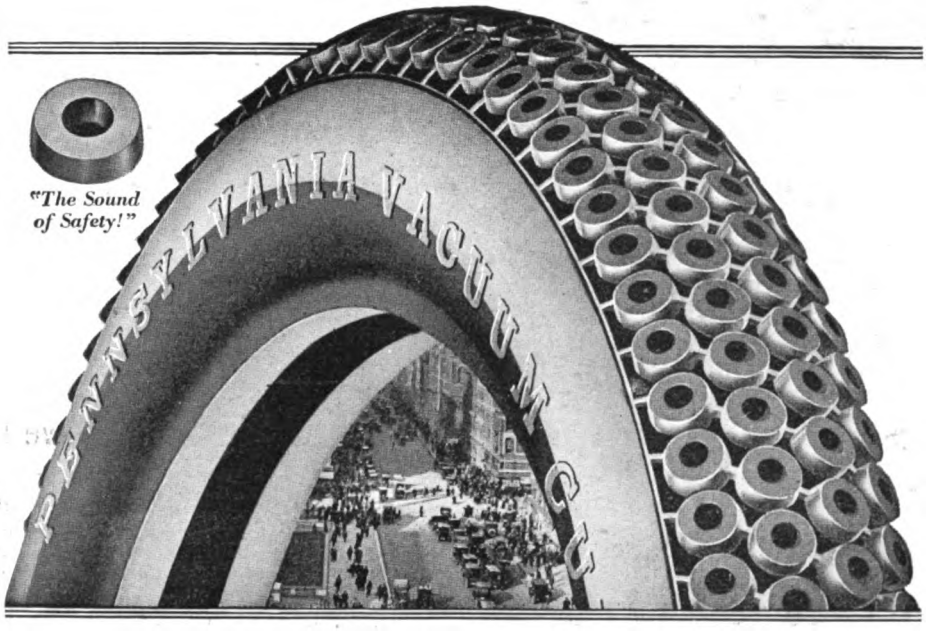
Praise from Texas

Guy F. Stovall writes us as follows from El Campo, Texas:

"I drove a Ford last July from here to the Pacific Coast, equipped with Pennsylvania Vacuum Cup casings on rear wheels, over the worst roads imaginable—hundreds of miles of sharp rocks and gravel—2100 miles in all. The casings stood the gaff—the cups in the center of the casings were not even worn off. The car was heavily loaded and I didn't expect these casings to last through the trip, but they appear to be good for two more trips over the same route."

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Advertisement of the Month



THAT rigid adherence to traffic regulations which protects the cautious motorist at congested intersections is completed by full equipment of Vacuum Cup Tires.

The deep-purring "Sound of Safety" of the Vacuum Cup Tread means the cups are exercising their famous *grip-hold-letgo* principle of suction on wet, slippery pavements, generating *safety* every inch of the way.

The Vacuum Cup Tread means *extra service*. It is built of hundreds of sturdy Vacuum Cups over an already extra heavy, extra ply foundation, giving *safety* and *service* far beyond the limitations of *ordinary* makes of tires, though the purchase price is no more.

Rough country roads or smooth city streets —they serve as well on one as on the other

PENNSYLVANIA RUBBER COMPANY OF AMERICA, INC.,
JEANNETTE, PENNSYLVANIA
Branches and Service Agencies Throughout the World

VACUUM CUP CORD TIRES *NOW COST NO MORE* THAN ORDINARY MAKES

"*THE Sound of Safety,*" the *extra service*, the extremely *low price*, and their serviceability on *every* type of road —these are the big features of Vacuum Cup Tires which are emphasized in the September advertisement reproduced above, and which is scheduled for full pages in our generous list of nationally circulated magazines.

Proofs of this advertisement have been sent you. It takes but a minute to display them where they will be seen by the tire buyers in your territory. Such display undoubtedly will be productive of added profitable sales of Vacuum Cup Tires. If you have not yet posted your proofs, please do so at once. It is sound publicity which alert dealers are eager to receive and use.

Illinois Roads Punish

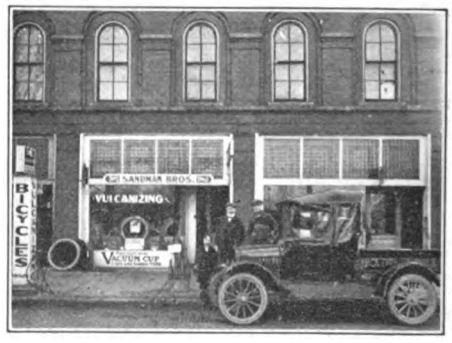
It's no pleasure jaunt to drive over the dirt roads of Southern Illinois, day after day, rain or shine, in hot and cold weather. Under such conditions, a motor truck would literally tear the heart out of the regular run of tires.



Vacuum Cup Tires, however, serve faithfully, no matter what is required of them. A notable instance of their sturdy performance is that experienced by the truck of the Southwestern Oil & Gas Company, Centralia, Ill. On the front wheels were mounted 36 x 6 Vacuum Cups and 38 x 7 on the rears. Up to February 1 of this year, the rears had rolled up 13,397 miles in eleven months, and then threw in an extra month for good measure. The front tires look good for another full season. Only three times were the tires "aired" and, up to the time the rear tires were replaced, not a tire had been taken from the rim.

Sandmans' Birthday

Heretofore, we have associated the word "Sandman" with that mythical old boy of nursery lore who prowls around late o' nights and makes the kiddies sleepy by casting sand in their eyes.

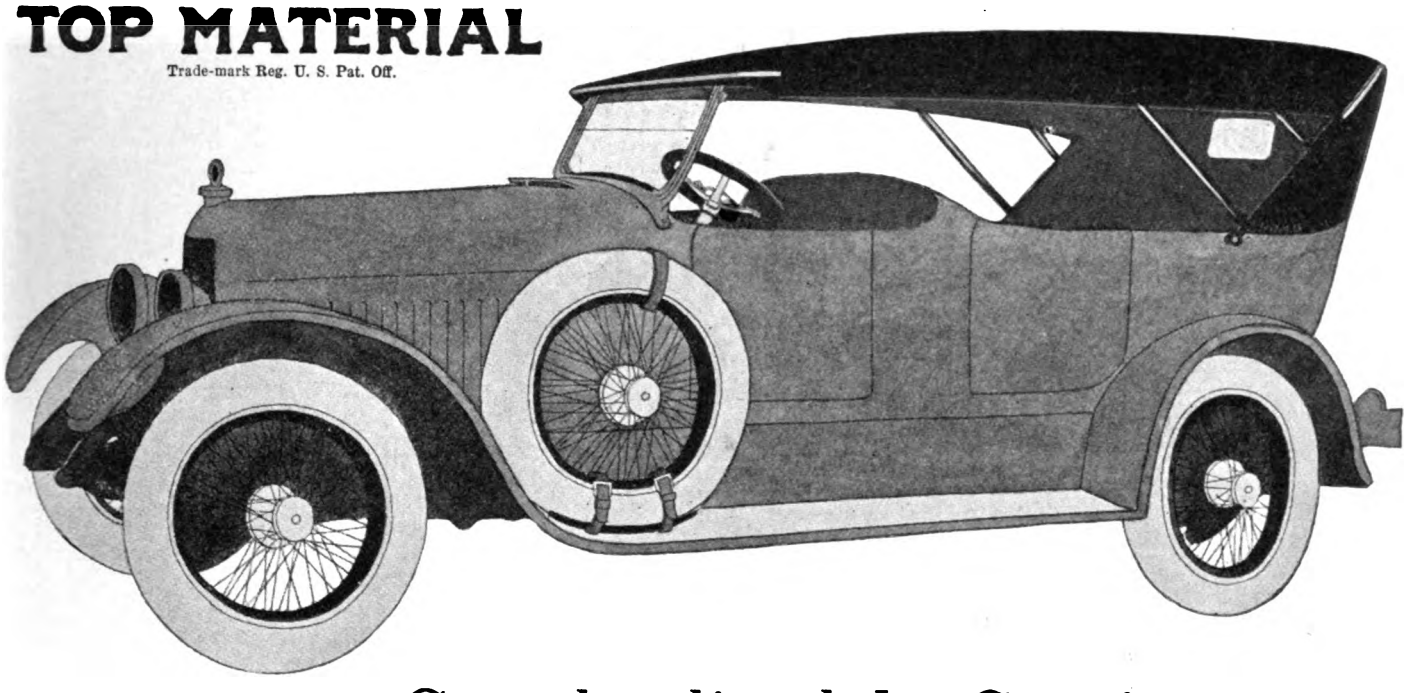


Now, however, it's taken on a newer and more significant meaning, for Sandman Brothers, Pennsylvania dealers at Franklin, Ind., have shown us that the name means wide-awakeness and pep twenty-four hours of every day. "Doc" (Harvey) Sandman manages the store at Franklin, while his brothers, Chester and William, keep the wheels in swift motion at Shelbyville.

Here is the Franklin place, snapped to commemorate the recent observance of their first anniversary as Vacuum Cup dealers. A few weeks ago a large addition was erected in the rear of the store for storage and "car laundry service" facilities. In addition to handling Vacuum Cup Tires and "Ton Tested" Tubes, Sandman Brothers carry a complete line of high-grade bicycles.

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NEVERLEEK
TOP MATERIAL
Trade-mark Reg. U. S. Pat. Off.



Standardized by Service

WHEN Neverleek Top Material was first placed on the market ten years ago, we announced that here was a material that could be accepted as a standard.

We had made the tests on which to base this assertion. Not only laboratory tests, but the severest trial of actual usage, in all weathers, winter and summer, over a long period. It was offered with a guarantee of satisfactory service.

Neverleek was adopted immediately by some motor car manufacturers as regular equipment. It made good thoroughly, surpassing all expectations of its users.

Each year the list of cars on which Neverleek Top Material is carried has grown. For the last five years it has been regular equipment on a big majority of high-grade cars; on three times as many makes of cars as any other branded material.

The quality of Neverleek has been maintained because we, as sole manufacturers, have controlled and completed every process of its making. It bears our guarantee and our trademark is stamped on the lining of every other yard.

In actual service, over these ten years, Neverleek has proved its quality as a standard. Its performance has always been better than its promise. It has given satisfaction to manufacturer, dealer and car owner.

For all purposes for which flexible top material is needed, Neverleek has the strength, the stamina, the beauty and the durability to give continued satisfaction. These are the essential elements for standardization.

Samples and prices are cheerfully furnished on request, to motor car manufacturers and custom top makers.

F. S. CARR COMPANY

31 Beach Street, Boston, Mass. 969 Woodward Ave., Detroit

Branch Sales Offices and Stock Rooms

42 Selden Ave., Detroit, Mich. 14 Nassau St., Atlanta, Ga. 321 No. 14th St., St. Louis, Mo.

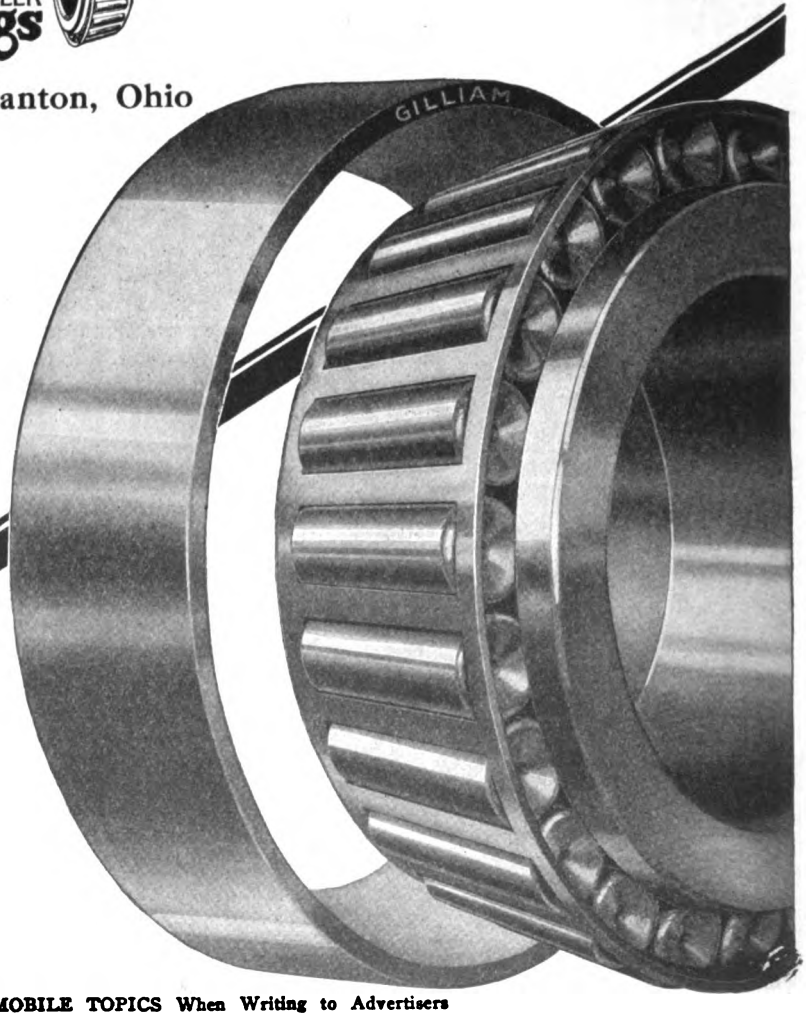
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When you see a tapered roller bearing with rollers that are fully concaved at one end and flush at the other, that bearing, you may be certain, is a—

GILLIAM TAPERED ROLLER Bearings

The Gilliam Mfg. Co., Canton, Ohio

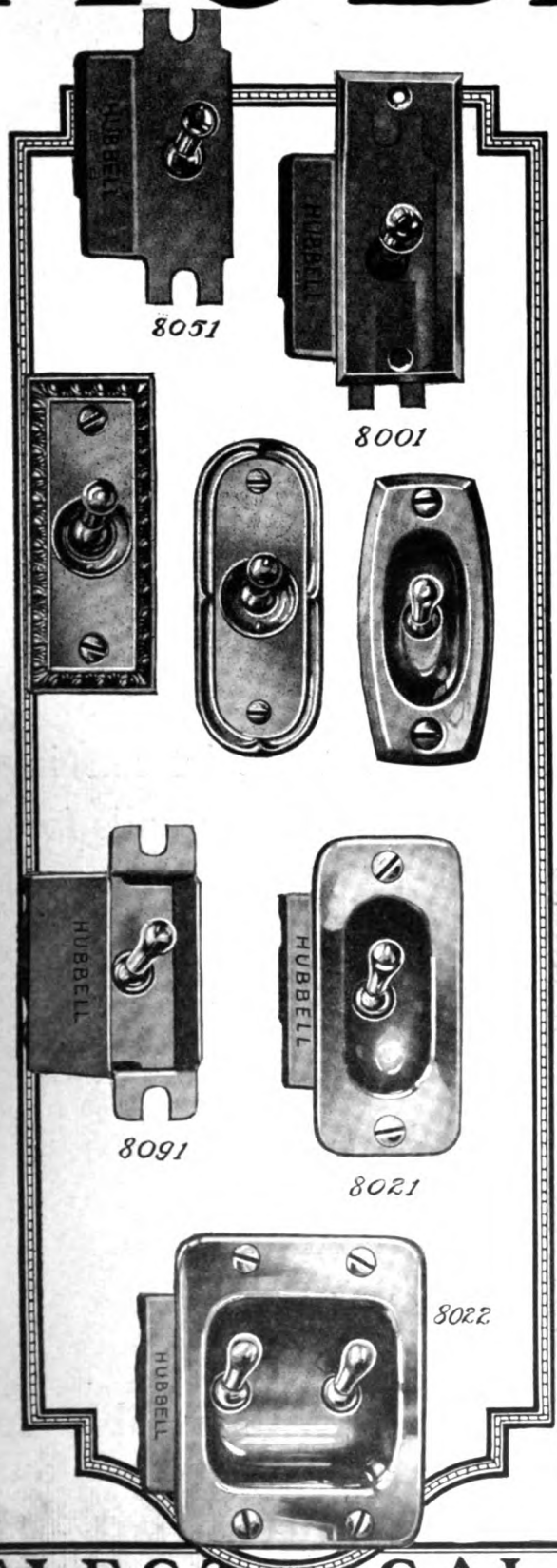
ALLOY Steel THROUGHOUT



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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HUBBELL



Toggle Switches

Add character to enclosed automobile Lighting Equipment.

Mechanism is strong, neat and convenient.

Furnished with standard or special plates—any finish.

Specify Hubbell Toggle Switches for enclosed body work.

HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.
2232-U



ELECTRICAL SPECIALTIES

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The Sign of Service

Let Your Nearest Ahlberg Branch Be Your Stock Room For Ball Bearings

We have all types of the highest grade ball and roller bearings in stock ready for immediate delivery.

In addition we have complete stocks of Ahlberg Ground Bearings to be had in exchange for your worn bearings, at a considerable saving.

When you next need bearings call at our nearest branch.

BRANCHES:

ATLANTA, BOSTON, BUFFALO, BALTIMORE, SEATTLE, BROOKLYN, CINCINNATI, CLEVELAND, ST. PAUL, COLUMBUS, DALLAS, DETROIT, INDIANAPOLIS, LOS ANGELES, DULUTH, KANSAS CITY, MEMPHIS, MILWAUKEE, MINNEAPOLIS, OMAHA, NEWARK, NEW ORLEANS, ST. LOUIS, NEW YORK, PORTLAND, OAKLAND, PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, WASHINGTON, TOLEDO, YOUNGSTOWN

Ahlberg Bearing Company
317 E. 29th St. Chicago, Ill.

A car is well built, or poorly built, according to the service it gives the average owner under average conditions.

Proper lubrication is absolutely vital to that service.

Both laboratory and service tests prove that perfect lubrication in the gear boxes calls for Dixon's 677

Seven scientific reasons will be mailed on request.

Joseph Dixon Crucible Co.
Jersey City, N. J. DXN **Established 1827**

Makers of Quality Lubricants

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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STANDARD EQUIPMENT ON OVER 100 MAKES OF PASSENGER CARS AND TRUCKS

PERFECTION
SPRINGS

Our veteran spring men
often say that
making springs is like
playing poker.
It's all in the "draw."
You can rush them
through a hot draw fire
to the required heat,
or you can anneal them
slowly and thoroughly,
through and through,
a very much longer
process. Only the
life of the spring,
and the cost sheet,
tell the difference.

THE PERFECTION SPRING COMPANY
CLEVELAND, OHIO

STANDARD EQUIPMENT ON OVER 100 MAKES OF PASSENGER CARS AND TRUCKS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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UNION DRAWN STEEL COMPANY

The World's Largest Bright Finished Steel Plant Offers You

QUALITY and SERVICE

COLD DRAWN AND TURNED AND POLISHED

Bessemer, Open Hearth, Nickel Chrome and Vanadium Steel

OUR WAREHOUSES CARRY A LARGE AND COMPLETE STOCK

Cold Drawn Shafting and Screw Stock in all sizes of Round, Flats, Squares and Hexagons

UNION DRAWN STEEL COMPANY

Main Office, Beaver Falls, Pa. **Works, Beaver Falls, Pa., and Gary, Ind.**

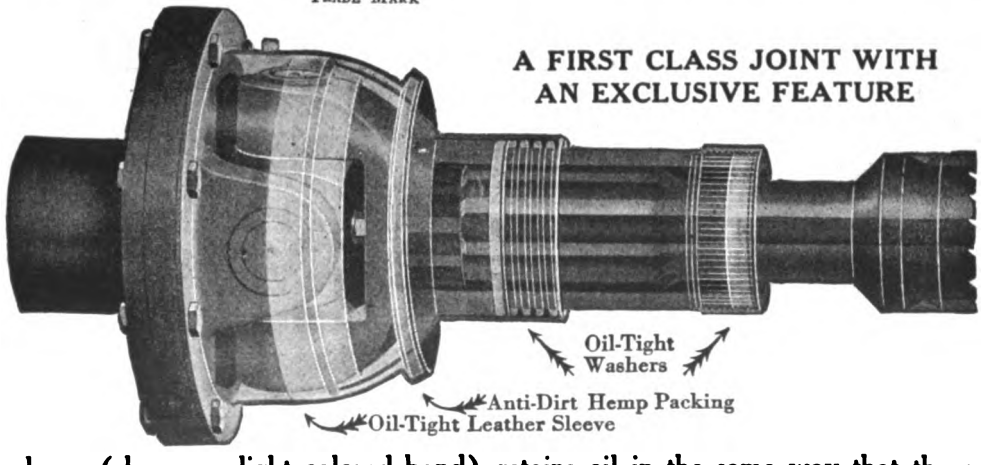
Offices and Warehouses—New York, Chicago, Philadelphia, Cincinnati, Detroit
Sales Offices—Boston, Buffalo and Cleveland

DO YOUR JOINTS THROW GREASE?

Do the bushings squeak, overheat and work loose in the Yokes?
If these things occur you are NOT using

"M & E" Oiltite Trade Mark UNIVERSAL JOINTS

A FIRST CLASS JOINT WITH AN EXCLUSIVE FEATURE



The leather sleeve (shown as light colored band) retains oil in the same way that the cup leather in a tire pump retains air. Standard Equipment on a Number of Well Known Motor Vehicles.

MERCHANT & EVANS CO., Philadelphia, Pa.

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Protect Your Springs
and You Protect Your Comfort

WEFCO Patent Spring Covers retain the lubricant between spring leaves—where it is needed. They keep out moisture and dirt, prevent rust and keep the springs in perfect condition. By eliminating needless vibration, they assure easy riding.

Trim-fitting as a glove, Wefco is the spring cover with the right sort of detail. No hooks, no eyes—but a perfect system of invisible lacing.

Made of the best imported hides, Wefcos improve the appearance of the handsomest car.

WEFCO PATENT SPRING COVER

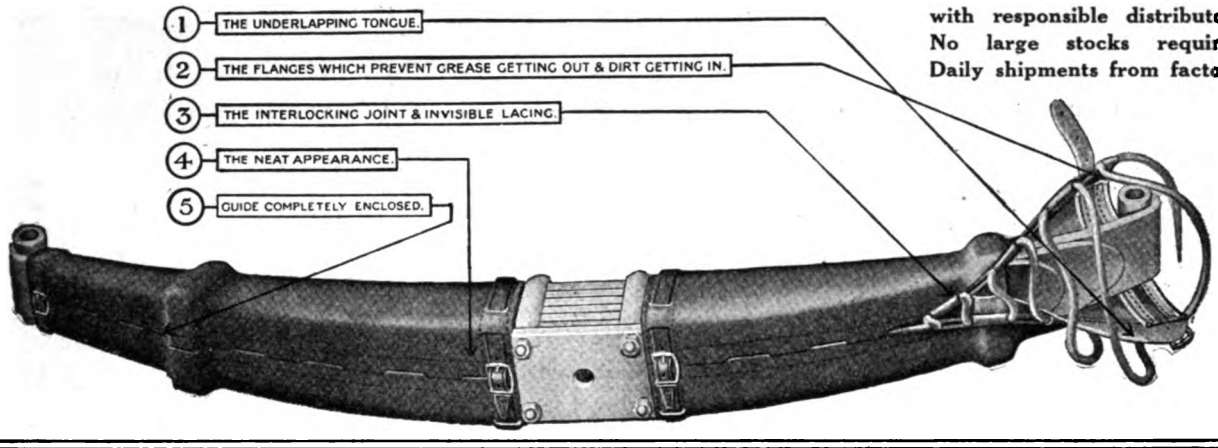
WEFCO COMPANY

440 West 41st Street New York City

Telephone Longacre 8828

Distributors:

Territory is now being closed with responsible distributors. No large stocks required. Daily shipments from factory.



MUNCIE WOOD WHEELS



IN developing the modern high class motor car automotive engineers have had to answer these two questions for each unit in the car.

How will it perform?
How will it look?

Performance of Muncie Wood Wheels is guaranteed by their staunch construction and demonstrated ability to stand up under the most exacting conditions of road or load.

Their appearance is assured by the high grade workmanship and attention to detail of finish for which the Muncie Wheel Company is known.

Send us blue prints for your next job. We will solve your wheel problems.

AUTOMOBILE WHEELS COMPLETE

MUNCIE WHEEL COMPANY, MUNCIE, INDIANA

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Interstate

Alloy Spring Steel

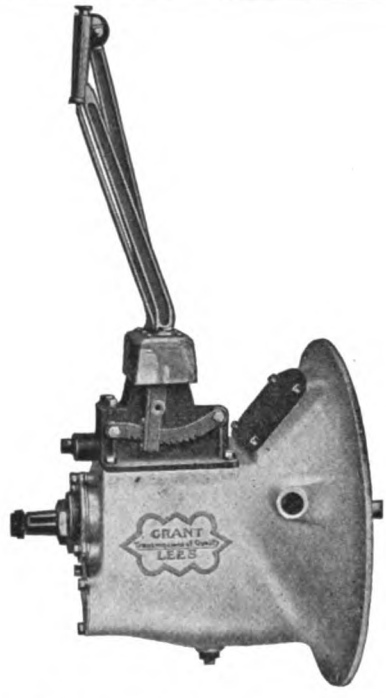
is giving marked satisfaction to all concerned, from the heat-treaters in the Spring Shops to the owners and drivers of the automobiles and trucks in which it is used.

Interstate Alloy Spring Steel is offered in the following grades:

Chrome
Chrome Vanadium
Chrome Molybdenum
Silico-Manganese

Following S. A. E. specifications or special analyses as preferred.

Interstate Iron & Steel Co.
104 South Michigan Avenue
Chicago



Grant-Lees Transmissions

Manufactured by
THE GRANT-LEES GEAR CO.
CLEVELAND, OHIO

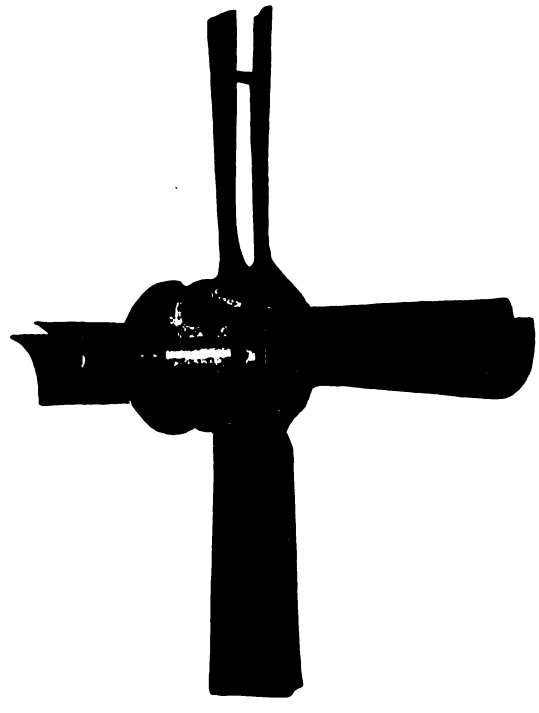
District Managers and Special Representatives

LARGE Automobile Manufacturer wants thoroughly competent experienced district sales managers of vision and exceptional executive ability. Also special representatives of executive officers of the company.

Correspondence strictly confidential.

Address Box 809.
AUTOMOBILE TOPICS

MULTIBLADE FAN



DETROIT CARRIER & MFG. CO.
DETROIT, U. S. A.

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Why car-owners demand the

ANDERSON AUTOMOBILE SPRING LUBRICATOR

Anderson-equipped springs will function perfectly, without a moment's care, during thousands of miles of strenuous use. No oil-can, grease-gun, or spring-spreader is necessary. Springs are kept constantly and automatically greased. Dirt cannot get inside the covers; rust cannot form to cause spring breakage.

Anyone can attach Anderson covers. Not even the spring clips need be removed. Simple as lacing a shoe. Covers are durable, oil- and water-proof. Cannot squeak, rust or rattle. Made for every model of car or truck, in genuine leather, or heavy artificial leather.

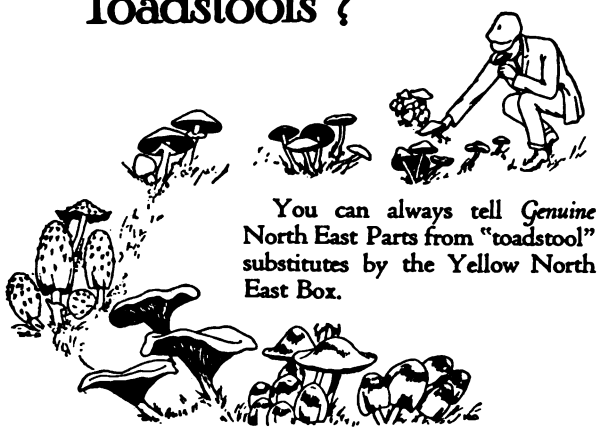
Our special non-acid grease is best for spring lubrication. Will not change consistency with heat or cold. Contains nothing harmful to metal or leather. Ask about it.

Dealers:
If you would like to sell Anderson Lubricators in your territory, write us or our nearest distributor.

Anderson Spring Lubricator Co., Inc.
1928 Parkway, Everett Sta. (49) Boston, Mass.



Mushrooms or Toadstools ?



You can always tell *Genuine* North East Parts from "toadstool" substitutes by the Yellow North East Box.

Genuine North East Service Parts are distributed to the trade by

North East Service Inc.
ROCHESTER, N. Y., U. S. A.

Atlanta, Ga. Rochester, N. Y.
Chicago, Ill. San Francisco, Cal.
Detroit, Mich. Windsor, Ont.
Kansas City, Mo. London, Eng.
New York City Paris, France



Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

EDMUNDS & JONES CORP.
Buchanan & Lawton Avenues
DETROIT, MICHIGAN

The Bearings Company of America

Lancaster Penna.



"STAR" Ball Retainers for Thrust, Magneto and Cup and Cone Bearings.
Thrust Ball Bearings.
Angular Contact Radial Bearings.
Angular Contact Thrust Bearings.

YOUR INQUIRIES ARE SOLICITED

Western Sales Office,
1012 Ford Bldg. Detroit, Mich.

L

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GABRIEL
SNUBBERS

Cause the car springs to regain their normal position gently after every bump, thereby making riding a real comfort always, eliminating spring breakage and protecting the entire car.

GABRIEL MANUFACTURING CO.
1421 East 40th Street CLEVELAND, OHIO

51 6/10 MILES ON A GALLON OF GAS

It is the official world's record breaking test with Ford Touring car. The 1922 Stromberg Carburetor and Hot Spot did it—made this marvelous mileage possible.

Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

Live dealers are requested to write for facts pertaining to territory.

Stromberg Motor Devices Co.
64 E. Twenty-fifth St., Dept. 19 Chicago

BE[illegible]
ECL[illegible]SE
for ELECTRIC STARTERS DRIVE AUTOMATIC ENGAGING & DISENGAGING



194 Motor Car and Truck Builders Use It
ECLIPSE MACHINE CO., ELMIRA N. Y.

Motor Wheel PRODUCTS

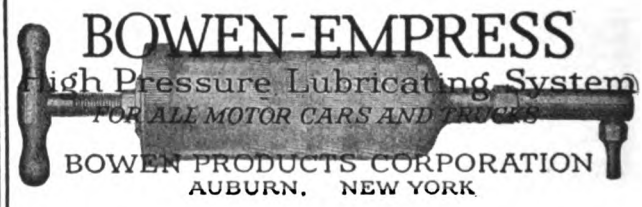
Gier Tuarc Steel Wheels
Gier-Lewis Steel Wheels
Gier Stampings
Wood Wheels for Cars and Trucks

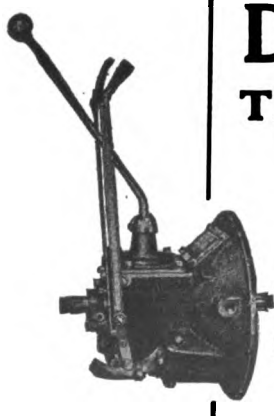
MOTOR WHEEL CORPORATION - LANSING, MICHIGAN

OVER 50,000 MILES

now reported on "Whitney" High Efficiency Front End Motor Chain Drives and still in good condition.

THE WHITNEY MFG. CO.
Hartford Conn.

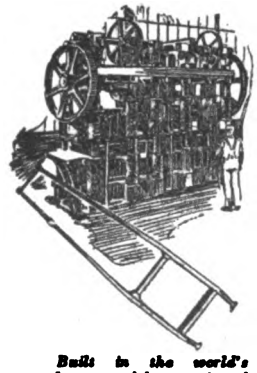




DURSTON TRANSMISSIONS

For trucks up to one-ton capacity, and Passenger Cars.

DURSTON GEAR CORPORATION
13 Maltbie St. Syracuse, N. Y.



Built in the world's largest and best equipped frame plant.

for
Better Motor Cars

SMITH FRAMES

Rear Axle Housing Assemblies, Running Boards and Hangers, Torque Arms and Tubes, Wheel Hubs and Flanges, Fender Brackets, Brake Drums, Body Sills

A. O. SMITH CORPORATION
Milwaukee, Wisconsin

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PARIS LONDON
BRUSSELS MADRID

Established 1840

Creators of Closed Car Fashions

Boyriven

Domestic and Imported AUTOMOBILE FABRICS

Carpets—Curtain Silks

Detroit Office: 1937 Dime Bank Building
Cleveland Office: 1428 Schofield Building
New York Office and Showroom: 225 West 57th Street

GURNEY

BALL BEARINGS

Have Greatest Load Capacity



Gurney Engineering Service is available at your request.

Gurney Ball Bearing Co.
Conrad Patent Licensee
Jamestown N. Y.

BROWN-LIPE-GEAR TRANSMISSIONS

BROWN-LIPE-CHAPIN DIFFERENTIALS

Both at Syracuse, N.Y.

WARNER GEAR COMPANY
MUNCIE, INDIANA

WARNER GEAR CO

CLUTCHES, TRANSMISSIONS, CONTROLS, DIFFERENTIALS

Grant Six

—an excellent car

Highest Quality—Correct Finish

AUTOMOBILE

Body, Hood and Fender

Sheets

This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

Through—

Asbestos

and its allied products
JOHNS-MANVILLE
Serves in Conservation

Heat Insulations, High Temperature Cements, Asbestos Roofings, Packings, Brake Linings, Fire Prevention Products

JOHNS-MANVILLE

AUTOMOTIVE EQUIPMENT

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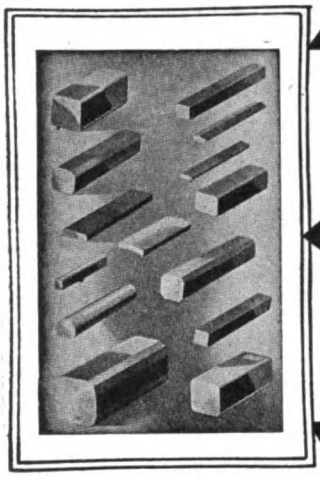


COUNTER-BALANCED CRANK SHAFTS HEAVY DIE FORGINGS

The Park Drop Forge Co.
Cleveland, Ohio

CHAMPION DROP FORGINGS

Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.
The Champion Machine & Forging Co., 3694 E. 78th St., Cleveland, O.
New York Office—30 Church St.
Philadelphia Office—Bourse Bldg.
Detroit Office—705 Ford Bldg.



COLD DRAWN STEEL
We specialize on accurately finished free cutting screw steel for automatic screw machine production.

MOLTRUP

Here is a page from our catalog, selected at random, reduced in size. Write for a copy—it's a valuable technical treatise on steel as well as a catalog of superfine Cold Drawn Steel Products.
MOLTRUP STEEL PRODUCTS CO.
Beaver Falls, Pa.

DOEHLER DIE-CASTINGS

A product whose uniformly high quality contributes largely to the high quality of the better class of motor cars and trucks. Send us your specifications.

DOEHLER DIE-CASTING CO.
BROOKLYN, N.Y.
CHICAGO, ILL. TOLEDO, OHIO.

SHARON PRESSED STEEL

MOTOR CAR and TRUCK FRAMES AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.

SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
SHARON, PA.

SHEET METAL STAMPINGS

From Steel, Brass, Bronze, Copper and Aluminum.

We also specialize in Case Hardening and Tool Tempering.

THE CROSBY COMPANY
Buffalo, N. Y.
New York Office: 30 Church St.
Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building

TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS

NATIONAL TWIST DRILL & TOOL CO.
DETROIT, U.S.A.



AUTOMOTIVE CABLE

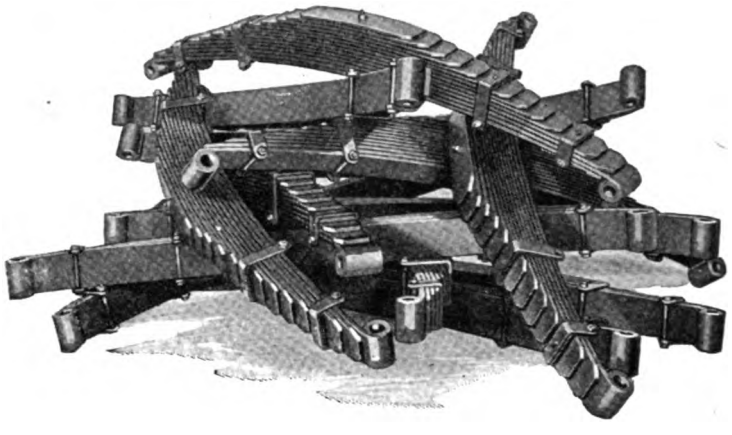
The vital nerve system of a motor car. Nowhere is recognized merit of greater importance.

The Packard Electric Company
WARREN, OHIO

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MATHER SPRINGS

Standard of the World



The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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We make a specialty of

FORMED TUBULAR

STEEL PARTS

such as

TORQUE TUBES, AXLE HOUSINGS, RADIUS RODS, EXHAUST TUBES, TAIL PIPES, IGNITION WIRING TUBES, STEERING COLUMN POSTS LAMP TIE RODS, RADIATOR OUTLET PIPES

The STANDARD STEEL TUBE Co.

TOLEDO, OHIO

General Sales Office:
General Motors Bldg. DETROIT, MICH.





INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co.....162, 163
Ahlberg Bearing Co..... 192
American Sheet & Tin Plate Co. 199
Anderson Spring Lubricator Co., Inc. 197

B

Baker R & L Co..... 188
Bearings Co. of America... 197
Bethlehem Spark Plug Co.. 171
Bowen Products Corp..... 198
Bower Roller Bearing Co.. 186
Boyriven Co., A..... 199
Brown-Lipe Chapin Co.... 199
Brown-Lipe Gear Co..... 199
Buick Motor Co..... 113

C

Carr Co., F. S..... 189
Champion Machine & Forging Co..... 200
Chandler Motor Car Co., Back Cover
Clark Equipment Co., Inside Back Cover
Courier Motors Co.....172a
Crosby Co..... 200

D

Detroit Carrier & Manufacturing Co..... 196
Dixon Crucible Co., Joseph 192
Dodge Brothers..... 114
Doehler Die-Casting Co.... 200
Dort Motor Car Co..... 180
Durston Gear Corp..... 198

E

Earl Motors, Inc..... 151
Eclipse Machine Co..... 198
Edmunds & Jones Corp.... 197

F

Firestone Tire & Rubber Co. 179
Fisher Body Corp..... 181
Fisk Tire Co., Inc..... 109

G

Gabriel Manufacturing Co.. 198
General Motors Truck Co.. 153
Gilliam Manufacturing Co.. 190
Goodrich Rubber Co., B. F. 115
Goodyear Tire & Rubber Co. 173
Grant-Lees Gear Co..... 196
Grant Motor Car Corp..... 199
Gurney Ball Bearing Co... 199

H

Hayes Wheel Co..... 184
Holley Carburetor Co..... 182
Hoover Steel Ball Co..... 203
Hubbell, Inc., Harvey..... 191
Hudson Motor Car Co..... 102
Hyatt Roller Bearing Co.. 176

I

Interstate Iron & Steel Co.. 196

J

Johns-Manville, Inc..... 199

K

Kelly-Springfield Tire Co.. 204

Digitized by Google

INDEX TO ADVERTISEMENTS

L

Laidlaw Co., Inc., Inside Front Cover
Lavine Gear Co..... 111

M

Madison-Kipp Corp..... 167
Mather Spring Co..... 201
Maxwell Motor Corp..... 157
Merchant & Evans Co..... 194
Midwest Engine Corp..... 166
Moltrup Steel Products Co.. 200
Monogram Lens Corp..... 110
Morse Chain Co..... 175
Motor Wheel Corp..... 198
Muncie Wheel Co..... 195
Muskegon Motor Specialties Co. 202

N

Nash Motors Co..... 116
National Twist Drill & Tool Co. 200
North East Service, Inc.... 197

O

Oakland Motor Car Co.... 158

P

Packard Electric Co..... 200
Parish & Bingham Corp.... 177
Park Drop Forge Co..... 200
Peerless Motor Car Co..106, 107
Pennsylvania Rubber Co. of America, Inc..... 188a
Perfect Window Regulator Co. 112
Perfection Spring Co..... 193
Prest-O-Lite Co., Inc..... 169
Pyrene Manufacturing Co.. 183

R

Racine Rubber Co..... 155
Rickenbacker Motor Co.... 185

S

Schwarz Wheel Co..... 108
Sharon Pressed Steel Co... 200
Shuler Axle Co., Inc..... 187
Smith Corp., A. O..... 198
Standard Steel Tube Co... 202
Stephens Motor Car Co., Inc. 170
Stevens-Duryea, Inc..... 178
Stewart-Warner Speedometer Corp. 101
Stromberg Motor Devices Co. 198
Studebaker Corp..... 105
Stutz Motor Car Co. of America, Inc. 164, 165

T

Ternstedt Manufacturing Co. 132

U

Union Drawn Steel Co.... 194
United Alloy Steel Corp.. 168
United States Rubber Co.. 149

W

Warner Gear Co..... 199
Wefco Co. 195
Westinghouse Union Battery Co. 172
Whitney Manufacturing Co.. 198
Wills & Co., C. H..Front Cover
Wyman-Gordon 103

Z

Zenith Carburetor Co..... 104

THOSE who have experienced the "just as good kind" now demand Hoover.



STEEL
BRASS
BRONZE
MONEL METAL
BELL METAL
ALUMINUM
HOLLOW BALLS

The World's Largest Manufacturer

Hoover Steel Ball Co.
ANN ARBOR, MICH.

CHICAGO .....180 N. Market St.
PHILADELPHIA.....259 Middle City Bldg.
CLEVELAND.....3124 Edgehill Road
CHATTANOOGA.....Sanford Brothers

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KEEP SMILING WITH KELLYS

Lotta Miles

AFTER all, the big thing in a tire is quality. Low price may gain temporary favor but mileage and service will be remembered long after price is forgotten. That is why we have constantly refused to lower Kelly-Springfield quality to meet the demand for lower prices.

More efficient manufacturing processes and increased production have brought Kelly prices down but Kelly quality is higher than ever. The Kellys of today are the finest tires we have ever built.

If you would like to sell a quality tire—a tire that will give service—a tire that will help you build a permanent and profitable business—write for the Kelly proposition *today*.

Now, it costs no more to buy a KELLY

KELLY-SPRINGFIELD TIRE CO.

GENERAL SALES DEPARTMENT

250 West 57th Street

NEW YORK

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Quality in a truck axle is far more important than its type. Clark Axles are good axles.

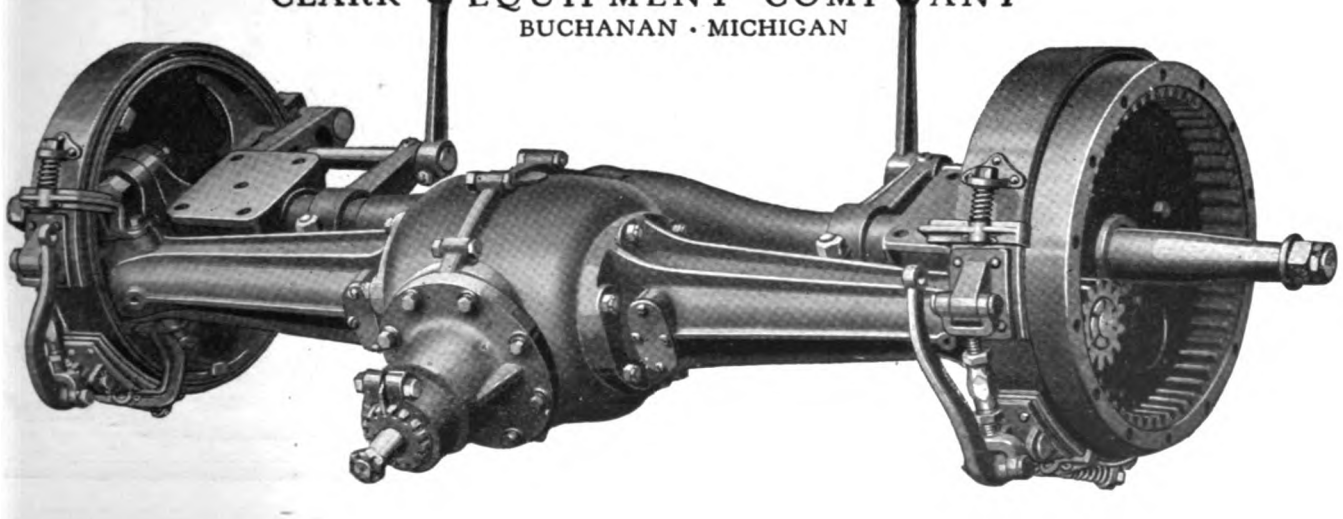
CLARK AXLES
are good axles

Clark Axles are thoroughly tested. Every part is subjected to minute inspection during manufacture and every complete axle is tested before shipping.

Axle Models	Plants
5 Internal Gear	Buchanan, Michigan
3 Bevel Gear	Berrien Springs, Michigan
3 Special Motor Bus [Internal Gear]	Battle Creek, Michigan

Also Builders of Clark Steel Wheels for Trucks

CLARK EQUIPMENT COMPANY
BUCHANAN · MICHIGAN



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New Low Prices Now In Effect

Sales Increase Proves

CHANDLER SIX

Offers Greatest Values

PURCHASERS are quick to concede the dominating Chandler value at the new low prices.

The dashing style, rich finish, modern appointment and superior performance tell their own story, and orders result.

Sales in every part of the country prove this.

Among the ten distinctive models, Chandler offers at the beginning of the fall season three extraordinary closed car leaders—

New Metropolitan Sedan -	**$2295**
Seven Passenger Sedan - -	**2375**
Four Passenger Coupe - -	**1995**

What could you do with such a line?

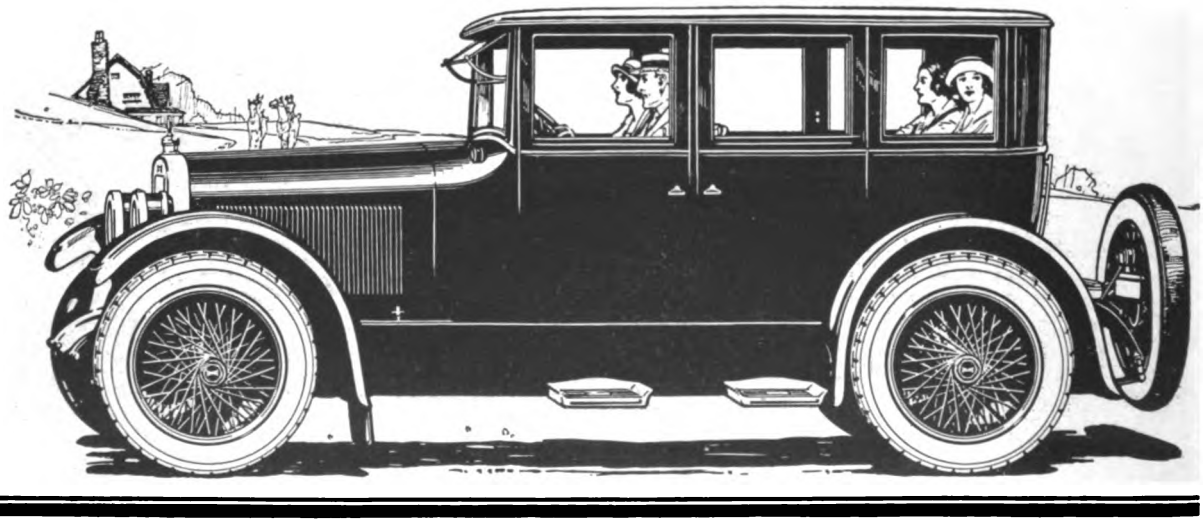
How do you know your territory is permanently closed?

TOURING CAR

$1495

F. O. B. CLEVELAND

THE CHANDLER MOTOR CAR COMPANY, CLEVELAND
Export Dept., 1819 Broadway, New York City Cable Address, "Chanmotor"



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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 3 | PUBLISHED WEEKLY NEW YORK, SEPTEMBER 2, 1922 | FIFTEEN CENTS A CO $3.00 A YE

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.

Here's a thought for every man who makes his living selling motor cars—

The open car is more of a luxury now than the enclosed car. It is completely satisfactory for only three months of the year.

The enclosed car is a necessity the year 'round.

Edward S. Jordan

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MULTIPLIED PROFITS



In one city after another, where records are being kept, motorists are learning the remarkably low cost of Marmon maintenance. The cost has grown less and less each year, until now the Marmon is undoubtedly the most economical fine car on the market.

This, together with the other outstanding Marmon superiorities, is winning many new friends—and that means increased sales for Marmon dealers.

"Standardized Service" as adopted by Marmon, is another example of the cooperation offered by Nordyke & Marmon Company to its dealers.

NORDYKE & MARMON COMPANY *Established 1851* INDIANAPOLIS

MARMON

The Foremost Fine Car

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The LANG BODY CO.
Cleveland O.

Announces

As an addition to its celebrated line of semi-custom-built closed bodies,

A 4-Passenger Coupe for Dodge Brothers Chassis

And invites inquiries from Dodge Brothers Dealers regarding quantity deliveries after November 1st.



The 4-passenger coupe body for the Dodge Brothers No. 3 Chassis—a classical car with an almost infinite market

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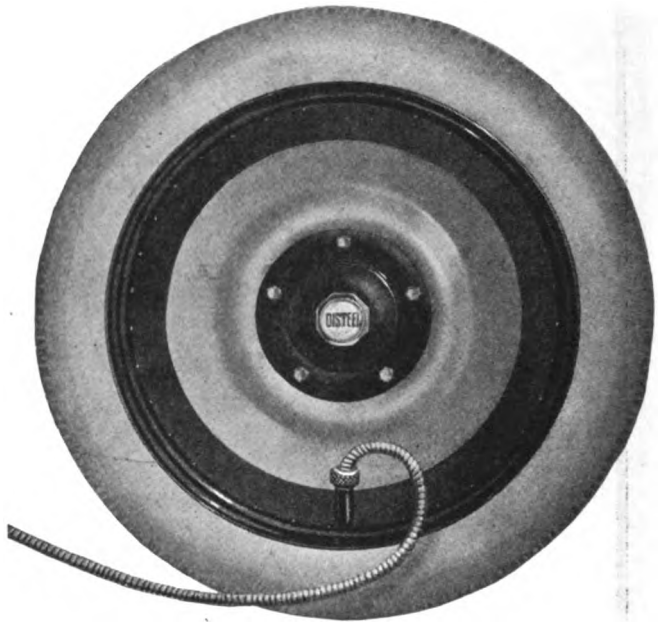
They Save Your Car

TO make Disteel Wheels rigid and almost indestructible would be for us a very easy task.

Far finer engineering and workmanship are needed to build Disteel Wheels which, though supremely strong as compared with other wheels, are yet flexible enough to absorb road shocks and even to sacrifice themselves when an impact comes which would otherwise wreck the vital mechanism of your car.

Such an impact may force a Disteel Wheel out of true but your spare Disteel is ready to replace it and the structural damage to your disc can never result in a replacement cost of more than $5.

Do you wonder that men who best know motor cars invariably tell you there is no adequate substitute for genuine Disteel Wheels?



You will need no special valve attachments or fittings for tire inflation with your new Disteels

Exclusive Manufacturers

DETROIT PRESSED STEEL COMPANY

6660 Mount Elliott Avenue Detroit, U. S. A.

DISTRIBUTORS:

189 Academy Street LONG ISLAND CITY
732 So. Michigan Avenue CHICAGO
682 Beacon Street BOSTON
865 Post Street SAN FRANCISCO

DISTEEL WHEELS

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, SEPT. 2, 1922 NO. 3

TABLE OF CONTENTS

Coal Tension Less at Motor Factories 221
Low-Priced Closed Cars Coming Ahead 221
White Now U. S. L. Vice-President 222
Hunt Joins Rayfield 222
Hundt Heads A. T. Baker Sales 222
Senate Would Levy High Reimport Duty 223
New Oakland Models Refined in Details 223
Roamer New "Six" Out Soon in Three Types ... 225
Outlook Bright, Is Word from Packard 225
Studebaker Analysis Shows Large Profits 226
Reo Pays Extra Dividend 226
Moon Company Shows Substantial Income 227
Ford Balance Sheet Records Big Gains 227
M. A. M. A. Sales Records Show Decrease 228
New American Models Carry Mile Warranty ... 229
Anderson Directors Elect New Officers 229
Rolls-Royce of America Passes 350 Output Mark 229
Wickwire Spencer to Acquire Wire Concern ... 230
Hertz Tells of Plans for Yellows in Paris 230
U. S. Studies Corrosion of Metals Under Oil Film 230
Lang Goes Into Big Production Schedule 231
Tire Producers See No Danger from Ford 231
D. A. D. A. Closed Car Salon in October 231
Portugal Seeks Way to "Side-Step" Duties 232
Klein Urges Better Salesmanship Abroad 232
Bad Roads Hinder Sales of Motors in Japan 232
Michigan Dealers Fear Rail Walkout 233
Western Farm Belt Promises Big Trade 233
Straight-Side Tire Markets Increased 234
Charge 76,000 Deaths to Careless America 234
Federal-Aid Roads Grow by 600 Miles 235
Heat Fails to Daunt "Ask 'Em to Buy"-ers 235

FEATURES IN THIS ISSUE

Teach the Boy About Motors! 239
Letter from a Dealer 243
Railroad Regulation of Prime Importance 244
By George C. Conn
Selling Goods at Retail 245
"To the Ladies," Says Car Dealer 246
Latest Offerings of the Car Makers 248
Ideas That Lead to Greater Sales 250
In the Field of Accessories 251
With the Wholesalers and Retailers 253
Calendar 260
Table of Passenger Car Selling Points (copyrighted) 265
Alphabetical Index to Advertisers 294

"NORMA"
PRECISION
BALL BEARINGS

Behold, how small a thing—in physical dimensions—is the bearing of a magneto or a lighting generator. Yet, how large is its capacity for causing trouble, delay, expense, loss—if it prove inadequate to its duty.

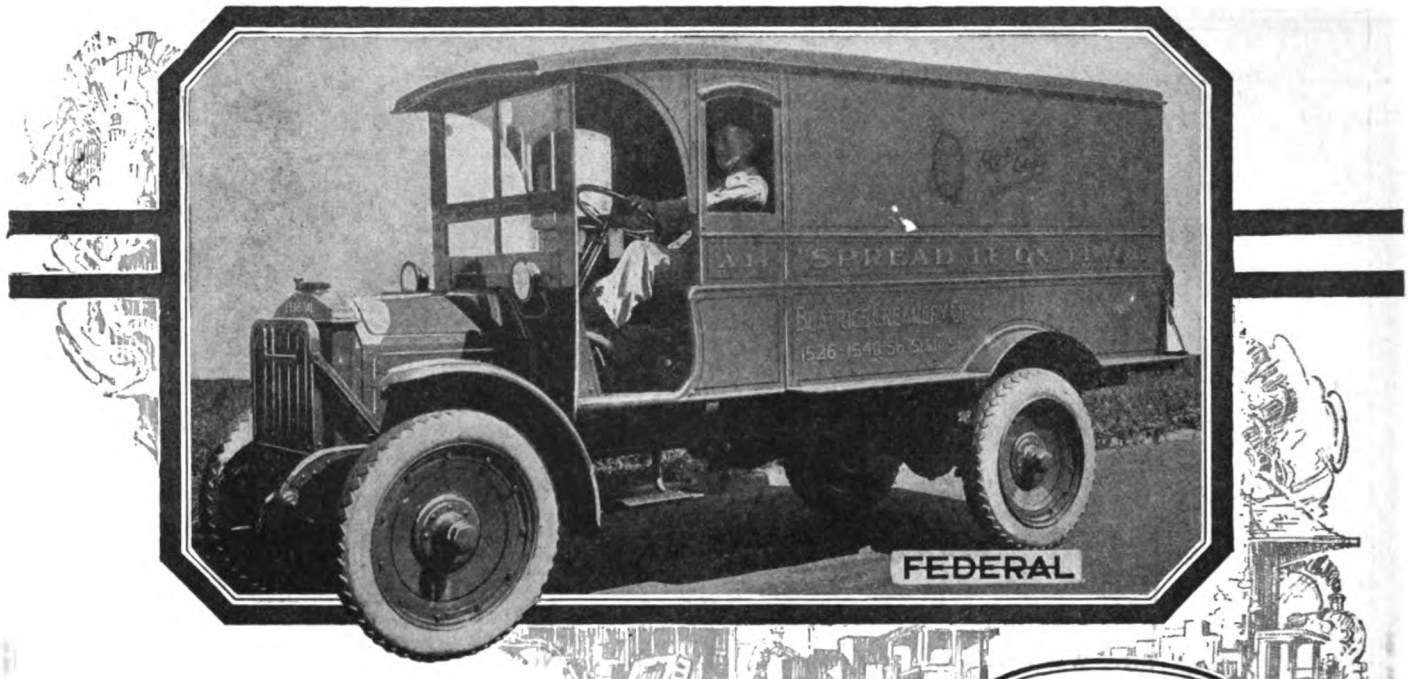
Year after year, makers of dependable ignition apparatus and lighting generators continue to use "NORMA" Precision Bearings—to protect themselves against criticism, to protect car, truck and tractor builder against discredit, and to protect car, truck and tractor owners against trouble and loss.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Dependability

It is now our privilege to serve an influential group of truck manufacturers in addition to the many car builders who have long used Remy equipment.

Remy starting, lighting and ignition systems for commercial vehicles are built for rigorous service.

Distinct design, durable materials and uncompromising workmanship assure the dependable operation of Remy electrical systems.

The thermostatically controlled generator, the husky starting motor, the long-lived ignition system, and every other piece of Remy equipment, possess the dependability truck buyers look for.

REMY EQUIPPED

TRUCKS

BROCKWAY
DENBY
FEDERAL
G. M. C.
KISSEL
OGDEN
RUGGLES
SERVICE
STEWART
TRANSPORT
UNITED

CARS

ANDERSON
APPERSON
AUBURN
CHALMERS
CHEVROLET
ELGIN
JEWETT
KISSEL
MITCHELL
OAKLAND
OLDSMOBILE
PAIGE
STUDEBAKER
STUTZ
VELIE

REMY

STARTING LIGHTING IGNITION SYSTEMS

REMY ELECTRIC COMPANY ANDERSON, INDIANA

PRODUCTS OF REMY CONSTANT PERFORMANCE

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Supposin'

Supposin' you step into a shoe store and ask for a pair of a certain make of shoes. Then—

Supposin' the salesman looks into your old shoes and finds you wear number 10 1/2. Now—

Supposin' he tells you that the shoe manufacturer makes that particular shoe only in size number 9. You wouldn't waste any more time with that dealer—or with that shoe. Now—

Supposin' you look at the automobile business from the same standpoint of merchandising. And—

Supposin' you had a line with a car that would fit every customer that you now have to turn away. For instance—

Supposin' you had the Studebaker line with three distinct models and 13 body types, *all sixes* and each a *Studebaker,* each dominating its market—and a fair, square concern with whom to deal, a manufacturer that has been building up prestige for its products through 70 years of honest manufacture—wouldn't you be interested?

Supposin' you get in touch with us and let us tell you something else about the Studebaker line and the opportunity it offers to business men!

MODELS AND PRICES—*f. o. b. factories*

LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*		SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*		BIG-SIX *7-Pass., 126" W. B., 60 H. P.*	
Touring	$ 975	Touring	$1275	Touring	$1650
Roadster (3-Pass.)	975	Roadster (2-Pass.)	1250	Speedster (4-Pass.)	1785
Coupe-Roadster (2-Pass.)	1225	Roadster (4-Pass.)	1275	Coupe (4-Pass.)	2275
Sedan	1550	Coupe (4-Pass.)	1875	Sedan	2475
		Sedan	2050	Sedan (Special)	2650

Cord Tires Standard Equipment

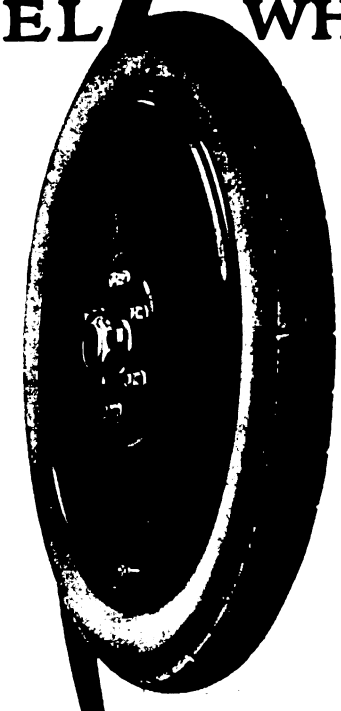
THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

Studebaker

THIS IS A STUDEBAKER YEAR

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BUDD
Michelin
STEEL WHEELS



Strength

People used to pay no particular attention to the wheels when buying a motor car. Wheels were simply—wheels. They were taken for granted.

Today it is recognized that this part of a motor car deserves more careful consideration.

Experience—often very bitter experience, too—has emphasized the folly of supporting a powerful and costly mechanism on an inferior foundation.

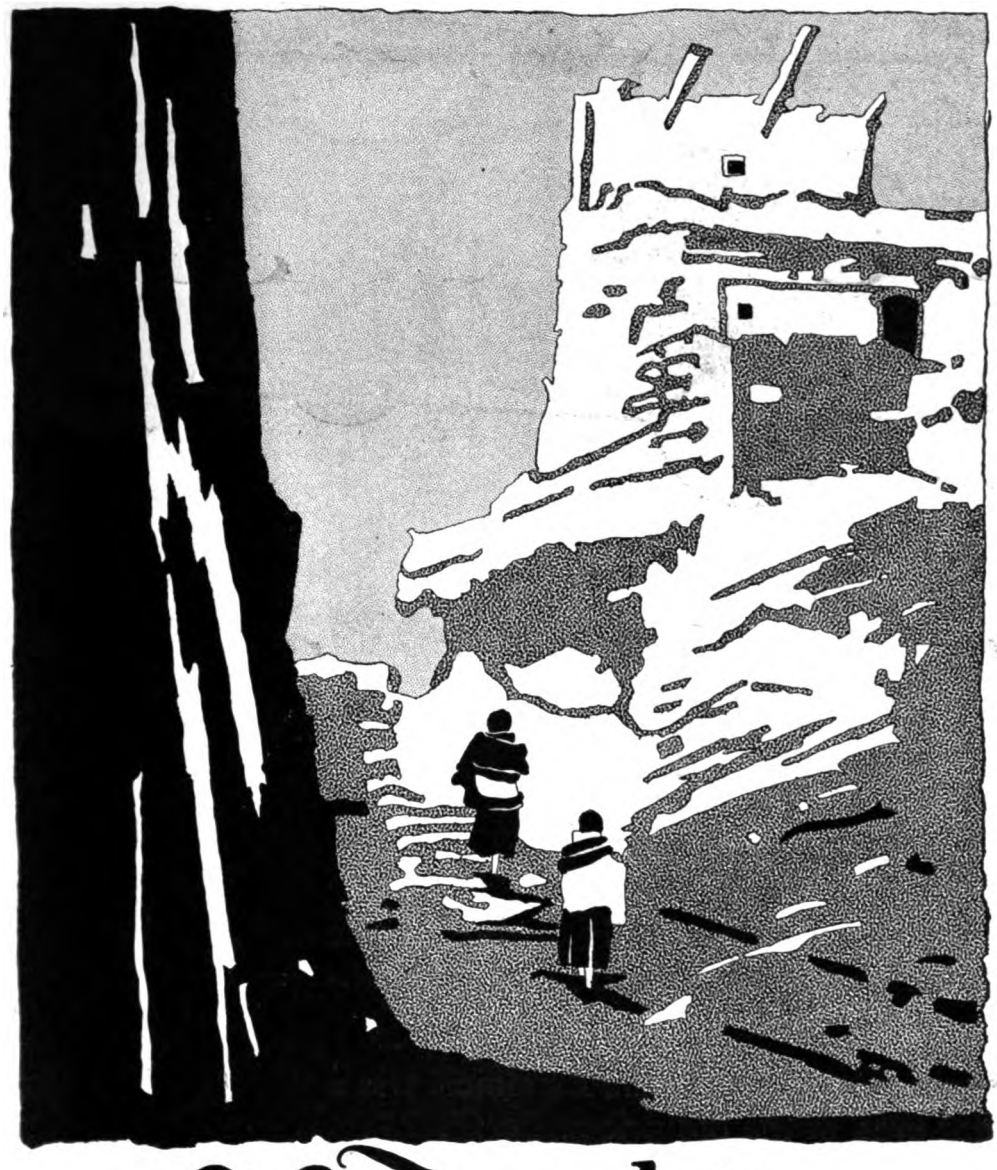
Wheels stand between the motor car and the road. Often between the passengers and disaster. They, alone, bear the terrific shock and strain of side-swaying, whirling around corners and skidding into curbs.

Michelin Steel Wheels combine exceptional lightness, resilience and beauty with very unusual *strength*. They bring to motoring a pleasant new sense of confidence and security.

Dodge Brothers, Studebaker, Willys-Knight, Chalmers, Winton, Nash, and Yellow Cab are among those who have adopted Michelin Steel Wheels as standard or optional equipment.

BUDD WHEEL COMPANY
Philadelphia

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Safe Foundation

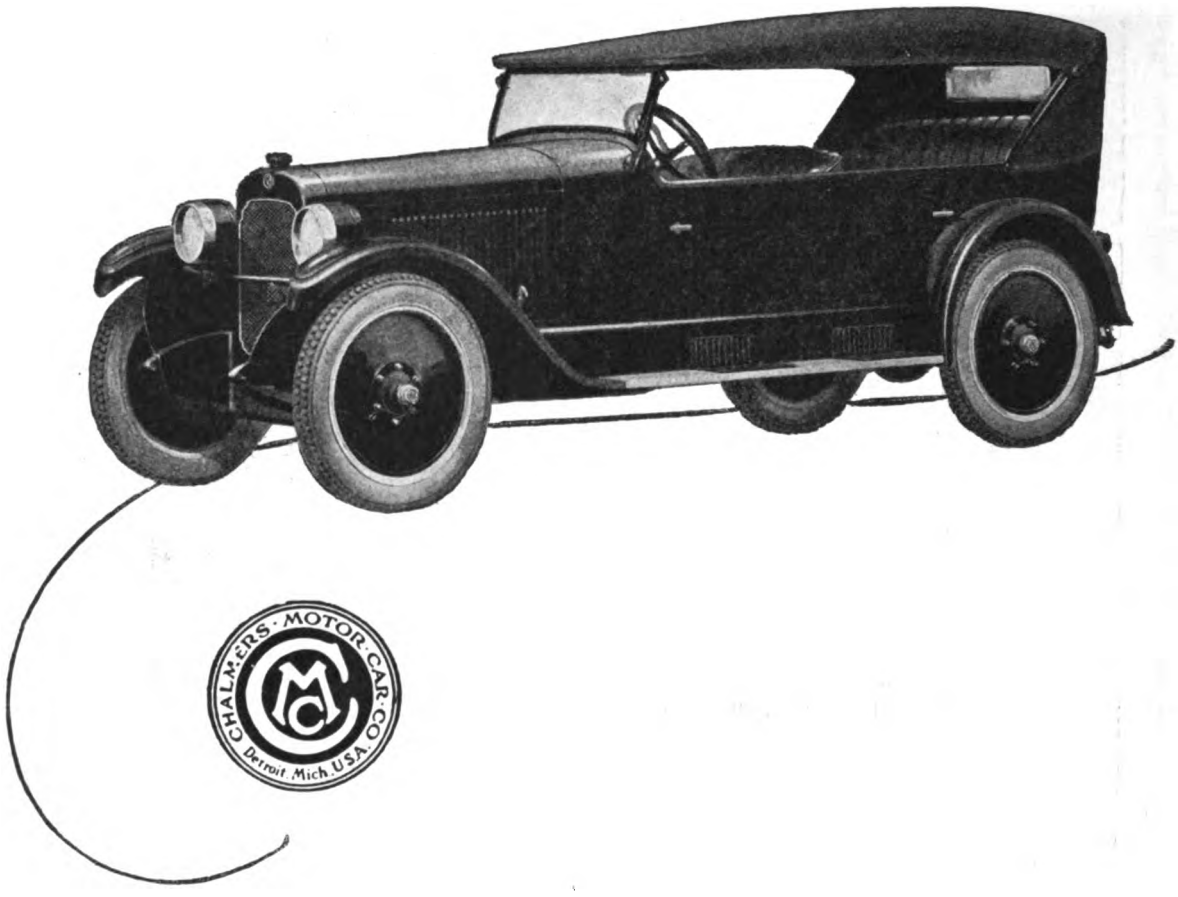
Our Metal Primer adheres firmly, under all climatic conditions, to the surface on which it is applied. It affords a safe foundation for succeeding coats.

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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Reduction of prices on the Chalmers Six is due to the determination of the Chalmers organization to give unequalled values.

Any Chalmers owner will tell you that the Chalmers was a clearly better investment even at the old prices.

Now the value is more pronounced than ever.

Learn more about the low-cost, consistent performance of the Chalmers Six.

Chalmers Six Prices

5-Passenger Touring Car	*$1185*	*Roadster*	*$1185*
7-Passenger Touring Car	*1345*	*Coupe*	*1595*

Prices f. o. b. Detroit. Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company, of Canada Limited, Windsor, Ontario

The CHALMERS SIX

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The One Tire That Gives A Sure Profit

There is no other tire in the country today which can show a dealer so steady a sale and so sure a profit. As direct proof, this letter is offered:

The Fisk Tire Co., Inc.,
816 Main St., Cincinnati, Ohio

Maysville, Ky., July 20, 1922

Gentlemen:—

It is just one year since we eliminated our other lines of tires and adopted the Fisk line exclusively.

In addition to cutting down our tire investment by standardizing on Fisk, we have materially increased our sales and built a permanent and lasting business.

The Fisk Straight Side Cord is outrunning anything in our community on large cars.

As usual, there are more small cars than large ones, and to this class of trade we pushed the Red-Top. The wonderful service delivered by the Red-Top always brings a purchaser *back for more.*

In addition to this, the distinctive color makes it a running advertisement for us—as Fisk dealers.

The Red-Top with its wonderful reputation and distinctive, aristocratic looks, has made it possible to almost completely eliminate the demand for low-priced tires. And last but not least, the large profit provided in the Red-Top stays in the till—no trouble or come-back to cut in on it.

Our slogan is "Once a Red-Top User, Always A Red-Top User."

This fact is the biggest business getter we have ever seen. We offer this testimonial in appreciation of the high quality and prompt, courteous service received from you during the past year.

Yours for more business,

MAYSVILLE BUICK COMPANY,
Per C. E. Peterson.

The Red-Top has a field of its own in every village, town and city in the country. Its position is unchallenged, and in the minds of the vast and growing army of its users, there is no other tire which can take its place.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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The

Generator Is One

of the

Smallest and Lightest

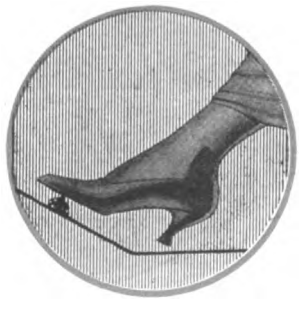
THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Auto-Lite

Starting, Lighting & Ignition



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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BUNTING

BRONZE BUSHINGS *and* BEARINGS

PATENTED



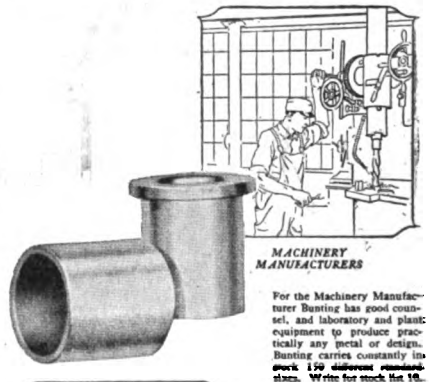
Now the National Standard of Bronze Bushings and Bearings

BY the quality of its product and the character of its service the Bunting Brass & Bronze Company has established a standard of bronze bushings and bearings—a high standard by which can be gauged the millions upon millions used today. Every Bunting bushing or bearing represents years of intensive research and experiment, a vast fund of specialized knowledge, an almost infinite experience in manufacture and application, a great plant equipped to meet any demand made upon it, a sales and distribution system that serves all classes in the national market promptly and economically.

Bunting was making bushings and bearings in the long-gone days when machine builders required but few of them. As machines multiplied in the hands of designers the Bunting organization expanded in knowledge, equipment and skill to the end that it might be relied upon, with full confidence, to supply the bushings and bearings required by every machine and vehicle.

The Products of the Bunting Brass & Bronze Company touch industry and commerce at numerous and important points. Machine tools, engines, motors, automobiles, factory machinery of all kinds, trucks, tractors, printing presses; power boats, electrical labor saving devices and the infinitude of moving mechanisms that make this the industrial age—all require bushings and bearings.

The manner in which it meets this world-wide need makes the Bunting Brass & Bronze Company bushing and bearing headquarters, and Bunting bushings and bearings the standard of the world.



MACHINERY MANUFACTURERS

For the Machinery Manufacturer Bunting has good counsel, and laboratory and plant equipment to produce practically any metal or design. Bunting carries constantly in stock 150 different standard sizes. Write for stock list 10.



ENGINEERS AND DESIGNERS

The engineer and designer finds Bunting a real collaborator on bushing and bearing detail. To specify Bunting "In Stock" standard bushings saves time and money for both machine builder and user. Bunting's stock list 10 should hang in every engineer's drafting room. Write for it.



AUTO PARTS JOBBERS

Auto Parts Jobbers are being supplied with standard Bunting Piston Pin bushings for all popular makes of cars. These bushings are made up in great quantities and carried in stock. Jobbers write for complete stock list.

AUTO REPAIRMEN

The Automobile repairman finds that genuine Bunting Bushings guarantee satisfaction in service. Rebushing with standard Bunting bushings cures many automobile ills. Parts jobbers have stocks of Bunting bushings for practically all cars. If your jobber can't supply you, write the nearest Bunting branch.

THE BUNTING BRASS & BRONZE COMPANY

753 Spencer Street · Toledo, Ohio

Bunting Trade Mark REG. U.S. PAT. OFF.

NEW YORK
Grand Central Palace
Vanderbilt 7300

CHICAGO
722 S. Michigan Ave.
Wabash 9153

CLEVELAND
1362 E. 6th Street
Main 5991

SAN FRANCISCO
198 Second St., cor. Howard
Douglas 6245

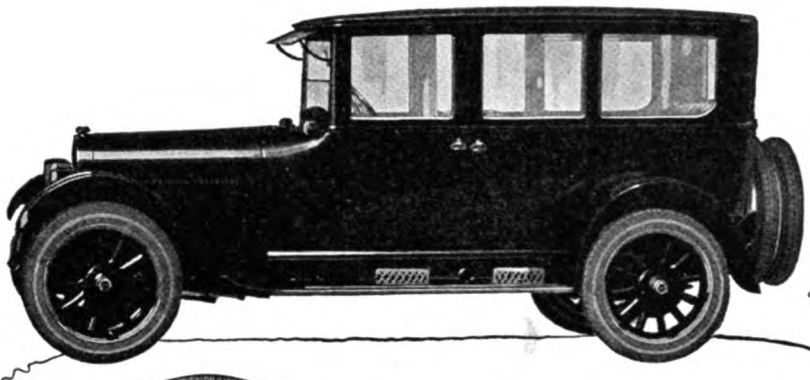
BOSTON
Main 8488
36 Oliver Street

BY INVITATION MEMBER OF

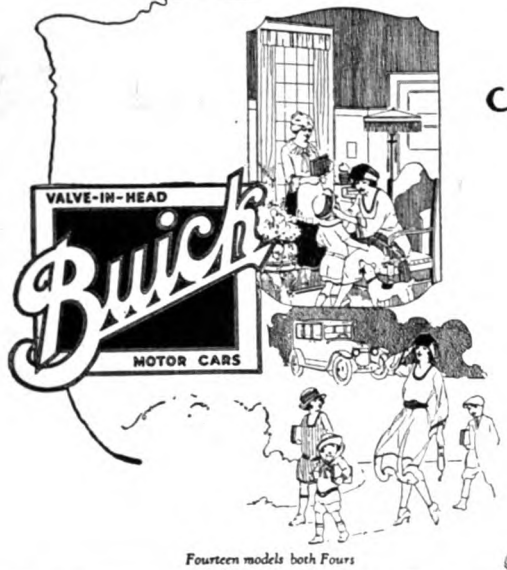
NEW YORK, U.S.A.

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The Ladies' HOME JOURNAL



The Standard of Comparison



Fourteen models both Fours and Sixes, comprising the

A Woman's Car ~ the New Buick Sedan for 1923

Exquisitely appointed and of rare beauty, the 1923 Buick seven-passenger sedan possesses the many special qualities which women for years have looked for in a motor car.

The body, by Fisher, is low and easy to enter The interior is luxurious with rich plush upholstery and trimming. Deep, yielding seat cushions and springs of a distinctive type afford a new degree of restful riding comfort on any road.

The smooth, quiet Buick Valve-in-Head motor is, as ever, a masterpiece of reliability. The steering wheel is placed at the correct angle for easy steering and responds to the lightest pressure of

"Business is Good" with Buick Dealers

With the wonderful 1923 Buick line, the astonishing prices, and the kind of co-operation Buick gives— Buick dealers are doing a greater business than ever before in their history. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

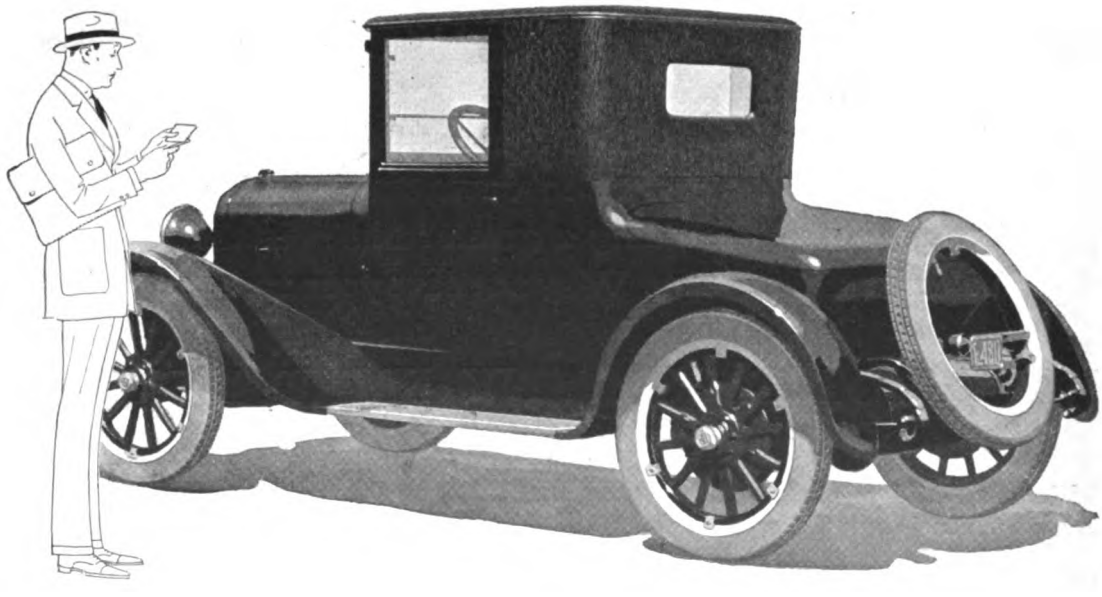
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

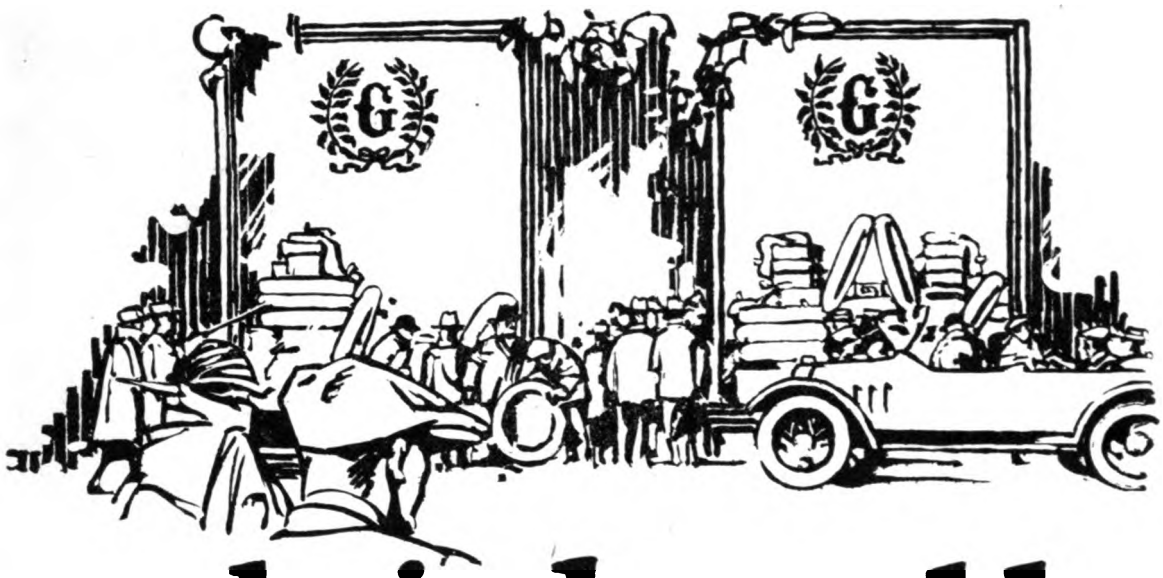
The price is $980 f. o. b., Detroit

DODGE BROTHERS



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Goodrich sells for—*not just to* the dealer

GOODRICH has always felt two great responsibilities towards its dealers.

The first is to supply its dealers with the right goods at the right price.

The second is to help that dealer turn over his stock.

This policy is bearing more fruit than ever in 1922. Goodrich supplies every need of the motorist including the Silvertown Cord and the complete line of Automobile and Tire Accessories.

And backing the line is a cooperative sales plan, that for comprehensiveness and proven efficiency has never been equalled.

A dealer of the right character who will cooperate can sell in 1922 more tires than he ever did before, and build a foundation of greater good will than he ever had. Write or wire for us to prove this claim to your satisfaction.

The B.F.Goodrich Rubber Co.
Akron Ohio

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The Nash Rise in Popularity by States



In Michigan, the very heart of the automobile industry, we find that the positive and pronounced value of the Nash has earned it a standing such as the "outside" car rarely attains in the home territory of other cars.

1917 was the first year that the Nash name appeared on the registration rolls.

In 1918 sales rose so rapidly that the Nash percentage of total state registrations was eight times that of 1917.

And 1919 saw the Nash percentage of all cars registered increased 100% over its 1918 percentage.

In 1920 the gathering momentum of Nash sales gained even greater headway and rose beyond its 1919 percentage of all cars registered by nearly one-third.

1921, the last available year, revealed a further substantial gain—the Nash percentage reaching a point nearly 20% higher than the 1920 percentage.

With 1922 more than half gone, it seems a positive certainty that all former records will be far outstripped.

These figures write their own message to automobile dealers.

Fours and Sixes

NASH

THE NASH MOTORS COMPANY, KENOSHA, WISCONSIN

(545)

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII. NEW YORK, SEPTEMBER 2, 1922 No. 3

COAL TENSION LESS AT MOTOR FACTORIES

Review of Situation Leads Many to Believe Crisis May Be Averted—G. M. C., Dodge, Studebaker in Good Position—Ford Announces Shut-Down.

Surveying the coal supply of the automobile plants of the Country this week, it is at once apparent that while some uneasiness exists many of the larger concerns are not only in "comfortable" circumstances but believe fuel production will soon be on such basis as to preclude any idea of being forced to shut down operations. At least, the General Motors Corp., the Studebaker Corp., the Hudson Motor Car Co., Dodge Brothers, Hupmobile, Maxwell and others find themselves with sufficient supplies on hand to warrant not a pessimistic view of the situation.

"We have a supply of coal on hand sufficiently large to operate our plants for ten weeks and anticipate no difficulty in securing additional supplies in the meantime," President A. R. Erskine, of the Studebaker Corp., states. "Our other supplies are in the same position, our sources of materials are not seriously threatened by either the coal or rail strike, and there is no reason for any suspension of operations at any of our plants. We expect to operate all of our plants at full capacity indefinitely. The demand for our cars is above manufacturing capacity. There is no reason and can be no reason for curtailment of our operations at any plant."

General Motors announced on August 30 that it had a supply in its bins sufficient for at least a month's operation at capacity production. Hudson points to a "reasonable" amount in storage. The far-seeing and highly efficient policies of Dodge Brothers would seem to assure it enough coal, especially when it is recalled that during the last shortage it was able to furnish fuel to hospitals, schools and other institutions then in dire need, aside from caring for its own requirements.

In Detroit it is found that the majority of companies derive some power from the Edison company. Even should this source of electricity be cut off because of the necessity of supplying homes, lighting and other public needs, a substantial level of operation can be maintained through the use of gasoline engines in lieu of the stable form of power.

Whatever may be the outcome of Henry Ford's announced shutdown for September 16, it is believed to have served at least one

(*Continued on page 224, first column*)

Farmers Own 2,000,000 Cars

Farmers of New York, New Jersey, Pennsylvania and the New England states have become so thoroughly "sold" on the automobile that today there is a greater percentage of motor cars owned by this class than there ever were horses, a recent survey of the United States by the Department of Agriculture shows. In the United States there are said to be 6,448,343 farms and of this number 1,979,564 answered a questionnaire sent out and reporting a total of 2,146,362 cars. In New York State, it is said, there are 193,195 farms and of this number 35 per cent reported owning 74,000 automobiles; in New Jersey the farmers own 13,695 cars, while in Pennsylvania 76,491 machines are accounted for on the farms.

July Production Shows Shrinkage

Production of passenger cars and trucks declined during July, according to figures compiled by the Department of Commerce. Reports submitted by about 90 car makers and 80 truck manufacturers showed 223,201 passenger cars, and 21,243 trucks produced in July. During June, the high month of the year, 263,017 cars were made, and 25,985 trucks. These figures may be compared with National Automobile Chamber of Commerce predictions appearing in AUTOMOBILE TOPICS under date of August 19.

LOW-PRICED CLOSED CARS COMING AHEAD

Seventeen of Them Put on the Market in Past Ten Months—Type as Yet Is Without Suitable Designation—All Are Two-Door Designs.

Ten months ago the prototype of a lower-priced two-door closed car made its appearance on the market. Since that time sixteen other low-priced closed cars —lower-priced as contrasted with the standard closed body types of the line—have been introduced. These have so firmly entrenched themselves in the market, since they meet the demand of that great percentage of the buying public desiring closed-car advantages and yet unable to afford it under former standards, that it is safe to predict many more such models will appear on the market in the near future. And yet, when it is desired to refer to bodies of this character there is no one word or name which might be applied, and at the same time recognized by the trade.

To provide for the listing of this important group of models in AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted), a new column makes its appearance beginning with the Table on pages 265-267 of this issue. It has been headed "Two-Door Closed Type" and in it the lower-priced closed types have been listed in place of the standard coupe model. Where no lower-priced model is produced, however, the standard coupe of the line has been given. This change conforms to the policy of listing the four leading body types.

Last November, the now well-known Essex "Coach" was introduced. Because it offered closed-car comfort at little more than open-car price, it instantly found favor with the public.

(*Continued on page 224, second column*)

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White Now USL Vice-President

John A. White, who is well known as one of the pioneers in the battery industry in this Country, has been appointed a vice-president of the U. S. Light & Heat Corp. He has been continuously engaged in the business for the past 23 years, joining the makers of the USL batteries when, as he served as manager of the Boston office, the National Battery Co. was absorbed. He lately has been sales manager at Niagara Falls where he will continue to maintain his office.

Hawk Heads A. T. Baker Sales

Homer V. Hawk has been appointed "exclusive representative" in charge of sales for the automotive products of A. T. Baker & Co., Inc. Hawk for eight years was purchasing agent of the Willys-Overland Co., and at one time was connected with the old Stoddard-Dayton company in Toledo.

Maxwell Transfers Justice

J. L. Justice has been transferred to the Pacific Coast territory by the Maxwell Motor Corp. Thus Justice returns to his native State and former scene of endeavor, now as district supervisor with headquarters at San Francisco.

Graham Made King Motor Supt.

C. L. Graham has been appointed factory superintendent of the King Motor Car Co. Graham has been associated with the industry for many years having served in a similar capacity with the General Motors Co. in Flint, for four years, and later going to Alma, Mich., as production manager of the Republic Truck Co.

Powe Gives Full Time to A. E. A.

W. R. Powe will hereafter give his full time to the general traffic management of the Automotive Equipment Assn. He has discontinued his connections with all other organizations to do so, it is stated.

Jones Now A. S. M. E. Division Chief

R. R. Jones, chief engineer of the Firestone Tire & Rubber Co., has been named chairman of the Akron section of the American Society of Mechanical Engineers. J. C. Sproule will serve as vice-chairman and W. R. Gilliam as secretary.

Hyman Joins Stutz

H. R. Hyman has been made director of advertising for the Stutz Motor Car Co. of America. Hyman will be associated directly with Fred Wilson, sales manager. He will be identified permanently with the Company, it is explained. For seven years he was in charge of merchandising department of the Cole Motor Car Co.

Barney to Celebrate "999" Days

Barney Oldfield, famed race driver and now tire manufacturer, will celebrate with his friends on September 21 the twentieth anniversary of his first contest. This was the affair at Grosse Point, Mich., in 1902, when Barney drove the Ford "999" to victory at a pace then thought to be suicidal. The veteran has not appeared as a contestant since 1919 when he became president of the Oldfield Tire Co.

Hundt Joins Globe Machine

J. F. Hundt, formerly district manager of the Wainwright Engineering Co., has become associated with the Globe Machine and Stamping Co., Cleveland. Hundt will care for the interest of the Company in the West while W. F. Edwards, who has been national sales representative for some years, will be in charge of eastern sales. The addition of several accessories and products to the line of the Globe manufacture, brought the business to "sufficient scope to warrant exclusive representation," the company explains.

Chandler Joins Peerless

W. N. Chandler has been appointed retail sales manager of the New York factory branch of the Van Courtlandt Vehicle Corp., New York distributers of the Peerless. Chandler for the past 12 years has been successively manager of the old Flanders Electric Co., vice-president and general manager of the Holt, Chandler Co., New York Maxwell and Pope-Hartford, and general manager for the Hayes-Diefenderfer Co.

Hogan Flies to Indianapolis for Cars

After a flight of 3,500 miles, with seven stops, Dan Hogan, of Denver, Cole and Rickenbacker distributor in that city, arrived in Indianapolis in his own airplane on August 28 to visit the Cole factory to try to arrange for increased deliveries. Hogan took J. J. Cole, president of the Cole Motor Car Co., up for an aero spin. He will fly back by way of St. Louis and Kansas City.

Lurie Return to N. Y. "Row"

After four years absence from the field, Robert Lurie has returned to New York's automobile row as Greater New York and Connecticut representative of the Kelsey friction-drive car. Lurie, who has offices at 125 West 49th street, was Metz distributer in 1918, in which year he quit the business.

Prather Visits East

P. I. Prather, general manager for Don Lee, California's well known Cadillac distributer, is on an extended vacation trip through the East. His first stop was at the Detroit factory where he took delivery of a new Cadillac in which he will make a tour, ending up in the Maine woods. Prather, who has been with the Cadillac organization 13 years, will return to Detroit in time for the Cadillac distributing organizations' convention.

Hunt Joins Rayfield

George H. Hunt, formerly manager of the Stromberg Motor Devices, and for the past three years sales manager of the Disteel Wheel Corp., has been appointed in charge of Rayfield carbureter sales to manufacturers. His offices are in the David Whitney Bldg., Detroit.

Shaw Takes Earl Coast Territory

J. W. Shaw, Oakland, Cal., well known in local trade circles, has taken over Earl sales in Alameda and Contra counties. He will work under L. M. Field, Earl distributer for northern California.

Spencer Goes Back to 'Frisco

LeRoy Spencer, who has been connected with the California trade for the past ten years, has been made general manager of the Western Motors Co., Wills Sainte Claire distributer for northern California. He succeeds Frank Hughes. Spencer, who has been in Los Angeles for the last three years, returns to familiar territory in making San Francisco his headquarters once more.

Jersey City Show in November

November 11 to 18 are the dates selected by the Hudson County Automobile Trade Assn. this week for the third annual show. As usual the display will be exhibited at the Fourth Regiment Armory, Jersey City. The dates include one more day than on the two preceding occasions. The committee is composed of A. R. Southworth, chairman, Fred Hill and Joseph Delaney.

Time Saving Farmers' Pride

Ninety per cent. of the farmers who responded to a survey made by the U. S. Department of Agriculture state that the factor of time-saving is the greatest advantage of trucks over horse-drawn vehicles. Even on short hauls the motor truck requires only about half the time needed to make the same trip by wagon, they point out.

Gabriel Tries "Foursome"

In an attractive series of cartoons, the Gabriel Mfg. Co. has compiled a set of advertising media which it sent to the trade this week. The series, called "Gabriel's Foursome," depicts golfers in various situations, commenting on the strokes and playing of their comrades and opponents in the simile of the value of snubbers for the "good of the game."

Charge Dragon Officers with Fraud

Herman Neidick, Joseph Stein and Hyman Edelman are charged with fraud in indictments returned against them in Chicago by a grand jury investigating the conduct of the Dragon Motors Co., of which the men named are officers. Misuse of the mails in the sale of stocks or "territorial rights" are alleged.

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SENATE WOULD LEVY HIGH REIMPORT DUTY

N. A. C. C. Urges Members to Write Solons if Provisions Please—90 Per Cent on "War" Cars Brought Back by Government Held Only Savior.

Victory is in sight but still liable to misfire in connection with the agitation of many automobile makers in conjunction with the National Automobile Chamber of Commerce for a Congressional bill levying a tax of 90 per cent. on reimported American "war" cars. The almost disastrous effect of these "dumpings" of trucks on the market here by the government has been too well realized to warrant further indictment here. But the practice has led to a fight against it which has at least resulted in a clause to assess the 90 per cent duty appearing in the tariff bill as passed by the Senate.

Calling attention to the need for some active campaigning on the part of automobile manufacturers if they find the principles agreeable, the N. A. C. C. this week bulletined its members regarding the proposed import duty and other matters not yet in the calm harbor of the tariff schedule agreements. Among these latter, it is pointed out that both Houses have agreed on a 25 per cent duty on cars and trucks made abroad.

"Members should express their views on bargaining features and the 90 per cent reimportation clause to the Senate and House conferees," the Chamber, over the signature of Alfred Reeves, general manager, points out. "The provisions regarding the 25 per cent ad valorem duties on automobiles, the 5 cents per pound for aluminum scrap and 9 cents for sheets and plates, are not subject to change. The provision on anti-friction balls is not a matter of Chamber action."

The Chamber sets out the matter as follows: "The tariff bill as amended by the Senate, passed and sent to conference for adjudication of differences between House and Senate, contains these points of particular interest to the automobile industry:

"That all automobiles, automobile bodies, automobile chassis, and parts thereof, including tires, exported prior to February 11, 1919, from the United States for the American Expeditionary Forces or the Governments associated with the United States in the war with Germany and Austria, and which have been sold or delivered to any foreign Government, individual, partnership, corporation, or association by the United States Liquidation Commission, or by any other agent or official of the United States, when reimported shall pay a duty of 90 per cent ad valorem, the value of such articles to be fixed on a basis equivalent to the original value of such articles in the United States, under rules and regulations to be prescribed by the Secretary of the Treasury.

"Such a reimportation duty was accepted in principle by the House in the Graham resolution; it was not included in the tariff bill passed by the House, and is therefore subject to debate in conference. The word 'automobile' includes trucks.

"The section passed by the House providing a bargaining duty ranging from 25 per cent to as much as 50 per cent on motor vehicles from manufacturing nations that impose more than 25 per cent duty on American cars was striken out by the Senate and is, therefore, subject to debate.

"General administrative provisions have been written into the bill by the Senate which would (1) broaden the power of the tariff commission and require them to make studies of conversion and production costs and to furnish the facts so arrived at to the President and Congress and (2) give the President power to increase duties by a maximum of 50 per cent or to prohibit importations wherever findings of fact or discriminations against U. S. foreign trade warrant. These provisions are not found in the House Bill and are therefore subject to debate in conference.

"The House provisions on anti-friction balls and rollers, metal balls and rollers commonly used in ball or roller bearings, etc., have been retained at 10 cents per pound but the added 35 per cent ad valorem duty has been increased to 55 per cent, hence the difference in the ad valorem duty is subject to debate in conference."

TABLE MORE VALUABLE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 265-267 of this issue. It is revised to August 29.

Adding greatly to the Table's value, a new column, "Two-Door Closed Type," has been introduced in place of the former "Coupe" column. This permits the listing of the two-door lower-priced closed models which several makers have added to their lines and in which many marked developments are anticipated. On those lines having no such model, the standard coupe has been listed.

Foreseeing a trend in its direction, provision has been made to list the permanent top under the equipment columns. Three makes of cars now are so equipped.

These changes prove the flexibility of the Table to meet trade developments. By keeping abreast with and anticipating trends, the claim to a real selling Table is further strengthened.

Jordan Tells of Blue Boy Model

Now in production, the Jordan Motor Car Co., Cleveland, has a new four-passenger sport model which it styles the Blue Boy. General body lines are slightly different from those of present open models, and for this new body type the 120-inch wheelbase chassis has been lengthened to a wheelbase of 124½ inches. The Blue Boy is attractively finished and its list price, $2,150, includes a long list of additional equipment.

NEW OAKLAND MODELS IMPROVED IN DETAILS

Minor Changes Give 1923 Series Better Appearance—Light Dimming Control and New Throttle Arrangement Put on Steering Wheel—Prices the Same.

Several minor changes are to be found in the new 1923 series disclosed by the Oakland Motor Car Co., Pontiac, Mich., this week. These have resulted in improved body lines and better performance. Prices on the new series range from $975 to $1,545, the same as the present models.

New full crown fenders, which are wider, heavier and extend over the wheels in a deeper arc, and lowering of the running board 1½ inches give the body a deeper and larger appearance. Other body changes make for greater convenience of the driver.

Interest centers on the new steering wheel which is considerably more dished than that of previous models, permitting easy reach of the greater number of controls now mounted on the steering wheel. Prominent among these is a lever for dimming lights, which lever may be operated by the thumb without moving the hands from the wheel. A new hand control for spark and gasoline throttle has been mounted on the steering wheel, this arrangement being superior to the quadrant, it is declared.

To provide for quick starting, a new Marvel carbureter and Oakland manifold have been adopted. This new carburetion system has a heat control working automatically with the throttle. A new Remy distributor with semi-automatic advance and retard feature cares for all spark adjustment inside the breaker box in contrast to the entire distributor head moving.

On the closed cars, heater, rear-view mirror, windshield wiper and snubbers are standard equipment. Several items of equipment have been added to the sport model, which is painted light maroon, upholstered in brown Spanish leather and set off by a khaki top.

Peerless Production Already Sold

Sales of the new Peerless models to dealers and distributers have been closed one year in advance, according to President R. H. Collins, of the Peerless Motor Car Co. This means that in the coming year more than twice as many cars will be produced as were formerly turned out in the Peerless plant.

Reo Starts Saturday Work

This week the Reo Motor Car Co. recalled its workmen for Saturday employment. Since early Summer, many of the Reo departments have quit work on Friday nights. Greater production, especially in the Speed Wagon division, made the renewal imperative.

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COAL TENSION LESS AT MOTOR FACTORIES

(*Continued from page 221, second column*)

good purpose. The Interstate Commerce Commission, late in the week, lightened and rearranged its coal priority restrictions. Briefly, emergency users are now all in Class 2, Class 1 embraces isolated cases of dire need and all others are in Class 3. Motor makers, with empty coal bins, therefore, automatically join emergency users.

As has been pointed out in AUTOMOBILE TOPICS heretofore, the prime source of worry to the automobile makers is the condition of those concerns upon which they depend for component and parts supplies. These companies are finding it increasingly difficult to obtain their supplies, because of the railroad and coal strikes, and there is little hope for immediate cessation of the strain. A flood of price advances have marked the steel markets this week, quotations being on the average of $4 a ton higher than they were the middle of last week.

However, extensive preparations are being made by the automobile manufacturers to relieve the transportation burden by motor trucks. Indeed, one Detroit concern is bringing parts and bodies from as far as Massachusetts. It is also explained that some plants are closing down a day here and there when found convenient and when deliveries and production would not suffer appreciably as a result.

With the partial settlement of the coal strike, a more optimistic tone cropped up in the manufacturing centers during the week. Those whose experience best qualifies them to judge, predict more stable conditions within a very few weeks or even days.

Those who believed Ford was going to precipitate another panic are beginning to see that things are not as bad as might be painted. Those of calmer minds saw many things beneath the bare announcement, and the confusion succeeding to it, of the decision to close up the factories. Whether they, the latter, will be found justified in their position when the date in question rolls around, remains, of course, on the lap of the gods.

The more substantial opinions saw in the move, among other things, some salve to grease Ford's skids for the plunge into national politics. Others saw necessity made the mother of invention in that receding sales might be a factor.

An executive of a large producer in the industry points to the merchandising possibilities inherent in Ford's announcement. His dealers are bound to find an excellent sales point in the possibility of the supply of cars being shut off. Used cars are bound to reflect in their turn the withdrawal of 5,100 new automobiles from the markets weekly, if the closure becomes fact, and are certain to move faster because of the threat. Dealers, in turn, will prove all the more eager to obtain deliveries and to increase orders even in the event the stoppage of the Ford industry does not occur on schedule. The possibility of a shut-down might prove a sufficient goal to this sort of merchandising.

Others who have watched Ford's various activities, profess to see a connecting link between the threatened closing and the Muscles Shoals project. It would take little imagination to vision the attention of the Nation being called to the possibilities for power inherent in the operation of the Shoals as a substitute for coal.

Those who expect to find in Ford's closing announcement evidence of stagnation of sales such as occurred in January, 1921, are told the following: Bank balance of the company is record-breaking; car orders for September exceed 125,000; future commitments already cut down so that a shutdown would leave a minimum inventory; minimum of finished cars on hand; current debts low.

For example, a lumber company has had cancellations of orders for 3,500,000 feet for September delivery, a body company having orders for daily production of 1,400 bodies has been cut to 400, a spark plug company which has been supplying Ford on monthly basis has not been given its October renewal contract, given usually on August 20. A hub cap supplier has had October specification cut down to one-tenth, and had September order cut to one-half.

Effect on the supply trade was pronounced. On August 29, the John W. Brown Mfg. Co., Columbus, O., announced its plant would close Friday in view of the Ford shutdown. At Toledo, the Standard Steel Tube Co. blamed the shutdown order for projected laying off of between 400 and 500 men on September 10. Officials of the Hamilton Foundry and Machine Co., Hamilton, O., asserted advance information on the shutdown had led them to lay off 250 men on August 24.

Finally, railroad executives point to the 20 days' grace Ford allowed himself and predict that much can happen in that time. Mayor Couzens ridiculed the announcement.

"I don't think Ford has ever had any intention of closing his plant," the mayor said late this week. "I think what he said was entirely for effect."

LOW-PRICED CLOSED CARS COMING AHEAD

(*Continued from page 221, third column*)

Soon after, standard passenger-car body nomenclature was approved by the Standards Committee of the Society of Automotive Engineers. The question of classifying a body type such as the Essex "Coach" came up before the Committee at that time. The designation "Coach" was generally deemed a misnomer since it applied to the largest horse-drawn vehicle, and horse-drawn vehicles are the source of most names applied to automobile body types.

This type of body comes nearest to answering the official description of a "coupe." According to the S. A. E. standards, a coupe is described as "An enclosed single-compartment body, with one fixed cross-seat. This seat may be straight and accommodate two persons or be staggered and accommodate three persons. With the latter arrangement, a folding seat may be placed beside the driver, thus in reality making it a four-passenger body. The conventional body has two doors and two movable glass windows on each side, the roof is permanent, and there is a luggage compartment at the rear." It hardly falls under the description of a "sedan," since that type usually has four doors and two fixed cross-seats, although occasionally the front seat is divided, in which case, however, it still remains fixed.

The "Coach" differs from the standard "coupe" mainly in that there is a fixed cross-seat in the rear for three passengers and two individual tilting seats in front. The construction also presents a marked difference. The body is, of course, of less expensive construction than the standard "coupe," it usually including a fabric covering over the upper part of the rear quarter.

Since at that time there was only one such body on the market and since the "coupe" description came nearest applying, the S. A. E. decided to consider it as a "coupe" with the proviso that some qualifying prefix be applied which would differentiate between the two methods of construction. Naturally, though, with this type of body growing in popularity and several additions being made in the field, S. A. E. officials state that it will be recognized soon with a standard name or designation.

In the meantime, it is interesting to trace the growth of this type of body and to record the different trade styles applied to it by the different manufacturers. In the latter respect the situation is somewhat analogous to the close-coupled four-passenger roadster of a few years back. This type, it will be recalled, was variously styled, "Clover Leaf," "Foursome," "Country Club," "Chummy," "Clubster," and many names.

The low-priced group can be divided into two classes, that which is offered in place of the sedan, and that offered in place of the coupe. In the first there are seven makes of cars: Essex "Coach," Dort "Yale" sedan, Hudson "Coach," Nash four "Carriole," Earl "Cabriole," Oldsmobile four "Brougham," and Gray "Coach." All of these are five-passenger designs with the exception of the Earl model which is rated for four passengers.

In the lower-priced coupe division there are ten makes. These are: Essex "Cabriolet," Dodge Brothers "Business Coupe," Nash four "Cab," Hupmobile "Roadster-Coupe," Dort "Yale" coupe, Chevrolet "Utility," Oakland two-passenger coupe, Gardner "Business Coupe," Haynes "Coupelet," and Liberty "Commander" coupe. These are all two-passenger coupes in contrast to the three- and four-passenger standard coupes.

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ROAMER'S NEW "SIX" OUT SOON IN 3 TYPES

Medium Priced Light Car to Be Launched in Two Sedans and Phaeton—First Batch Scheduled for Late This Month —New Company Succeeds Old.

Three models will constitute the first of the new light sixes to be marketed within a month by the Roamer Motor Car Co., which has just been incorporated as successor to the Barley Motor Car Co. As related in AUTOMOBILE TOPICS under date of August 12, the new production of the Company will be in the more cheaply priced class and although a name for the car has not been divulged as yet, it is stated by the management that it will not be called "Roamer."

The new models will be a phaeton, a sedan and a touring-sedan. All will be of five-passenger type. It is understood that a coupe will be added later. The cars will be powered by the Continental Red Seal engine. Wheel base will be 115 inches. The prices will be announced coincident with the first shipments, scheduled for the latter part of this month.

President A. C. Barley states that orders for the new cars are coming in in gratifying bulk and that production for the next season would be near 2,000. This includes both the new car and the Roamer.

The new organization of the Company includes $500,000 shares of preferred and 500,000 shares of common stock. A bond issue of $300,000, secured as a first mortgage of three to ten years at 7½ per cent, is being floated in connection with the manufacture of the new line.

Receiver Sells Monitor Plant

Receiver E. W. Pavey this week sold the plant of the defunct Monitor Motor Car Co., at Columbus, O., to the Clark Grave Vault Co. The Monitor plant has been in Pavey's hands for more than a year.

Lexington Surveys Used Cars

Lexington Motor Co. this week sent a questionnaire to all its distributers and dealers requesting that a list of all used cars on hand be forwarded to the management as soon after August 31 as possible. The purpose of the survey is not made public.

Supreme Motors in Receivership

Supreme Motors Corp., of Warren, O., in receivership, is likely to merge with several parts concerns and a prominent automobile maker, according to advices from Cleveland where N. A. Wolcott, of Warren, was appointed receiver last week. The receivership is a move anticipated by those concerned and was taken to ascertain assets and liabilities prior to possible merging. Plant assets were placed at $300,000 and other items totaled $250,000. Liabilities were withheld. The Corporation is three years old with $5,000,000 authorized capital.

New Peerless Priced at $2,990

In making known prices on the new type "23" Peerless, the Peerless Motor Car Co., Cleveland, confirms the general belief held by the trade that the highly developed and refined new cars would sell at higher figures than the former models. As put into production, the new line will comprise eight body types, as follows, the prices being effective August 24:

Body Type	Price
Four-passenger touring-phaeton	$2,990
Seven-passenger touring-phaeton	2,990
Two-passenger roadster-coupe	3,300
Four-passenger suburban-coupe	3,400
Five-passenger town-sedan	3,900
Seven-passenger suburban-sedan	4,090
Five-passenger berline-limousine	4,390
Four-passenger opera-brougham	4,900

The four-passenger town-coupe, at first contemplated, has been eliminated from the line.

SCHWAB'S STUTZ INTEREST REFLECTED BY DEALERS

Factory Reports Numerous Requests for Franchises as Steel Man Takes Hand

Concurrent with the transfer of the control of the Stutz Motor Car Co. of America to the interests identified with Charles M. Schwab, and the reduction in prices of the factory's output, a rush of dealers eager to obtain franchises is reported by the management. Quite a number of these applications, some of which came from former dealers in Stutz cars, have been approved and signed. District salesmen have been assigned territories and have set out from the Indianapolis plant.

"We have been gratified with the increased interest manifested in the Stutz throughout the trade since the announcement that Schwab has assumed control of the Company," said W. N. Thompson, president and general manager of the concern. "We attach no little importance to the fact that before any overtures were made by us, a number of our former dealers—among whom were some who figured most prominently in the early activities of the Company—have again made application for the Stutz line, many of them seeking it on an exclusive basis. Our future plans depend in no small measure on a considerable enlargement of our distributing organization, and from all indications we are going to acquire this without any difficulty. In our opinion the Stutz is going to be one of the most desirable franchises in the field and we have been surprised to see how quickly the trade has grasped the significance of recent developments."

OUTLOOK BRIGHT, IS WORD FROM PACKARD

Profits Have Increased Steadily Since May—Current Earnings Now $500,000 Monthly—Cash Resources of Company Strengthened Materially.

Conditions affecting the activities of the Packard Motor Car Co., are held decidedly favorable. Profits have increased steadily since last May when shipments of the new Packard Single-Six were started, and current earnings are now placed at $500,000 monthly. Large earnings and heavy liquidation of inventories have increased the Company's cash resources. This item now exceeds $16,000,000, an increase of nearly $7,000,000 since the first of the year.

Little interference with this progress is expected from the coal or rail strikes. Coal on hand and in transit will meet the needs for some time to come, according to officials. Whereas forward stocks of raw materials and accessories are not large it is believed that motor trucks could haul the material required in the event of any emergency arising.

Capacity operations are being planned throughout the coming Winter. Present production of 2,100 vehicles a month including Single-Sixes, Twin-Sixes and trucks will be increased as rapidly as possible. At present the Company is several months behind on deliveries, but this condition will be relieved just as soon as the production schedule can be increased, it is declared.

Receiver for Cyclone Motors

C. G. Eidson, president of the Cyclone Motors Corp., Greenville, N. C., has been appointed receiver for that Company. The action resulting in the bankruptcy proceedings against the concern, formerly the Cyclone Starter and Truck Co., was taken by the Hardwood Lumber Co. and others. The Cyclone concern began business about two years ago with $1,000,000 capital and production has mainly been trucks. Liabilities are set at $200,000 and assets at $500,000 by the petitioners.

Illinois Licenses Mount

Illinois automobile licenses continue to mount in numbers. On August 29 two days' sale brought the total to 743,398 so far this year.

Lee Prices Lowered

New prices on Lee De Luxe cord tires have been announced. Reductions representative of the line include the 32x4 which has been lowered $3.35 to $29.15, and the 30 x3½, formerly $17.95, now sells at $17.15. The Standard cord, zig-zag tread, is a new line, with prices ranging from $14.95 for the 30x3½ to $27.45 for the 34x4.

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STUDEBAKER ANALYSIS SHOWS LARGE PROFITS

Increases Reveal How Well Prepared Corporation Is to Stand Price Cut—Profit in Each Dollar of Net Sales Mounts Five Cents in One Year.

How steadily and easily Studebaker Corporation can absorb price reductions is amply illustrated when the facts resulting from an analysis of its profits are gathered into focus. Briefly, net profits on operations of the second quarter of this year amounted to 15½ cents on each dollar of sales. In 1921, the comparative figure for the entire year was 10¾ cents per dollar.

These sales of the second quarter of 1922 reached the unprecedented (for that Corporation) figure of $45,606,044, or nearly one-half the sales of the entire year of 1921, which totaled $96,690,643. The same item for the first quarter of this year was $27,816,817, so that the Corporation had, as of June 30, 1922, earned in six months three-fourths of what it had earned in 12 months in 1921.

The following table shows sales, net profits and profit per dollar of sales for the periods indicated. It should be noted that actual figures for the final three months of 1921 are not included since to show them would be unfair in view of comparisons that might be drawn between them and preceding quarters, write-offs and adjustments having been made in the last quarter of 1921.

	Net Sales	Net Profits	Profits a Dollar of Sales
2nd quarter 1922..	$45,606,044	$7,086,552	$.1553
1st quarter 1922...	27,816,817	4,069,848	*.1463
Full year 1921.....	96,690,643	10,409,690	.1076
3rd quarter 1921...	29,059,893	3,263,201	.1123
2nd quarter 1921..	33,059,834	4,270,547	**.1291
1st quarter 1921...	18,475,270	2,110,577	.1142

*Price reductions approximating 10 per cent made Jan. 7.
**Price reductions approximating 8 per cent made June 1.

The results of price reduction on earnings are readily revealed by a study of the table. Thus in the first three months of 1922, at the beginning of which prices were cut on an average of 10 per cent, profits per dollar were about 14½ cents. In the succeeding three months, with sales nearly doubled, the ratio increased to more than 15½ cents. On the other hand, the period succeeding to the price cut in June recorded a drop of more than a cent. Reduction in sales volume, however, also had a hand in the reduction.

New Watson Company Formed

Judge Ray of the U. S. District Court has approved the plan for the transfer of the assets of the Watson Products Corp. to the new Watson Truck Corp. Issuance of Class "A" seven per cent cumulative preferred stock of the latter corporation to Watson Products creditors in payment of their claims aggregating $550,000, was also authorized.

Reo Pays Extra Dividend

An extra dividend of 1 per cent has been declared by the Reo Motor Car Co., together with its regular quarterly dividend of 1½ per cent. Both of these will be payable October 2 to stock of record September 15. It is held likely by those in close touch with the situation that this extra payment will be continued.

Canada's Exports Increase

Exports of automotive products from Canada during July reached the total value of $1,818,359, an increase of about 21 per cent when compared with June's table. This more than compensates for the decrease of 13 per cent registered in June as against May. The number of passenger cars shipped in July was 2,812, there were 211 trucks sent out of the country and parts shipped totaled $153,113, the latter a gain of 51 per cent.

Moon Common Admitted

Moon Motor Car Co. has obtained admission to the list of the New York Stock Exchange for 180,000 of its common stock shares. No par value is attached to the admission.

Liberty Tire in Receivership

Stockholders of the Liberty Tire Corp., of Carey, O., have applied to the Federal courts at Toledo to have the Company adjudged bankrupt. The proceedings follow receivership action at Carey in which A. H. Schwartz was named for receiver.

DIVIDENDS DECLARED

Advance Rumely Co.—Regular, quarterly dividend of ¾ per cent on the preferred stock; payable November 2, 1922, to stockholders of record September 15, 1922.

J. I. Case Threshing Machine Co.—Regular, quartedly dividend of $1.75 on the preferred stock; payable October 1, 1922, to stockholders of record September 11, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly dividend of 2 per cent on the common stock; payable September 15, 1922, to stockholders of record September 5, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly dividend of 1½ per cent on the debenture stock; payable October 25, to stockholders of record October 1, 1922.

General Electric Co.—Quarterly dividend of $2; payable October 14, 1922, to stockholders of record September 7, 1922.

General Electric Co.—Dividend of 5 per cent on the new special stock of $10 a share par value; payable October 14, 1922, to stockholders of record September 7, 1922.

B. F. Goodrich Co.—Regular, quarterly dividends of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Hayes Wheel Co.—Regular, quarterly dividend of 50 cents; payable September 15, 1922, to stockholders of record August 31, 1922.

Miller Rubber Co.—Regular, quarterly dividend of $2 on the preferred stock; payable September 15, 1922.

Miller Rubber Co.—Dividend of $1 a share on account of accumulated dividends; payable September 15, 1922.

Packard Motor Car Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 15, 1922.

Timken Roller Bearing Co.—Initial dividend of 75 cents; payable September 20, 1922, to stockholders of record September 11, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended August 30. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted, as well as listed, securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	21	20
*Advance Rumely, preferred	59½	57½
Ajax Rubber	12¼	11⅛
Allis-Chalmers	59	57
Allis-Chalmers, preferred	100	99⅞
American Bosch Magneto	41	40
Case (J. I.) Plow	7	40
Chandler Motor	62	59
Chicago Pneumatic Tool	75	73
Cleveland Motors	27	26¼
Continental Motors, common	8¾	8
Daniels Motor	11⅜	11⅛
Durant Motors	39¼	38½
Durant Motors of Indiana	14⅝	14⅛
Fisher Body	112½	112¼
Fisher Ohio Body, preferred	91½	90¼
Fisk Rubber, common	12⅝	12¼
General Motors, common	14	13⅜
General Motors, preferred	83	83
General Motors, 6% deb	84	81
General Motors, 7% deb	96	93½
B. F. Goodrich, common	36⅜	34¾
B. F. Goodrich, preferred	87	86¼
Goodyear, common	10	10
Goodyear, preferred	30	30
Goodyear, pr. pf	66¾	65½
Grant Motors	75c	50c
Gray & Davis	15⅝	14⅛
Hayes Wheel, w. i	31¼	30¼
Hupp Motor Car, common	19⅛	17⅛
International Harvester, new	111¾	108½
*Kelly-Springfield Tire, common	44⅝	42⅝
Kelly-Springfield, preferred	100½	100½
Kelsey Wheel	95	94½
Keystone Tire	9	8¾
Lee Rubber	27⅜	26¼
Lincoln Motors	2⅜	2⅛
Mack Trucks, Inc	56⅞	55½
Martin-Parry	32	29¾
Maxwell Motors, Class A	58½	57
Maxwell Motors, Class B	19⅜	18¾
Mercer Motors	2⅜	2
Moon Motors	14½	13
Parish & Bingham	15⅜	12½
Pierce-Arrow, common	12½	11⅛
Pierce-Arrow, preferred	31	28¼
Reo Motors	14½	13⅞
Republic Motor Truck	3⅝	3
Saxon Motors	3⅜	3¼
Stewart-Warner Speedometer	48⅜	44⅞
Stromberg Carburetor	56⅜	53
Studebaker, common	129½	126⅜
U. S. Light & Heat	1⅛	1⅛
U. S. Rubber, common	58⅜	55⅛
U. S. Rubber, 1st preferred	104½	104
Westinghouse Air Brake	100	100
Westinghouse Electric & Mfg	64¾	63
White Motors	49¾	48½
Willys-Overland, common	7	6⅝
Willys-Overland, preferred	40	36⅞

*Par $50.

Prices for automobile securities quoted in Detroit during the week ended August 30 are as follows:

	High	Low
Auto Body	4¼	4¼
Charcoal Iron, common	1½	1½
Charcoal Iron, preferred	2½	2
Columbia Motors	5½	3¼
Commerce Motor	5½	4
Continental Motor	8⅜	7⅞
Edmund & Jones, common	21	19½
Federal Truck	20½	20½
Ford of Canada	395	370
Motor Products	80	78½
Motor Wheel, common	13¾	13
Packard Motor, common	14¾	13½
Packard Motor, preferred	89	87
Paige-Detroit Motor Car, common	21½	21
Reo Motor (new)	14¼	13⅞
Timken Axle, common	30	27½
Timken Axle, preferred	90	86
Truscon Steel, common	17¼	15¼
Truscon Steel, preferred	10	9¼

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MOON COMPANY SHOWS SUBSTANTIAL INCOME

Six Months' Statements Set Net at $203,926—Surplus Grows by $154,473—Assets Now $2,057,291—Business Continues on Capacity Basis.

For one of the few times in its history the Moon Motor Car Co. this week issued for general circulation a statement of its income account and a balance sheet. The figures are as of June 30, 1922, and reveal the substantial nature of the gains made by the Company during the first six months of the year.

The statement shows a net income of $203,926, after expenses, costs and reserves for Federal taxes. Sales reached the large total of $2,502,101, bearing out the many reports of substantial business increases enjoyed by the St. Louis concern. Expenses and costs of bringing sales to this point are set at $2,311,275, leaving a profit on this score of $190,826.

Assets of the Company are set at $2,057,291, of which more than half are quick. Unusually satisfactory is the ratio of quick assets to current liabilities of approximately three to one in favor of the first mentioned items. The totals are $1,272,896 and $469,562 respectively.

The accompanying tabulation more clearly sets out the condition of the Company. Since the first of the year, increasing sales and production schedules have been noted from time to time in these columns. March 1 saw the plant operating at capacity from which point it has not receded.

Examination of the financial statements shows that the 154,213 shares of common stock of no par value have received, for the purpose, a book worth of $1,147,364, something over $7 a share. On this amount, the Company paid during the six months' period dividends totalling $38,553. Dividends on preferred stock were $10,899.

MOON MOTOR CAR CO.
Balance Sheet, June 30, 1922

Assets	
Cash	$324,540
Other current items	948,356
Prepaid expenses	5,686
Investments	25,000
Property, plants, etc.	278,709
Good will	475,000
Total assets	$2,057,291
Liabilities	
Accounts payable	$396,820
Other current items	72,742
Reserves	128,965
Preferred stock	311,400
Common stock	1,147,364
Total liabilities	$2,057,291

MOON MOTOR CAR CO.
Income Account, June 30, 1922

Sales	$2,502,101
Expenses	2,311,275
Profit	190,826
Other income	45,829
Total income	236,655
Federal taxes	32,729
Net income	203,926
Dividend requirements	49,452
Surplus	154,473

Gray & Davis Increase Stock

Gray & Davis, Inc., has filed a certificate with the Commissioner of Corporations showing an increase in common stock from 138,904 shares without par value to 254,404 shares no par; also the creation of $750,000 preferred stock $100 par. Of the new common 20,000 shares are to be issued for cash to net the company $250,000; 30,000 shares to Arthur T. Murray at $20 a share under the option contract which expires February 1, 1925; 87,500 shares previously authorized to be reserved to provide for conversion into common of the $1,000,000 first mortgage 7 per cent convertible sinking fund gold bonds and the 7,500 shares of 8 per cent preferred, and 3,000 shares to be issued to bankers underwriting the $1,000,000 bonds.

New Process Gear Sale September 6

Sale at auction of the New Process Gear Co. plant at Syracuse, N. Y., has been set for September 6. The original date was August 23, but at the request of a bidder, who desired time to make arrangements for financing, it was postponed. It is regarded in some quarters as certain that one of the industry's most noted operators will make an attempt to buy it.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended August 30 are as follows:

	H	L
Firestone	80	70
Fisher, Ohio	45	40
Goodyear	10	9½
Grant	⅞	½
Grant, preferred	8½	8½
Jordan, common	200	140
Jordan, preferred	84	80
Peerless	61	58¾
Standard Parts	4½	3½
Standard Parts, preferred	25	16
F. B. Stearns	24	20½
Torbensen Axle	26¼	24½
W-S-M, common	40	40
W-S-M, preferred	72	72
Winton, preferred	40	30

Prices for rubber securities quoted in Akron during the week ended August 29 are as follows:

	H	L
American R. & T., common	25	15
Amazon Rubber	6	4
Firestone, common	80	70
Firestone, 6% preferred	91	89½
Firestone, 7% preferred	86	84
General Tire, common	300	250
General Tire, preferred	97	92
B. F. Goodrich, common	37½	34½
B. F. Goodrich, preferred	88	86
Goodyear, common	10	9¾
Goodyear, preferred	32½	29½
India, common	78	74
Marathon, common	3	2¼
Mason, common	12½	11
Mason, preferred	56	53
Miller Rubber, common	75	70
Miller Rubber, preferred	100	97
Mohawk Rubber	20	10
Mohawk Rubber, preferred	100	75

FORD BALANCE SHEET RECORDS LARGE GAINS

Increase in Cash and Debts Receivable Set at $61,600,000—Inventories Sliced by Nearly $18,000,000 During Year Ended April 30.

Cash on hand and debts receivable of the Ford Motor Co. grew by $61,620,000 during the year ended April 30, 1922, according to the annual statement of the Company filed in Boston this week. This huge gain may be compared with a growth of only $24,496,000 recorded on the same date of 1921 over 1920.

Equally indicative, though on the other side of the ledger, the profit and loss surplus grew by practically $58,000,000 to the immense total of $240,478,736. Total assets and liabilities were $400,548,946.

An examination of the statement reveals that all assets, with the usual exception of furniture, office fixtures, etc., and the substantial reduction in inventories, grew in varying but large amounts. Nevertheless, the recorded gains are not as great as had been expected in many quarters and quite a number of other concerns making automobiles can and have shown a proportionately greater increase in sundry items.

Throughout the past two years, the statement shows, inventories have been consistently cut. Nearly $18,000,000 was taken off of this item this year as against practically $33,000,000 during 1921. Patent rights are listed as having grown in value $29,000 as against an increase in valuation in 1921 of only $4,000.

FORD MOTOR CO.
Comparative Balance Sheet

	Apr. 30, '22	Apr. 30, '21
Assets		
Real estate	$81,026,633	$71,329,719
Machinery and equipment	49,401,132	46,459,046
Inventories	45,208,094	63,848,157
Cash and debts receivable	148,615,334	86,995,165
Patent rights	110,740	81,397
Securities	15,749,953	10,361,964
Furn., fixtures, autos	39,221,860	44,779,634
Miscellaneous invest.	500,815	501,815
Good will	20,517,986	20,517,986
Deferred charges	196,399	265,674
Stock in subsidiary companies	.....	.....
Total	$400,548,946	$345,140,557
Liabilities		
Capital stock	$17,264,500	$17,264,500
Accts. and notes payable	33,089,894	48,886,141
Dep., reserve, etc.	*50,829,307	*43,493,394
Accrued expenses	.....	.....
Deferred charges	853,950	3,027,120
Reserves for Federal and local taxes	58,032,559	49,591,706
P. & L. surplus	240,478,736	182,877,696
Total	$400,548,946	$345,140,557

*Includes amortization reserve.

D. M. C. Moves Headquarters

Due to the closing of the Hotel Charlevoix, the Detroit Motor Club has moved its offices to the Hotel Griswold. A membership campaign, in progress several months, is showing big results, it is said.

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M. A. M. A. SALES RECORDS SHOW SEASONAL DECREASE

Past Due Accounts Jump 20 Per Cent During July, Figures Indicate

Seasonal decreases in business of members of the Motor & Accessory Manufacturers' Assn. are recorded in the July report, compiled this week. The most notable effect of the slight slump is an increase of 20.42 per cent in past due accounts as compared with the June totals. This is a little more than usual, past tabulations show, since in the similar period of 1921 the percentage of increase was relatively large.

Purchases, the comparative table reveals, fell off approximately a million dollars, as they did in June last year. In fact a comparison of this and last year's business shows that the seasonal decline set in at least a month earlier in 1921. Whatever construction is placed on the several July figures, a glance at 1921 statistics places beyond cavil the statement that business for the members of the M. A. M. A. has increased tremendously this year. The following tabulation sets out this comparison clearly:

	July, 1921	Per Cent Change
Total sales	$23,096,214	1.68 Inc.
Total past due	5,242,046	10.79 Inc.
Total notes outstanding	3,690,154	7.90 Dec.
	July, 1922	
Total sales	$41,001,650	2.42 Dec.
Total past due	3,423,850	20.42 Inc.
Total notes outstanding	2,217,650	4.49 Dec.

Morse Chain Moves Quaker City Office

Officers of the Morse Chain Co., in Philadelphia, have been moved to 612 Franklin Trust Bldg., 18-22 South 15th street. Need for expansion due to increased business led to the change, it is explained.

Chillicothe Has the Highways

Among the many interesting replies received by the National Automobile Chamber of Commerce to a card questionnaire on motor camp sites in the United States, is one from Chillicothe, Mo. This city with a population of 12,560 has no less than 28 national, inter-state and state highways passing through it. Tourists' cars carrying over 100,000 persons visited or passed through Chillicothe in 1921.

Pandolfo Loses Appeal

Sentence of Samuel C. Pandolfo, formerly head of the Pan Motor Co., to ten years in the nenitentiary and to pay a fine of $4,000 on conviction of a charge of using the mails to defraud was affirmed this week by the United States Circuit Court of Appeals at Chicago. The government prosecution was based on the sale of stock to the alleged extent of $1,000,000.

Haynes to Hold Business Meeting

Haynes distributors and dealers will meet at the factory at Kokomo, Ind., September 7 for business sales consultation. All members of the sales force are expected to attend and exchange thought along the line of "result-getting" methods for selling cars.

The Traffic Problem

TAXATION of motor vehicles impinges against the question of traffic regulation in connection with roads. As was pointed out several weeks ago in thi section, wit'iout constant expansion of the mileage good roads and equally continuous improvement of bad roads, the automotive industry will eventually become stagnant. Without taxation roads cannot be built nor kept in repair. It is therefore patent that the empire builder of the automobile world, in considering traffic must evolve a scheme of imposts that will meet with success.

The first problem—to which all too little thought has been given—is, who shall be taxed for roads?

Before traffic became such a grave consideration, it was fairly agreed that the citizen whose property benefited by improved roads should bear at least a part of the burden. With the coming of the automobile, particularly the truck, the matter became complicated. When, as happened in Maryland this year, residents along the Pike had to pay in 12 months $600,000 to repair damages done by trucks to their highway, the future of the industry suffers a mortgage.

The people believe the automobile owners should pay at least to a large per cent the taxes to maintain the roads. The automobile owners point to license, drivers' and other fees. The railroads cry discrimination. Those unfortunate municipalities and States in which highway offices are doled from political vest-pockets, agree with everybody and "saw wood" or "grind axes."

Certainly it is not right that citizens who benefit only indirectly by automotive transportation should be required to pay for the original surfacing, watch passing passenger and commercial vehicles ruin it in short order and then have to shell out for new road finishes ad infinitum. Neither is it right that truck owners, carrying the citizen's articles of commerce to and for him, giving him all the benefits automotive hauling involves, should pay for the roads and their upkeep. Surely the railroads have cause for complaint when they have had to buy most of their right of way (save, of course, in the West), must maintain it and then pay taxes on their equipment and suffer the meddling interference of little-minded politicians while practically untaxed motor vehicles compete with them.

These are but a few of the divers crises facing the man who would attempt formation of a suitable traffic-taxation plan. Everyone knows the automobile, in whatever guise it appears, is overtaxed. Everyone knows the public is looked upon as a sucker who always must swallow the hook of more taxes. Everyone knows the railroads have some compensation due them.

In Indiana it is understood the next legislature will be asked to levy higher licenses on trucks while eliminating from the highways sizes of more than three-ton capacity. This is a straw in the wind. Highway commissioners throughout the Country know the situation is as full of incongruities as raisin pie is full of raisins but no two can agree on what should be done.

The time will come when truck lines will be as extensively and complexly organized as are railroads. Until that era arrives, taxation of trucks cannot be on the same basis as taxation of railroads. Yet an equitable sharing of the burden of taxation for road building and upkeep must be devised soon. It is not a politician's job. It is not a manufacturer's job. It is the job for a professor of political science, an acknowledged authority, who at the same time possesses that rare quality in one of his ilk, practical views on actual conduct of governmental taxation systems and a personal, not academic, acquaintance with the problems involved.

Such a man can be found, no doubt. When he is this apparently hypothetical leader and real founder of the automobile industry who has been addressed in these articles will lay the taxation question in relation to roads in his hands. Unless the puzzle of who shall pay highway costs and how much he shall pay is solved, the Traffic Problem will become a graver menace to the industry than it is now. For the roads of the nation are an increasing though welcome burden and they must not be allowed to deteriorate through insufficient and wrongly imposed taxation.

You Made It—Help Solve It

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NEW AMERICAN MODELS CARRY MILE WARRANTY

Places 25,000-Mile Guarantee Against Defective Material and Workmanship—Prices Reduced from $65 to $210—Plans Extensive Development.

Rather unusual, when compared with the practice of most automobile manufacturers of adhering to the N. A. C. C. warranty, the American Motors Corp. this week announced a new policy of placing a 25,000-mile guarantee against defective material and workmanship on their cars. The warranty is part of an extensive program of development the corporation is putting into effect under the direction of Carl H. Page, president of the Company.

"We have made a thorough analysis of claims for defective material registered in our Service Department over a period of years," Page explains, "and find to our own surprise that claims for replacements on this account average less than one-sixth of one per cent or only $3.24 per car. With improvements which we are including in the new models now being brought out we have reason to believe that such claims will be practically eliminated with the result that the Company feels entirely warranted in putting into effect a 25,000-mile guarantee on all cars of the new series. Under the terms of this warranty a purchaser can drive an American Car the full distance around the earth and if in the course of this mileage any part breaks or is damaged by reason of a defect in material or workmanship the Company stands ready to make it good."

As will be noted in AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) in this issue, the prices on the line have been reduced. The list is as follows:

Model	Old	New	Change
Touring (5)	$1,850	$1,785	$ 65
Sport (4)	1,995	1,885	110
Sedan (7)	2,695	2,485	210

The new series, on which deliveries are already being made, include both open and closed models equipped with an enlarged motor, 3½ x 5, in size giving 20 per cent increased power, in addition to many details of special equipment such as dash clock, cowl lights and ventilators, tonneau light, windshield wiper and inside mirror. List prices includes extra equipment.

Wills Sainte Claire Birthday

Celebrating its first anniversary, C. H. Wills & Co. this week inaugurated its second annual Fall sales contest to run from September 1 to 30 inclusive. The present contest will vary somewhat from that held last year. Only sales on which delivery is made will count. Every salesman except the actual managing head of the distributing organization is eligible to receive the prizes which total thousands of dollars in amount of from $100 to $25.

Cadillac of N. Y. to Expand

Planning to build an addition in the near future, the Detroit Cadillac Motor Car Co. of N. Y., New York city, has purchased a plot 80 x 150. The plot adjoins the Company's present plant.

Haynes Sets Date for Sales Conference

A business sales meeting will be held September 7, by the Haynes Automobile Co., Kokomo, Ind., for its entire dealer and distributer organization. Several well-known merchandisers will address the gathering.

Hayes Wheel Gets Big Contract

A contract to furnish wheels for cars manufactured by one of the country's largest automobile makers has been signed by executives of the Hayes Wheel Co., Jackson, Mich. The size of the order is reported as establishing a record for equipment of this kind.

ROLLS-ROYCE OF AMERICA PASSES 350 OUTPUT MARK

Bankers Say Company Can Earn $600,000 Yearly on Eight Cars a Week

Since Rolls-Royce of America, Inc., built its first chassis in January, 1921, 350 of its cars have been built in this Country, a report issued this week shows. Though the output is not comparable with any American concern, bankers point out that the Company can earn $600,000 yearly on a production of only eight cars a week. The real problem in the development of the American Rolls-Royce has been the building of a chassis equal in mechanical worth to the car produced in England. This, it is believed by the company, has been accomplished at its Springfield plant.

It is asserted that with comparatively insignificant capital expenditure for equipment the output can be raised to 750 cars a year, and Company investigators believe that this number of automobiles can be disposed of to trade able and willing to pay the price. In March the price of the chassis was reduced and since that time sales have been greater, it is asserted. Beginning with the second quarter, the Company has earned a profit each month after paying all fixed charges and setting aside a very substantial depreciation. Unfilled orders are on hand in sufficient amount to keep the factory at capacity until well in 1923, it is declared, and no great decrease is expected next year.

Pullman Body Work Is Increasing

Production on both open and closed bodies is increasing daily in the plant of the Pullman Co., Chicago. This Company is now building all its bodies complete, including painting and trimming. On the open models it is furnishing tops.

ANDERSON DIRECTORS ELECT NEW OFFICERS

J. W. Anderson Now President—W. A. Given Vice-Presidency and J. G. Takes Chairmanship—Unveiling of New Car Brings Spot Orders for 4,225.

Through the election of J. W. Anderson as president and W. A. Anderson as vice-president, active management of the Anderson Motor Co. has been placed in the hands of a group of unusually young men. The newly elected officials are under 35 years of age. With J. G. Anderson, founder of the company, now in the chairman's seat on the board of directors, the stockholders elevated J. W. to the presidency, he having been vice-president and general manager. W. A. was sales manager.

The announcement of the elections came last week at a "convention" of dealers at Rock Hill, N. C., the factory site, when the new light aluminum six was unveiled. At the meeting practically the entire output of the factory for the next year was contracted for in ten minutes. Not all of the dealers were present but those at the meeting took 4,225 cars.

The output of the factory for a year is 5,500. A larger per cent of these cars than ever before go North. The New York dealer contracted for 800, Chicago 400, Boston 275, Minneapolis 250. Practically all the contracts call for new aluminum six.

AUSTRALIA CALLED GOOD MARKET FOR ACCESSORIES

Body Building and Fitting Materials Also to Experience Strong Demand

Medium-priced cars, accessories and all classes of materials for body building and fitting will find a good market in Australia during the remainder of 1922 and in 1923, according to the Bureau of Foreign and Domestic Commerce, which this week publishes the findings of Consul General Thomas Sammons at Melbourne. Sammons states that body building is encouraged by the high tariffs on imported bodies and by a regulation prohibiting the entry of more than one automotive body to every three chassis.

Approximately 95 per cent of the cars imported arrive without bodies, he continues. During the months of May, June and July, imports of passenger cars from the United States and Canada totaled over 1,000 monthly. It is estimated that the replacement market averages 2,000 cars a year. The industry as a whole is confined to body building and assembling of cars. It suffered a slump early in the year but that has passed and builders report more orders than they can handle. It is believed the new year will show the same condition.

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WICKWIRE SPENCER TO ACQUIRE WIRE CONCERN

Stockholders Asked to Vote on Purchase of American Wire Fabrics Co.—Capital Readjustment Also Planned—Plan Reduction of Common Capital Stock.

Directors of the Wickwire Spencer Steel Corp. have called a special meeting for September 8, for stockholders to vote upon the acquisition of all the capital stock of the American Wire Fabrics Co., or of a corporation to take over the business and substantially all its assets. The stockholders will also be asked to change the 250,000 common shares of Wickwire corporation now outstanding of the par value of $5, to an equal number of shares without par value; to authorize the issue of 350,000 additional common shares without par value, and increase the authorized number of shares accordingly; and to determine the manner of disposition of such increased stock by the board of directors.

Other matters to come before the meeting include propositions to reduce the authorized capital stock of the Company by the amount of $400,000, such reduction to be effected by an exchange of the 80,000 Class A common shares, par value $5 each, now outstanding for 120,000 shares of the new common shares without par value and by the cancellation of the Class A shares so exchanged. Finally, it is proposed to authorize the issue and sale of $1,775,000 10-year 7½ per cent secured convertible gold notes for the purpose of paying in part for all the stock of the American Wire Fabrics Co. or the new corporation to be formed to take over the business and substantially all assets of that company.

H. W. Doddard, chairman of the board of directors of the Wickwire Spencer Steel Corporation, points out that the American Wire Fabrics Co. was organized in 1911, through a consolidation of various companies in several states, and their product is wire cloth of various grades similar to that manufactured at the Clinton and Wright works of the Wickwire Spencer Steel Corporation. The business of the American Wire Fabrics Co. has always been profitable, and for the last nine years earnings have averaged over $400,000 a year, after taxes and depreciation. Last year sales were approximately $4,000,000.

Another Gasoline Price Cut

Most of the large gasoline producers made another cut of one cent in the price of their product this week. Standard Oil, Sinclair and the Texas Co. made the first reductions throughout the Country.

N. A. C. C. Courtesy Campaign Thrives

Greater civility on the part of the one million motor truck drivers in this Country is anticipated from now on by reason of the excellent response that has been made to the educational campaign being carried on by the motor truck committee of the National Automobile Chamber of Commerce. The pamphlet that is being used in the campaign, "Common Sense on the Highway," has already reached a circulation of 125,000 copies among truck manufacturers, dealers and fleet operators.

S. A. E. Announces Section Meetings

Schedules of section meetings to be held in connection with the September program were announced this week by the Society of Automotive Engineers. They are as follows: Detroit section—Lubrication—A. A. Bull—September 29; Metropolitan section—Automobile Club of America—George A. Round—Lubrication, September 21; (Annual outing, September 16); New England section—Engineers' club—Boston—Starting and Lighting equipment—Louis Ehrlich, September 22.

U. S. STUDIES CORROSION OF METALS UNDER OIL FILM

Experiments with Rifles of Interest to Automobile Industry

Experiments conducted by the Bureau of Mines of the Department of Agriculture into the causes and results of corrosion of metals under oil film have resulted in what is claimed to be remarkable discoveries. The investigation, just completed, and the consequent clearing up of many problems in handling bright steel parts are embodied in Technical Paper 188 which may be obtained from the Washington office.

Toward the end of the World War the Bureau was requested to investigate the causes of after-corrosion upon the bore surfaces of the infantry service rifle, with the ultimate purposes of developing some simple procedure for eliminating this serious menace. The importance of this study is not, however, limited to the users of firearms. The fundamental problem proved to be corrosion under oil films; this differentiates after-corrosion sharply from the ordinary corrosion of clean iron and steel surfaces. It was shown that this after-corrosion is closely allied to a number of other general problems, such as the corrosion under oil of bright steel parts after handling the manufacturing operations, and to the corrosion under oil experienced near large bodies of salt water.

Survey Shows Growing Farm Market

Increased activity is being felt in the farm market for automobiles. This has been confirmed of late in a survey carried on by distributers of the Velie Motors Corp. throughout large agricultural territories. It is expected that before the year is out purchases by farmers will go far toward re-establishing the agricultural car market.

HERTZ TELLS OF PLANS FOR YELLOWS IN PARIS

American Taxicabs to Revolutionize Continent, He Predicts—Yellow Cab Co. Not to Build Factories, Aid Says—French Place Initial Order for 475.

Declaring that the taxicab business of Europe will be revolutionized by the Yellow Cab Co., John Hertz, president, returned from France last week after a tour of the Continent in the interests of his concern. Hertz carefully considered the taxicab situation in England, France, Belgium, Holland, Czecho-Slovakia and Switzerland. He expressed himself as certain that American methods of operation and building of taxicabs would soon become the rule instead of the exception in those countries.

A syndicate of Parisian bankers is financing the installation of Yellow Cabs in Paris, Hertz added. An initial order of twenty-five cabs has been placed with the Chicago company and an additional order of 475 is to follow if the service proves satisfactory. In preparation for the inauguration of the Parisian company, Captain Marcel de Journay will arrive here early next month for an intensive survey of the Yellow Cab methods and efficiency. When he returns to France in December, two representatives of the Company will go to Paris to aid in installing the service and an official of the Company will maintain headquarters abroad permanently.

The French operation will contain several unique features which will revolutionize the industry there. The chauffeurs for the Paris service will be recruited from the thousands of unemployed ex-army officers. The Yellows there will eliminate tipping, breaking up a system under which it is practically impossible to hire a cab without tipping in advance. Paris now has only 3,500 cabs in service.

A London agency for Yellow Cabs already has been sarted. The situation there is held to be favorable as labor is cheaper than here, the taxi fare is 32 cents as compared with 20 cents for Chicago, although gasoline is higher.

The situation for the introduction of the Yellow system is considered favorable, as the motor industry abroad continues demoralized. There are few privately owned motor cars and the taxis are built from antiquated pleasure vehicles in many cases.

The Yellow Cab Company is not planning to establish a factory abroad or to arrange for stockholders to obtain stock in any other Company, Charles W. Gray, vice-president and general manager of the company stated. Neither will the Company be concerned in a financial way, he added.

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LANG GOES INTO LARGE PRODUCTION SCHEDULE

Four-Passenger Dodge Brothers Job Leads to Greater Output—Builds Special Train of Assembly—Plans 20 Bodies Daily In Next Few Months.

From its introduction of fine body practise into the field of quantity built automobiles, the Lang Body Co., Cleveland, has experienced a reaction of such proportions as to call for a larger production schedule. The cause is the four-passenger coupe body for Dodge Brothers chassis, which was originated by E. J. Lang, general manager of the Company, and tried out in its first retail market by W. Pitt Barnes, Dodge Brothers dealer in Cleveland. First pictured to the trade in these columns under date of May 27 and presented quietly here and there among other dealers since that time, the body has met with a reception which has held out promise of successful further manufacture and exploitation.

Already normally busy on its programs for a number of customers in the trade whose body requirements call for fine design and quality manufacture, the Lang company is building up within its adequate plant what is to all practical purposes a special train of manufacture and assembly for this featured product. From the seasoning of the wood which goes into the framewrok to the installation of cushions, which are made in the plant, and including the next to final coat of finishing varnish, the whole process is to be carried on exactly as Lang has done over a long period of years for cars selling at several times the price at which dealers are offering this vehicle.

The schedule calls for twenty bodies daily, and the company's materials requirements have been figured in quantities which promise to extend this schedule over a considerable portion of the next few months. This, of course, is to be in addition to the manufacturing schedules on larger bodies of other varieties for lines which the Company has served almost since its inception. These contracts, it is declared with emphasis, are to be handled exactly as has always been Lang policy, and it may be said that extensions of this side of the business are now under consideration.

Though this is the first time the Lang company has dealt directly with the retail automobile trade as a quantity manufacturer, it is by no means the beginning on the part of those who direct the business of close study into the requirements of the dealer. The Lang Body Co., as such, has been in existence since 1917. It was formed at that time by Charles E. J. Lang, who was then vice-president of the old Rauch & Lang organization. He is president and treasurer of the Company that now bears his name, and it is his studies of the market, together with those of his son, E. J. Lang, that led the firm into its present undertaking.

Briefly it is the Lang idea, that the closed body end of the automobile business is still in its early stages of development. In the one direction this is producing the body of frankly utilitarian purpose, so built and so offered at a price that encourages quick acceptance. In another, and no less definite direction there is the finely designed and built closed body to serve a market that is able and willing to pay the necessarily higher price for a product that appeals to its taste.

D. A. D. A. Closed Car Salon in October

Detroit Automobile Dealers' Assn. will hold a closed car salon from October 17 to 21 inclusive. The exhibits will be staged in the General Motors Building.

Memphis Show Preparations Progress

Preparations for an automobile show September 23 to 30 at Memphis, Tenn., are being made by the local organization on a scale it is hoped will surpass all previous exhibitions in that city. Thomas H. Smart is chairman of the show committee of the Memphis Automobile Dealers' Assn., and is assisted by Fred M. White, Jr., and H. W. Osoinach, secretary.

London Rubber Growers Balk

Rubber Growers' Assn. of London has turned down the suggestions made with the object of stabilizing the prices of crude rubber through limitation of output. American interests have suggested the formation of a $250,000,000 corporation with the object of amalgamation and assistance of rubber estates. A conference between the Rubber Growers' Assn. of England and the Rubber Association of America is contemplated.

N. Y. Seeks Bus System

Special meetings of the Board of Estimate and the Board of Aldermen of New York city were held this week with the result of a petition being started on its way through Red Tape towards the State legislature, asking permission to create a $25,000,000 municipal bus system. The plan was launched by Mayor Hylan some time ago but the fuel emergency is the activating principle beneath the present movement.

Preferred Utilities Adds Monogram Lens

Monogram Lens Corp., New York city, has assured itself of capable representation in the north Atlantic states by placing sales of the Monogram lens in that territory with Preferred Utilities Co., Fisk building, New York city. The preferred company, which already represents a number of equipment makers, will handle the lens in the New England states, New Jersey, New York and Pennsylvania east of Harrisburg.

TIRE PRODUCERS SEE NO DANGER FROM FORD

Threatened Shut-Down Discounted by Those Involved—Expansion "Tabled" Despite Huge Indicated Demand of the Future—Output Near Capacity.

Production of tires keeps up the high pace set by the year's business so far and prospects point to a continuance of present schedules far into September if not into October. This is the reply of those close to the industry when the question "What will happen if Ford shuts down and others follow suit?" is brought up. And throughout the automobile centers of the Country this week, the question was often asked.

Both Firestone and Goodyear, who furnish large quantities of Ford tires, immediately let it be known that no immediate cut in production will follow if the September 16 cessation becomes fact. Two reasons are given. The first is that the heavy touring this season is keeping up a remarkable demand from dealers and the second is that the weather being favorable the seasonal cut in consumption is still some distance off.

"Although Firestone plant has been producing 26,000 tires a day for some time past," the Firestone Tire & Rubber Co. states, "our supply in a number of types and sizes is behind orders. In view of this we are not planning any change at present in our manufacturing schedule. It will be about 60 days before the usual seasonal decrease in retail sales is felt and the new schedules arranged on the basis of anticipated spring demand. The determining factors in the situation, however, are the length of time of the Ford closing and the usual weather and other conditions which affect consumer demand for tires."

Indeed, only the wholesome fear engendered by the experience of 1920-21 holds Akron factories back from an expansion believed to be logical. As is well known, Akron's tire makers lost upwards of $100,000,000 in the slump that followed 1920's record breaking output. The lesson is remembered and the conservative leaders now say they would not dare prepare for even the indicated demand of the immediate future. This demand is variously estimated but pretty well settled at at least 33,000,000 tires sold. This was the figure of 1919, the previous record year.

New records are being set at the present time. The months just past, ordinarily "dull," have shown consumption equal to the best winter production. Yet only timidly is an attempt made to answer the question of what will be the demand when general conditions become "normal." Buildings started during the

(Continued on page 234, first column)

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PORTUGAL SEEKS WAY TO "SIDE-STEP" DUTIES

Agitation Started to Construct Assembly Plants—American Manufacturers See Chance to Increase Sales in Potentially Excellent Market.

High duties imposed by the Portuguese government on imported automobiles, have led to considerable agitation in that country for construction of assembly plants that advantage may be taken of the lower imposts on parts. American manufacturers interested in the potentially good market in Portugal, see still larger possibilities for "Made in U. S." automotive products in the fostering of the movement to erect the plants.

These reports reach the Department of Commerce this week, which adds that there is a good opening for American cars in the medium and lower price classes. Imports of our machines into Portugal have fallen off since the war but the heavy duties are the main cause. The market is there.

Other information regarding foreign opportunities as collected by the Department, may be summarized as follows:

Hungary: Big drop in imports during quarter ended March 31, reported. Totals were 37 of which 23 were from Austria, nine from Germany and five from all others. This compares with 915 imported in corresponding period of 1921.

Great Britain: Practically all sales of new commercial vehicles are being confined to trucks of one to three tons capacity. Trucks sold from the surplus war stocks and used vehicles still constitute menace to markets, all heavier types being drawn from those sources.

India: Imports of passenger cars into Bombay during the fiscal year ended March 31, 1921, numbered 4,908, of which 2,845 came from the United States and 949 from the United Kingdom; for the fiscal year 1922 the imports numbered 968, of which 238 were from the United States and 359 from the United Kingdom. Although the United States' share in these imports dropped from 58 per cent in 1921 to about 25 per cent in 1922, the prospects for 1922-23 are favorable to the United States, on account of the recent tariff changes which are less detrimental to lower-priced American automotive products than to those of the United Kingdom.

Rumania: Preliminary registration figures for Rumania show 4,220 passenger and 2,028 commercial cars, of which about 75 per cent are in the city of Bucharest. It is estimated that about 20 per cent of the cars are of American manufacture, while between 50 and 60 per cent are the products of Austrian, German, and Italian factories. It is conceded that one American low-priced car is better adapted to Rumanian roads than is any other, while another American car of higher price enjoys a very good reputation. Motor busses and motor delivery wagons, although few in number, are becoming more popular as their worth is appreciated.

Dutch East Indies: Part of the stocks of automobiles imported into the Soerabaya district during 1920 are still unsold, and there are several hundred trucks of American manufacture stored in warehouses in Batavia and Soerabaya. There appears to be no prospects for the sale of motor trucks because of the high Government tax on such vehicles. Automobile dealers are still being carried by the banks, which, owing to general conditions, are not disposed to further the import of machines until the present lot has been disposed of. The market, although not saturated, is practically without activity.

BAD ROADS HINDER SALES OF MOTOR CARS IN JAPAN

Limousines Most Popular Type Sold by Willys-Overland Representative

"Perhaps the greatest hindrance to the development of the automobile industry in Japan is the poor condition of roads throughout the country," A. L. Zollner, special factory representative of the Willys-Overland Co., who has just returned from a trip to the Orient, reports. "With the exception of a few roads used exclusively by the Military, road improvements are practically unknown. With the introduction of Occidental methods of transportation, however, some of the larger cities are building wider roads, but those for the most part are limited to the main thoroughfares in the immediate business and shopping districts.

"The city of Tokyo has recently levied a tax on car owners, the proceeds of which are to be utilized for municipal road improvements. This tax, while having a deterrent effect on sales during the period of deflation and liquidation, will eventually mean much for the industry. Limousines are by far the most popular type of car in Japan. The reason for this is, the highly developed sense of personal dignity of the people and their unwillingness to drive their own cars. Limousine bodies are much in demand and many chassis are shipped into the country for closed jobs."

Sees Big Chinese Market

Asserting that China and other Asiatic countries form a huge though almost virgin market for American automobiles, J. Walter Drake, chairman of the board of directors of the Hupp Motor Car Co., declares 1,000 cars a day could be absorbed and a potential capacity of 10,000,000 is assured in Asia. He points to these figures as indicative of a source of sales for Americans in case European countries balk at high tariffs imposed by the present Congress on their exports.

KLEIN URGES BETTER SALESMANSHIP ABROAD

Declares It Is Vital to Future of American Foreign Trade—Automotive Business Men as Much at Fault as Leaders in Other Lines.

One of the most vital essentials to American success in foreign business today is the selection of efficient salesmen, according to Dr. Julius Klein, director of the U. S. Bureau of Foreign and Domestic Commerce. Dr. Klein finds that the automotive industries are just as much at fault in this matter as are the leaders of other businesses.

A comprehensive world survey of this phase of American trade development by experts has revealed striking facts and conclusions. Several instances have recently been brought to light where unwise appointments have proved extremely costly, or even disastrous, to American manufacturers whose judgment was at fault.

"This is a most serious problem," Dr. Klein points out, "involving, as it does, not only the welfare of the offending firms but the good will and standing of American export business in general. In foreign countries the traveling representative of an American house is regarded as the spokesman of his Country as well as of his company—he has the power to build up or damage the prestige of both. The banner bearers of American industry in the world markets should be the best men obtainable, and every effort should be made to secure capable 'Americans' to perform the task, even at some temporary sacrifice to the concern's domestic trade.

"A partially successful pill salesman, whose sole qualification for the position is knowledge of Spanish and of 'the customs of the people,' may not be so successful in the automobile business. This was the recent sad experience of the manufacturers of one of the highest priced makes of American automobiles in South America. The vendor of 'cure alls' made the American automobile company ridiculous in the eyes of scores of shrewd Latin American business executives who put the incident down as 'just one more example of Yankee stupidity.'"

On the subject of nationality, Dr. Klein notes that many firms favor the selection of a real American bearing the indubitable appearance of one in preference to a naturalized citizen who is selected solely because of his knowledge of the language and customs of his native land. Many foreign firms have a keen respect for American business methods and they will frequently do business with a bona fide "Yankee" who evidently lacks polish, as against a man of their own nationality who approaches them as the representative of an American house.

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MICHIGAN DEALERS FEAR RAIL WALKOUT

Fruit Crop Must Fail If Transportation Is Not Resumed Soon, They Say—Illinois Finds Price Cuts Help Sales—Indiana Finds Prospects Bright.

Adverse effects of the two great strikes and a coincident increase in sales due to lowered prices in some lines are the outstanding features of this week's batch of reports from dealers in Illinois, Michigan, Wisconsin and Indiana to AUTOMOBILE TOPICS. The first and deplorable experience is particularly noticeable in Michigan where the fruit crops are the subject of much gloomy speculation due to the tie-up of railroad facilities. The latter and encouraging signs are seen most prominently in Illinois, Indiana and Wisconsin.

From Galesburg, Ill., the Galesburg Overland Co., declares flatly that dealers in that State who are carrying cars of manufacturers who have recently cut prices are "making many sales." The business of those dealing in automobiles on which the price has not been reduced is characterized as "stagnant."

"For the last three weeks our business has been slowing up," the Company states. "It is, however, better than last year's business at this time. Used cars are very low priced but very hard to move, especially the large cars. Cash sales are scarce, practically all prospects asking for time on their purchases. The public is waiting for manufacturers of the car they prefer to cut the price."

Frank E. Hathaway, Inc., Muskegon, Mich., Dodge Brothers, sees all depending on the outcome of the fruit crop movement. While the crop is exceptionally fine, the growers are not in a very cheerful state of mind, fearing the rail strike and prices being generally not enough to cover picking and shipment.

"If they do not obtain freight cars soon, the bulk of the crop will perish," Hathaway states. "If the crops can be moved in time and a fair profit obtained, car sales to farmers this Fall will be fair.

"The trend of the automobile business in our territory since March has been exceptionally good. However, we are now experiencing the customary seasonal let-up in orders placed. During July and August last year, due to the substantial reduction in price on our line, we experienced a very good business. Our sales in those months this year were approximately the same as last year. From January to September this year our sales will about double those for the same period of 1921. We will deliver more cars in 1922 than in any previous year in the history of our business."

Enthusiastic predictions regarding future sales in Indiana are voiced by the Jones-Whitaker Sales Co., Inc., Chevrolet dealers in Indianapolis. Only those dealers handling what the Company designates as "little known cars" have experienced any financial difficulties.

"The sale of our car has been unusually good," the Company asserts. "It appears that business in the popular makes is in healthy condition. Our sales have been about four times those of the corresponding months of 1921 and the ratio is increasing as the Fall season approaches."

A similar report is made by Jesse A. Smith Auto Co., Hudson-Essex distributers at Milwaukee.

"The trend of the automobile business in our locality is towards better and bigger business," Smith declares. "The crop outlook is fine and the prospects for the sale of cars for the balance of this year is extremely good. Our present rate of sales is about 100 per cent better than it was a year ago this month. From every indication our volume for the year will be about twice that of 1921. We believe these facts would apply to most distributers who are handling popular lines in our State."

MOVING PICTURES TO SHOW VARIOUS HIGHWAY TYPES

Bureau of Public Roads Announces Series of One-Reel Films

Series of one-reel motion-picture films illustrating modern practice in the construction of the various types of highways has been prepared under the direction of the Bureau of Public Roads and are now available for free distribution by the Department of Agriculture. The films, consisting of one reel each, are as follows: "Modern Concrete Road Construction;" "Building Bituminous Roads;" "Mixed Asphalt Pavements;" "Brick from Clay to Pavement;" "Granite Block Paving;" "High Roads and Sky Roads."

In addition there will be completed in a short time, "Building Forest Roads" and "Around the West by Forest Roads." A film on gravel-road construction is in course of preparation. These films are intended for use in engineering colleges, road meetings, and other public gatherings. They may be obtained upon application to the department for use on specific dates without cost other than that of paying for transportation.

Providence Orders Republic Buses

An order for six 25-passenger single-deck Republic buses equipped with the Knight sleeve-valve engine has been placed with the Republic Truck Sales Corp., by the United Electric Railways Co. of Providence, R. I. These buses are similar to the 27 that were installed a short time ago in regular service in Baltimore, Md., by the United Railways and Electric Co. of that city.

WESTERN FARM BELTS PROMISE LARGE TRADE

Hodgkins, of Cletrac, Discovers Prospects of Substantial Business—Casts Critical but Appreciative Eye Over Many States While Touring.

Prospects of real big business are discovered by a practiced and critical eye which has surveyed the various significant parts of the West during the past month. R. T. Hodgkins, in charge of Cleveland Tractor Co. sales and associated with Clement Studebaker in the Zeder projects, just returned from a tour which took him to the Pacific Coast States and back through the northwestern grain centers, this week declared that he found abundant signs of sound and substantial business in those sections.

For his comparisons Hodgkins discarded such obvious ones as might be found in seasonal variations, and took as his basis for judgment the results of years. Naturally he surveyed chiefly the centers in which tractors are used in large quantities, and his impressions are directly linked to the prospects for tractor business among the agricultural and lumber districts. So far as the condition of these sections influences general business, however, it also has a direct bearing on the prospects for automobile sales, as Hodgkins, with his own long experience in the automobile trade, admits.

California sales prospects have never been more promising, he finds. Obviously the tariff on the Golden State's products is going to prove a help, and at this time, through developments of the past few years in national legislation and its reactions, California vineyards are reaping bumper prices for their crops.

Further North, along the Coast, where logging has been under restrictions imposed by dry weather, activity is being resumed and the transfer of natural wealth into more conventional media of exchange is getting under way. This is expected to provide a direct market for Cletracs. It may also be asserted that it will influence the automobile market.

Montana is experiencing its first real crop in six years, Hodgkins declares. Wheat is growing 35 bushels to the acre this year. Of course it is a "bankers' crop" to a large extent, which is a local way of saying that many a Montana farmer is going to be able to liquidate his bank loans, and remove the money to a large extent from the easy reach of the automobile dealer. On the other hand, the thawing out of frozen loans will bring major reactions both in the matter of retail buying and of credit available for legitimate financial requirements.

North Dakota is found to be in much the same circumstance. Here the interval since the last good crop is not quite so large, but the resumption of regular producing is quite as heartening.

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STRAIGHT-SIDE TIRE MARKETS INCREASED

Rubber Association Judges from Responses to Its Educational Pamphlet on the Subject—Results of Questionnaire Soon to Be Made Public.

Straight-side type of tire is rapidly becoming standard throughout the world, according to the Rubber Association of America, Inc., which bases its assertion on responses that have been received to its educational pamphlet, "Why Straight Side Tires Are Better." The pamphlet, which eventually is to be distributed in all civilized countries, is now being printed in Dutch and Danish. Both will be ready for mailing within two weeks, the former edition also to be sent to all Dutch colonies.

The Association's questionnaire report for the first half of this year will also be ready for distribution within two weeks. It will contain information for the period covering average number of employes, amount of reclaimed rubber produced with the amount of scrap rubber consumed, the total of crude rubber used, sales value of shipments and the inventory of crude in stock and afloat in ports as of June 30.

The divisions and committees, following their usual custom, omitted meetings during August. It is expected, however, that Fall and Winter will be quite busy seasons for the members and the organization.

TIRE PRODUCERS SEE NO DANGER FROM FORD

(Continued from page 231, third column)

boom, halted when semi-completed because of deflation, and pointed at by Washington as forever useless, are being finished. Two years ago 10,000,000 tires were piled up on the hands of the makers because of the depression. In August, 1920, it was said they never would be sold. In October, 1921, the pile had vanished.

Now Goodrich is completing buildings started during the war. Firestone is finishing its Canadian plant. Goodyear requires all its space except one building, the uncompleted rim plant. Every factory in the district is in operation except two small ones. A year ago six were idle.

These are a few of the facts pointed to by the industry's leaders both as answers to pessimists and optimists. Barring the strikes, the outlook is very bright. But expansion in anticipation of the probably greater demand of the years to come is a subject handled with care by those best qualified to advise their fellow manufacturers.

Nevertheless, there are indications that the usual decline in the last three months of the year will come about. This may be accounted for by the hesitancy of buyers resulting from the price-cutting "war." Hoping that prices may be further reduced, buyers who could wait have naturally postponed their purchases.

On July 15 one company made reductions which averaged 28 per cent; and other large companies have lowered prices, either by slashing their consumers' price lists or by offering an inner tube free with each casing or by increasing the discount to dealers, all of which will lower the price to the consumer. A tabulated statement showing the changes made by the principal companies since 1914 indicates that present prices are not only 40 per cent lower than the peak quotations of March, 1920, but are the lowest ever quoted by these companies.

Goodyear Employes Assured of Coal

Employes of the Goodyear Tire & Rubber Co. are assured of having plenty of coal on hand this Winter. Arrangements have been made with mines in the vicinity of Akron to provide all Goodyear homes with fuel.

EXPECT 50,000 CAMPERS IN DENVER'S OVERLAND PARK

Ask All Tourists to Pass Over and Register on "All-States Avenue"

Fifty thousand automobile tourists are expected to register this year at Denver's $250,000 free municipal camp grounds at Overland park. The city authorities, doing a constructive work that has been widely copied, have established an "All-States Avenue" over which they ask all motorists to drive and register if they cannot camp awhile.

Virtually every State was represented last week when 5,000 automobile campers attended a celebration at the grounds on the occasion of which Mayor Dewey C. Bailey of Denver turned the park over to the people of the United States. Records at the park on August 15 disclosed 8,983 cars registered with their 29,949 touring occupants. This is a gain of 33 per cent over last year at that time and lacking only 9,905 of the total of the entire year of 1921.

Retail Tire Collections Better

Collection in the retail tire trade are characterized as in greatly improved condition, general business betterment having brought about the change in the last 30 days. One dealer exemplifies the situation through the remark, "I am beginning to see real money for the first time in months."

Will Leave Rubber Situation Alone

Coercive measures in rubber cultivation are held unnecessary by the Dutch government. Information to this effect has been forwarded the International Union for Rubber Cultivation in Dutch Indies.

CHARGE 76,000 DEATHS TO CARELESS AMERICA

Safety Council, Opening Annual Meeting, Learns of Huge Toll Exacted by Failure to Be Careful—Automobiles Placed Almost First on List.

Seventy-six thousand accidental deaths —a life needlessly snuffed out every six minutes—is the astounding bill charged against careless America for 1920, according to the report of the public accident statistics committee of the National Safety Council, presented at the Eleventh Annual Safety Congress which opened at Detroit this week. While the 1920 toll from all public and industrial accidents is a decrease of 3,300 over 1911, the beginning of the decade, there is only a balance of 400 on the credit side of the ledger over the 1919 total. This record is viewed with concern since the yearly downward tendency of accidental deaths, constant up to 1919, came to a halt in 1920.

Automobile accidents are held to be in part responsible for the unfavorable experience of 1920; in that year there were 1,200 more deaths from that cause than occurred in 1919. The chief reason for this, it is pointed out, was the large increase in the number of automobile users. The automobile fatality frequency for 1920 was 30 deaths a day, a total for the year of 11,000. The 1921 estimate of auto deaths, based on figures now available from 50 of the largest cities, indicates a considerable increase over 1920. General traffic accidents in 1921, however, will show a 5 per cent decrease over 1920, it is believed.

People died from falling accidents of all kinds at the rate of 34 a day, a higher rate than even automobiles. Burns claimed 22 lives a day, a total for the year of 8,088 and an increase of 215 over 1919. Other major causes of accidental deaths are listed in order of importance as follows: railroad accidents, 7,769; drownings, 6,066; deaths from gasing, 3,618; firearms, 2,767; mine accidents, 2,660; machinery, 2,660; street cars, 2,128; other vehicles, 2,022; conflagrations, 1,277. Other general causes of deaths are crushing accidents, poisonings, sharp instruments, excessive heat or cold, injuries by animals, lightning and electricity.

Accidents in industry show a general decline of 1.3 deaths per 100,000 population for each year of the ten year period while public accidents decreased 1.1 per 100,000. The 1920 report shows public accidents on a slight upward turn while industrial accidents declined, this in spite of increased manufacturing activities. This is said to be due to the aggressive spirit shown by industry as a whole in organizing for safer working conditions.

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FEDERAL-AID ROADS GROW BY 600 MILES

Completed Highways Now Total 18,299 Miles with 40,338 Under Construction—5,392 Miles Added Since Beginning of the Year.

Nearly 600 miles nearer the goal of a completed system of highways for the United States is the report of the Bureau of Public Roads of the United States Department of Agriculture for the month of July. The final goal, the construction of a system of approximately 180,000 miles of Federal-aid highway consisting of a network of trunk line and secondary roads reaching into practically every county is still a long way off, but we are 5,392 miles nearer than at the beginning of the year according to the bureau.

Completed Federal-aid roads now total 18,299 miles with 14,912 miles under construction and approximately 60 per cent complete. Including projects not yet under construction Federal-aid roads in all stages now total 40,338 miles.

There is no indication of any slackening of the greatly increased rate of progress which began with the season of 1921 as the States continue to pour in plans for new projects and place them under construction as rapidly as possible. Nearly twelve and one-half million dollars was obligated to new projects in June and July, and in the week ending August 5 reports were received of the letting of 68 new projects and announcements of 57 to be let. At the present time the force of the bureau is taxed to the limit with the examination of new plans and projects, inspection of roads under construction and the planning of the Federal-aid highway system which is being gotten into final shape.

Timken Seeks Better Driving

In an attractive booklet entitled "Good Driving is Mostly Nice Steering," the Timken Roller Bearing Co. is undertaking a most valuable work in teaching motorists, garagemen and others the secrets of proper operation and upkeep of automobiles. Excellent cuts, interesting diagrams and explicit, clear text form a combination that should do much toward preventing the blunders that result in many accidents, ruined mechanisms and costly repairs. The effort of the Company is to be highly commended and the results should be proportionately effective.

Ford Dealers Plan Unique Exhibit

Ford Motor Co., Memphis, Tenn., branch, cooperating with the 230 dealers in the territory is planning an unusual display for the automobile exposition which will be staged in that city September 23 to 30th. A complete saw mill to include edger, planer, trimmer, boulter, cut-off, derrick and tram load will be operated. A cotton gin with press, a threshing machine and a road construction outfit operating over an area of 60 x 388 feet will be staged.

Date Set for Intercontinental Meeting

September 13 is the date set for a meeting of stockholders of the Intercontinental Rubber Co. at which plans for the formation of a new Company will be discussed. As already outlined in these columns the new organization would have an authorized capital of 60,400 shares no par value. In exchange for 31,370 shares of new stock it would acquire from the old concern, all stock, obligations and indebtedness, and exclusive right to use all patents, trademarks and trade names. New Company would then ask for authority to issue $2,903,000 convertible collateral trust notes. Certain amount of opposition to this plan is expected from several stockholders.

Chicago "L" to Use Buses

Chicago elevated lines will install a system of "feeder" bus lines as a result of the favorable impression made by such use of motors during the recent street carmen's strike. The bus lines will be an integral part of the elevated, transfers being issued without charge. At the start, 14 buses are to be installed. Forty will be needed ultimately.

ANDERSON ELECTRIC CAR CHANGES TO TOWSON BODY

Former Makers of Detroit Electric Take Name of M. S. Towson

Title of the Anderson Electric Car Co. has been changed to the Towson Body Co., it is announced this week. The Anderson concern formerly made the Detroit Electric vehicles until three years ago when W. C. Anderson withdrew and formed the Detroit Electric Car Co. Since that time the Anderson company has confined its activities to body making.

The new concern, which produces 60 bodies daily at capacity, takes the name of M. S. Towson, who has been connected with it since the consolidation with the Ellwell-Parker Co., of Cleveland. He is president as he was of the Anderson concern for three years. Gordon G. Fairgrieve continues as vice-president and general manager. The entire output of the concern is taken by the Packard and Lincoln producers.

Dunlop Rubber Seeks Stockholder Aid

Holders of Dunlop Rubber Co. debenture stock are being asked to release directors from attempting not to issue balance of the stock except to bankers, for security for loans. Provided this agreement can be secured, it is thought likely the Company can raise sufficient funds in this Country through a bond issue, to finance its American subsidiary.

HEAT FAILS TO DAUNT "ASK 'EM TO BUY"-ERS

A. E. A. Merchandising Work Continues Progress Despite Hot Weather—600 Meetings Held in First 11 Months of Operation of Plan.

Hot weather has had little effect on the progress of the merchandising work of the Automotive Equipment Association, according to records from the office of Merchandising Director Ray W. Sherman. During the first 11 months of the movement more than 600 "Ask 'Em to Buy" meetings were held, and it was expected that activity might lessen during the hot months. Instead, 82 meetings were held in June, July and early August and the big majority of them were in the Dixie section.

Ozburn Abston & Co.'s representative, George A. Brusch, operating out of Memphis, has the longest string to his credit. Next comes the McCauley-Ward Motor Supply Co., Waco, Tex., which is completing a schedule of successive days from August 1 to September 5.

The Peoria jobbers, following their big meeting of 555 people July 28, have held meetings in Paxton, August 11, and Springfield, August 21. Another was held at Monmouth on August 28.

The department of merchandising has begun the publication of a small four-page sheet, *The Sales Executive*, in which will be an interchange of executive information on the subject of merchandising. Tentative arrangements have been made for big meetings in the Twin Cities during the Minnesota State Fair, the first week in September, in Richmond, September 18, and Milwaukee, September 22.

Cadillac Presents Itself with "Old-Timer"

To celebrate properly its twentieth birthday the Cadillac Motor Car Co. has purchased for itself a birthday present in the form of a little one-cylinder Cadillac built in 1902. The "grand-daddy" of them all has been taken out for a spin by President H. H. Rice, who pronounces it "as fit as a fiddle."

Stone Joins Hoyt's Service

Maj. E. B. Stone, advertising manager of the Cleveland Tractor Co., is turning from his work at the Cletrac plant to enter the general advertising field. He joined, this week, the staff of Hoyt's Service, Inc., continuing his contact with the local field by becoming attached to the Cleveland office. Stone brings to the agency end of the business a soundly rounded experience in selling plans. He has been salesman, assistant advertising manager, district manager, and advertising executive in his recent connection, which he entered after returning to civilian clothes.

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The owner of a Cadillac is impressed almost immediately by its day-by-day dependability.

But what cements and seals his allegiance to the Cadillac is the continuity of this fine performance over a period of years.

He gradually realizes that this dependability which he prizes is not a mere passing quality to be enjoyed while the car is new, but that it is to endure in all its fullness throughout this entire term of ownership.

From the time of that realization forward, and the realization comes certainly and clearly to every owner of a Cadillac, his whole conception of motoring possibilities changes and becomes infinitely broader and finer.

Every far-off state and city of fancy becomes instantly a place to be visited, and easily and safely visited, in his Cadillac.

Every trip, whether of one mile or one thousand, he undertakes with the serene surety that not only will he travel in complete comfort, but that arrival and departure at a particular time in his Cadillac is almost exclusively a matter of his own decision.

This is what the veteran owner of a Cadillac has in mind when he becomes almost extravagantly enthusiastic over his car's indomitable dependability.

It is a dependability that the Cadillac owner sincerely believes is unequalled; that he knows will endure not simply for a month or a year but throughout the entire term of service; not merely for one thousand but for many thousands of miles; and that is the deep, determining reason for his preference for the Cadillac.

CADILLAC MOTOR CAR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

C A D I L L A C

Standard of the World

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

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To the Unknown Car

"The several automobile companies in our city which have gotten into tight places as a result of lack of sales are those dealers selling little-known cars." So writes a dealer to AUTOMOBILE TOPICS.

It is common enough in all lines of trade to find the mortality highest among retailers handling unfamiliar brands of goods. And for this, there are reasons enough and to spare.

The nation-wide repute of the well-established and popular brands attracts to itself the better class of local business men; not only does it assure them an added measure of repute, but it adds to their own strength a measure of fortification against disaster and defeat. There is no such power of reinforcement in the unknown brand, however, while the lack of a network of reputable agencies, reaching everywhere, leaves the individual dealer almost alone and unsupported in his efforts.

There is thus the invariable temptation to feel that the unknown-brand is more or less outlawed, even in its own territory. The dealer handling the unknown brand is apt to be discouraged by this very circumstance itself; often his energy is sapped by a condition that might lend him courage, were he to take a different view of his situation.

Why is it that even "unknown cars" always possess disproportionate strength and relatively high repute in a few communities, where they sometimes overtop even the greater names of the industry? Why is it that even the strongest lines have "weak spots," where their prestige is sacrificed to lines that take much lower rank elsewhere? Is it not the strength of the local dealer? And does not the individual equation of the retailer sometimes set at naught all the calculations of those who believe, in absolute honesty, that the factory sales department is the "whole selling works"?

Those dealers who sell little-known cars hold their fate in their own hands. Their path to success may be the more difficult, but their independence is greater than that of those who are part of the great, and sometimes autocratic national selling systems. It rests with them to make good with their customers, and the process may be difficult, but so much the more to their credit, if they win out.

The unknown car is not necessarily a poor car or an overpriced car. If it be made within five hundred miles of the dealer's establishment it may be a better buy than a known car that is dishonestly advertised or distributed without proper profit to the manufacturer and his representatives. Local evidence seems to show that the dealer in unknowns is foredoomed.

This is to say that such evidence is, and always has been, misleading. He is foredoomed only if he remains an unknown dealer handling an unknown line. Let him proclaim himself, and let him be what he says he is; let him advertise his goods, and let him back them to the limit of reason; let him interweave his reputation with the unknown merchandise, and never fail to prove his honesty; and the unknown car may become the best seller in its class within his territory. It can be done, because it has been done. If then, he fails, it will not be for lack of trying.

Stage and Bus

Out of the earliest history of established passenger transport has been perpetuated the word "stage"—originally contracted from stage-coach, a coach which traveled by stages, or from post to post. "Omnibus," however, dating from the time of George the Fourth, is defined by British statute as a vehicle plying over an established route and carrying passengers at individual rates of fare. Nor has the advent of motor transport altered the usages. The "motor stage" is still the conveyance covering relatively great distances; the "bus," the medium of popular transport over shorter lines, literally "for all" as the Latin origin of the word implies.

But for the "rubberneck wagon," there is neither precedent nor pretext. It is a vulgarism affected only by people who are away from home.

A Self-Propagating Cycle

Good roads, automobiles; more automobiles, more good roads; more good roads, more automobiles. The cycle is, to a degree, self-propagating.

"The people have the money to buy automobiles, if we get the good roads," writes a dealer. "And large amounts of money are now being spent on good roads," he adds.

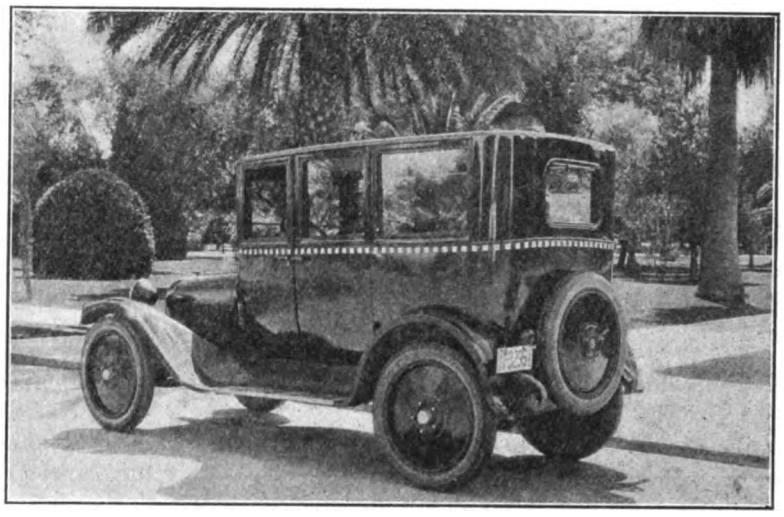
In some parts of the Country this chain of circumstances is now being drawn taut. But it is pulling everywhere. The United States has entered upon a highway program of stupendous magnitude, and its results are only just beginning to be apparent. For data on the possible saturation of the automobile market reference should be had to the status of improved highways.

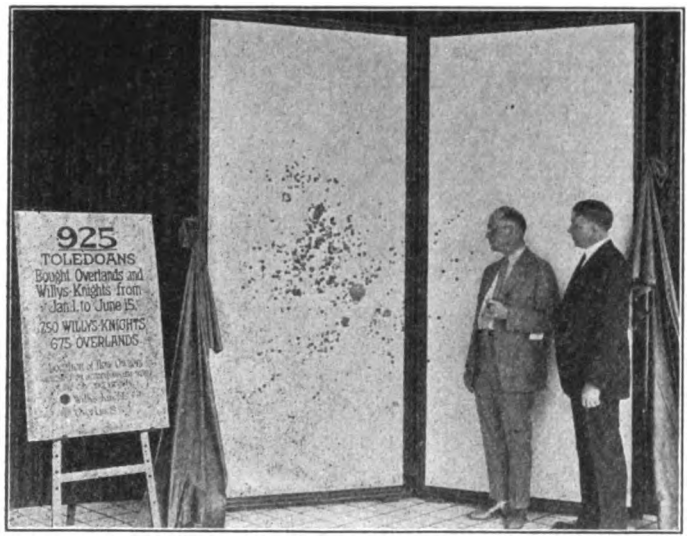
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Industry's Products Portray Interesting News

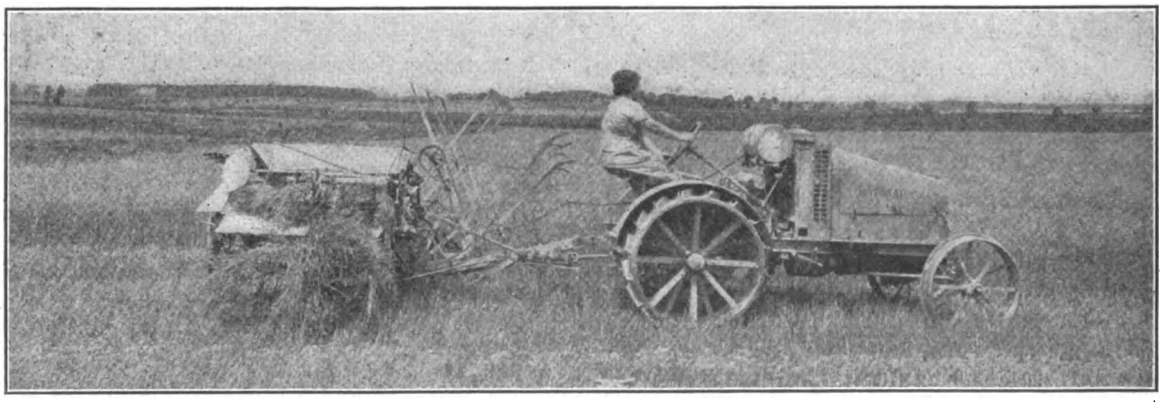
Sedan Made Cab; Map Shows Buyers; Woman Uses Tractor

STANDARD Dodge Brothers sedans are used by the Black and White Taxi service of Phoenix, Ariz. Several of these cars are equipped with Kelly-Springfield cord tires, which have established an enviable record in service rendered, being still good at the end of 20,000 miles. The attractiveness of the car is enhanced by a line of black and white checks around the body, also making it easily distinguishable





PICTURING in a novel fashion the support by Toledoans of home-made products, the retail sales branch of the Willys-Overland Co. adopted a policy of constantly reminding citizens of the fact by using its window display space for this purpose. The display illustrated consists of an enormous map of Toledo mounted upright on a folding frame. At various points on the map colored tacks are placed to indicate the residences of persons who purchased Overland or Willys-Knight cars within a six-month period



The ease with which a woman can handle the new McCormick 10-foot binder and International 8-16 tractor is demonstrated here. Mrs. George Chester on the Chester Farm, near Hobart, Ind., cut and bound 10-foot swath of oats and was none the worse for her accomplishment

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Teach the Boy About Motors!

A Plan for Broadcasting a Knowledge of the Internal Combustion Engine—An Industrial Aid

MOST simple, most compact, strongest and most economical of "prime movers"—that is the gas motor, the internal combustion engine. It is potentially the greatest power producing plant yet to be devised. Without it the work of the world would be handicapped to a degree that might be fatal to human progress. At the moment a substitute is inconceivable.

Yet—and what a commentary on humanity!—perhaps not one person in many thousands has more than a vague idea of the principles of construction or details of operation of the machine.

This is a peculiar and mayhap grave situation. Millions of persons move their articles of commerce, their food, their clothing, themselves, their living and their dead with the aid of the gas engine. These millions light their homes, obtain water, mine their coal, saw their woods, build their homes, manufacture their necessities, in fact, live their modern lives with the for the most part unconsidered aid of the internal combusion engine. Yet how few of the millions know anything about the god within the machine that makes it "go!"

To most persons, an automobile—the apotheosis of application of the power of the internal combustion motor—functions in mystery. Things one presses with one's foot, turns or shoves into position with one's hand—all mounted on four wheels—that is the usual conception.

AUTOMOBILE TOPICS believes that the situation endangers not only the safety and comfort of the people but menaces the future of the automotive industry. There is a limit to making so essentially delicate a mechanism simple enough to be fool proof.

The need for education of the American public is pressing. On the humanitarian side, ignorance of the potentialities of what the law calls "a deadly weapon," an automobile, kills, cripples, maims more persons in the United States every year than any of our wars have done. On the commercial side, thousands of machines are condemned by indignant but ignorant owners and drivers because this very ignorance of construction, operation and care stands responsible for the abuse of a marvelous machine. For it is marvelous that so delicate a thing as a motor can be constructed so sturdily that it can be driven over the most terrible roads, caused to undergo tremendous strains, be subjected to all manner of indignities by a person who sits at the wheel but knows nothing of what lies beneath the exterior of his car, and yet will continue to function.

Therefore AUTOMOBILE TOPICS lays before its readers and the public at large, its suggestion that:

The study of the internal combustion engine and its application to the automotive vehicle be made a part of the curriculum of grammar schools—particularly, if not exclusively, for boy scholars.

There follows a discussion of the suggestion. It is the sincere wish that something more than discussion grow from the exposition—that pedagogs may be led to a consideration of the outline presented herewith, that their attention be drawn to the plan, if it be found of merit, by that body of men forming a very real power in the communities of the land—the automobile manufacturers and their associates in the industry.

There is no question but that the subject can be taught to grammar school boys with practical and highly beneficial results.

Everyone knows that the boy is an apt and eager student of any course that promises a command of constructive ability. He is greatly interested in what men are doing. He longs to be engaged in constructive pursuits. Boyish ideals find expression in desires to be motormen, engineers "of trains," bridge and tunnel builders, ship captains. Above all, today he longs to drive motor cars and, in a lesser degree, to be a mechanic, to learn to make things operate of themselves. He is by nature inclined to studying things, sometimes destructively it is true, to find out "what makes them go."

Any normal boy can master the principles of construction and care of the motor car, particularly the engine. This native desire for mechanics can be capitalized, at least to this extent.

That a boy can learn to operate, construct and care for an internal combustion engine may seem, as an assertion, a bit comprehensive. Of course, intricate problems of motor construction and designing, or even detail of many parts of a motor must remain a mystery to all save mature minds. But the broad principles are not only easily assimilated by

A NEGLECTED FIELD

DESPITE the very patent need for popular education on the subject of the internal combustion engine, little has been done heretofore in a constructive, broad way. A machine that never ceases serving the public in all its mighty works, is a mystery to most people today. Why this should be so is only another of the enigmas of modern life. That it should continue to be so after more than 10,000,000 persons have purchased motor cars is at once a danger and a shame.

AUTOMOBILE TOPICS has long entertained a purpose of opening something approaching a campaign for the education of the public to the weapon for good or evil it unknowingly holds in its hands on the highways of the Nation. It has come to the conclusion that the most feasible plan is the education in grammar schools of the rising generation. Just as prohibition must find its greatest effect in the next generation of men, so must the education and growth of the people along lines mechanical be felt to greatest advantage when the now growing boy has reached maturity.

Communications from those interested are solicited. Little can be accomplished without the earnest cooperation of all concerned. The proposition is of the broadest, its aspects are many, its practicability is beyond question. It remains to be seen whether there are those sufficiently awake to Tomorrow to devote thought to the opportunity of Today

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boys but are absorbed with astounding ease, as educators will bear witness. It is not advocated that grammar schools attempt to teach their charges from a technical, subjective standpoint. The objective in broad outline, but yet sufficiently detailed, is desired.

The advantages to be gained are numerous and worthy. To the boy they include the stirring of creative thought, the development of faculties that might otherwise lie forever dormant, to the real detriment of the boy and his age. He will learn lessons that he will never forget and which will be of great value to him as long as he shall live. It may mean a life of distinguished achievement in the world of motor car industry through the development of creative and inventive genius. It will always mean the formation of the groundwork for an honorable professional career.

Advantages Are Many

The advantages to the industry are equally important, if not as readily apparent. Foremost, here will be a host of youths constantly coming to maturity with a knowledge that will mean years of saving to the business in the acquisition of semi-trained workers. A constant reservoir of material for the craft is created thus year after year. Again, the popular knowledge thus instituted would lead to still greater refinements in the motor car and would fittingly and immediately reward those manufacturers who strive for what is best in making the American car.

A point not to be overlooked is that education thus early begun would remove one of the last barriers—the unjust criticism of the modern automobile (as far as individual makes are concerned, at least) by those too ignorant of motor construction to be just judges. No longer would the "Blank" car be condemned because Jones is unaware that he cannot pour cold water over the super-heated engine nor run it without proper care. No more would the "Craftsman Six" be cursed because it would not run without proper adjustment of the electrical system.

The possibilities are numerous and varied. Popular education would eliminate the fraud, the incompetent car—just as the spread of knowledge has for the most part has retired the goldbrick of the halcyon days of the "Rube," back to the "slickers'" suitcase.

What Should Be Done

Leaving for the time the obvious necessity and value of teaching the public about the gas engine through the most receptive part of the public's system, the growing boy, it remains to be seen what should be taught.

Considering the youth of those to be instructed, simplicity is a prime requisite. Indeed, simplicity fits the case since simplicity is the keynote, the desideratum of the ideal internal combustion engine.

To arouse interest at the outset, the history of the engine and of its application to the vehicle should precede serious study. Charts, old cuts, pictures, photographs, may be used. The history of the engine is one not without romance and certainly of great human interest. Even the passion of the average boy for racing, racers and races is an important adjunct. Copies of such picture material as is used may be supplied for study and sustaining of interest outside the class room. This historical interest can be maintained and nurtured throughout the course if it is not made the subject of "home work," that great deterrent to the gaining of practical education.

As the course of studies progresses, the trend from the non-technical to the mildly technical will be found most natural. Facts, not theories, come first. A simple stationary engine may be set up in the class room. Drawings and diagrams designed for clearness only are least tiring and most instructive. Drawings on a large scale should be so made as to even disregard scale in the interest of clearness and interest.

The two-cycle engine is, naturally, the first to be considered. The stationary type of the most primary working is needed. Bit by bit the refinements can be added, each addition being explained and its purpose pointed out demonstratively. Thus something far from "dry as dust" may be achieved and "learning taught by pleasant ways."

Too much emphasis cannot be laid on the necessity of having workable parts which can be assembled and made to operate. Nothing is gained and much is lost when the student, particularly the boy, can only watch the teacher build the engine and cause it to function. But he will become an enthusiastic devotee if allowed to do it himself.

Should Be Practical

After simplicity, practicability of the course is of first importance. Having mastered the basic principles of the construction of a single or double cylinder stationary engine, no time should be lost in carrying on to the study of the internal combustion engine as applied to the propulsion of vehicles—the automobile motor.

Power as transmitted to the wheels of a motor car, if properly demonstrated and interestingly explained, will never lose its glamor for the boy, or, for that matter, for the man.

One cylinder, cut in half, the piston rising, the explosive spark, the down thrust, the course of the power thus generated through its vertical and lateral expression to the movement of the wheels—this is all a matter for keen, illuminating enjoyment. If verification is needed—which exhibits at automobile shows attract the greatest crowds of spectators, particularly men and boys? Those displaying "cut in half" engines and transmission units in slow operation are constantly encircled by visitors. A show window in which even a single cylinder is shown in operation is always ringed by eager watchers.

This is psychological, this desire to watch machines operate. And what boy would not absorb knowledge at such a fount! And it is an ideal way of educating youngsters, who will soon be men, to give intelligent care to cars should they own them or be readily assimilated by the industry if they choose this way of earning a living. It is practicable, it is pleasant and, above all, it is valuable and will pay enormous dividends to the automobile world in the future.

Should Be Complete

This method of teaching will be of only passing value if it is not complete. In the concluding section of this article a tentative program of instruction has been appended.

A FAIR PROPOSITION

AUTOMOBILE TOPICS lays before its readers and the public at large, its suggestion that:

The study of the internal combustion engine and its application to the automotive vehicle be made a part of the curriculum of grammar schools—particularly, if not exclusively, for boy scholars.

TEACH THE BOY ABOUT MOTORS

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Beginning with Part II in this schedule, there follow AUTOMOBILE TOPICS' suggestions as to the succession of these more or less complete details as material for a grammar school course. The purpose is suggestive rather than didactic. Just as one size cap does not fit all boys, so one type of curriculum does not suit the mental attainments of all young chaps. Defects probably will be found.

The main need is that something be done to arouse those concerned to the real necessity for such education. Boys are taught to work in wood, to construct in metals, to penetrate the basic "mysteries" of chemistry, in fact, to do any number of useful, needful things during their school days, but they are not now taught what that preeminently wonderful machine, the internal combustion engine, is and why it is. Even the term itself is but dimly understood.

Plan Outlines Two-Year Course

The appended schedule has been divided into a two-year course. This is not obligatory, naturally. The teachers' responsibilities will make light of a problem that those not trained in pedagogics find puzzling. But it is claimed that herein lies a basis for future study, future improvement, and, what is of most importance, future action.

Manufacturers of all the varied things that are assembled into an automobile, a motor boat, a motorcycle, a submarine, an airplane, a concrete mixer—any of the thousands of machines of fundamental type, know the public must be educated to the proper use of their products. This ought to be true if the value of such products is to be fully appreciated by the public and the results of manufacturer maintained at the highest point. One ignorant motor car owner, driving his car in violation of all decency of operation with resultant constant troubles, can do more harm with his condemnatory remarks than a dozen satisfied, intelligent owners can wipe out with their commendations.

What is more satisfactory or is accomplished with greater ease than the instruction of the next generation of users while they have the time and the super-excellent ability to grasp the fundamental lessons?

Therefore, AUTOMOBILE TOPICS takes no little or passing interest in presenting the subject. It is one containing seeds of great promise and is of such magnitude that ultimately "something will be done about it." Should not the automobile industry be first to undertake such work?

Educators and the industry should cooperate. Manufacturers will be readily found who would be glad to supply needed articles for class room use, for the manufacturers will derive immense values therefrom. Educators may attain renown for their work in the propagation of a needed adjunct to the preparation of America's boyhood for the tasks of manhood.

Success Lies in Cooperation

Preliminary comment on the plan leads AUTOMOBILE TOPICS to believe that the success of it, or some modification or amplification of it, rests solely in the amount of cooperation between manufacturers and pedagogs. The manner of launching the proposition in the several sections of the Country must be carefully worked out. For as M. L. Heminway, general manager of the Motor & Accessory Manufacturers' Association, points out, "Is it not possible that many might consider this more or less of an advertising proposition for the automotive industry and fail to appreciate the importance of it?" That is entirely possible, but with thoughtful promulgation, the public cannot but be brought to see that the major benefit will be to it, and the advantage to the industry, while unquestionably great, secondary.

"I agree with your thought," Heminway states. "The course you suggest for grammar school study seems comprehensive and at the same time simple. If the public interest could be sufficiently aroused to have such a course as part of the regular school system, I feel that it would be a good thing. I shall gladly await with interest the next step in your program."

Ray W. Sherman, merchandising director of the Automotive Equipment Assn., likewise commends the idea. "It is a forward step in a movement which our educational system needs," he finds. "Instruction of this kind should tend to hold boys in schools, and should cause them to feel more strongly than many boys do now that education is something of a practical nature which can be of value in later years.

"The benefits to the automotive industry through such education are obvious, and there are doubtless many corporations and men who would be glad to lend their support to such work. Some may contend that the plan is defective or incomplete.

"Let us not forget that any reasonably good plan is immensely superior to none at all. Your idea, however, seems to have been well worked out and you are to be commended for having brought it forth."

Keeping the Boy in School

Sherman's remarks on the value of the plan as a means of holding boys in school points to another facet of the matter which should further recommend it to those who are alarmed at the tendencies of modern youth to leave school too early. Boys may be classed for this purpose into two divisions, those of the studious type and those who tend towards action in all things. The former may be attracted through his love of theory, invention and the like while the latter could not but take intense interest in the study of something he can make to "go" through his own prowess as a builder.

Likewise, it is not claimed that any one plan will work out to best advantage in all cases. That presented here must necessarily be skeletonized to the "nth degree" since offering a more extensive program would be to usurp the privileges of the boards of education as well as prove a cumbersome appendage.

The National Institute of Progressive Farming, Chicago, which has done a great deal of constructive work in the way of practical education, puts forth a suggestion that may further commend the work of others.

"I would like to say," Guy H. Hall, director of the Institute, writes, "that it would be an excellent opportunity to include in your work the tractor, and other gas engine appliances on the farm. The proper service on the tractor by the youth of the Country will advance the tractor industry several years.

"We are elated to know that you have worked out this plan so completely and extend our best wishes. We are even now in touch with the commercial automotive colleges relative to their views on a nation-wide public school agricultural engineering course."

There follows AUTOMOBILE TOPICS' outline of studies for the education of the nation's youth in the principles of construction, operation and care of that necessity of modern life—the internal combustion engine.

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A Topical Outline for a Grammar School Course of Study of the Internal Combustion Engine

I.
PREPARATORY

Historical.*
- (1) Invention of internal combustion engine.
- (2) First application to vehicles:
  - (a) Prior to 1885.
  - (b) Daimler's high speed gas engine, invented 1885.
- (3) From 1885 to date.

Sources of Energy.
- (1) Muscles of men and animals.
- (2) Earth forces producing acceleration, such as gravity.
- (3) Groups of other forces.
- (4) Introductory material leading to.

II.
THE INTERNAL COMBUSTION ENGINE

What a gas engine is.*
- (1) Explosion of gas in a tight chamber.
- (2) Explosion's force transmitted into power to move objects, and as applied to
  - (a) Light (illuminating gas, electric light).
  - (b) Heat.
  - (c) Food (production, transportation, preparation, consumption).
  - (d) Clothing.
  - (e) Automobiles, motor boats, submarines, airplanes, etc.
  - (f) Other uses, such as in forestry, printing, etc.

Practical Study and Demonstration.†
- (1) Engine parts.
  - (a) Cylinder, piston, shaft, flywheel, pulleys, etc.
  - (b) The two-cycle engine.
    1. Strokes.
    2. Inlet of gas.
    3. Spark ignition.
    4. Power stroke.
    5. Exhaust stroke.
    6. Repetition of cycles.
    7. Advantage of compression in cylinder.
  - (c) Practical demonstrations on stationary engine.
    1. Tearing down.
    2. Setting up.
- (2) Where power comes from.
  - (a) Gas explosions.
    1. How gas is brought to combustion chamber.
    2. The function of the carbureter.
    3. The function of the jump-spark.
    4. What the explosion accomplishes.
  - (b) Ignition.
    1. Electric current.
    2. Parts of system.
    3. Flow of current.
    4. Jumping spark.
    5. Wiring.
    6. Grounding wires and necessity.
    7. Timers.
  - (c) Cooling.
- (3) Review.**

III.
APPLICATION OF INTERNAL COMBUSTION ENGINE TO THE PROPULSION OF VEHICLES

The Automobile Engine.
- (1) Historical.‡
- (2) Power.
  - (a) Difference in application of power.
    1. Stationary.
    2. Automobile.
    3. Motor boats.
    4. Submarines.
    5. Airplanes.
    6. Motor truck.
  - (b) Types of Motor.
    1. Two-cycle.
    2. Four-cycle.
    3. Valves and gears.
    4. Cooling.
    5. The carbureter.
    6. Lubrication.
- (3) Transmission Parts.
  - (a) Clutches.
  - (b) Change speed mechanisms.
  - (c) Final drive.
  - (d) Practical demonstration of operation.
  - (e) Housing of parts.
    1. Motor.
    2. Crank case.
- (4) Running gear (Optional)*
  - (a) Steering.
    1. Front axle.
    2. Steering knuckles.
    3. Drag link.
    4. Steering mechanism.
    5. Differential.
  - (b) Brakes.
    1. Contracting.
    2. Expanding.
  - (c) Springs.
  - (d) Tires.

IV.
THE COOLING SYSTEM

How motors are cooled.
- (1) The water system.
  - (a) Fan.
  - (b) Radiator.
  - (c) Circulatory system.
- (2) The air cooling system.

V.
THE OILING SYSTEM

How motors are lubricated.
- (1) Parts of the oiling system.
  - (a) Motor.
  - (b) Transmission.

VI.
THE ELECTRICAL SYSTEM

Plan of equipment.
- (1) Battery.
- (2) Magneto.
  - (a) Coil.
- (3) Timer.
  - (a) Secondary distributer.
- (4) Starter.

VII.
THE VAPORIZING SYSTEM

How the carbureter works.
- (1) Fuel tank.
- (2) Feed types.
- (3) Float chamber.
- (4) Mixing chamber.
- (5) Manifold chamber.

VIII.
CONCLUSION OF COURSE

Where troubles may arise.
- (1) In power plant.
- (2) In running gear.

Repair and maintenance.
Setting up engine.
Placing engine on chassis.
Connecting transmission line.
Attaching steering mechanisms.
How motor cars are built.
- (1) Trip through factory.
- (2) General elementary explanation of foundry work, machines, assembly, etc., etc.

(Note: Timer, magneto, battery, generator, and similar parts of the ignition and electrical system should be left largely for the advanced work. Reference above should be only so complete as to show source and course of currents. No attempt should be made to instruct in principles or technology of such parts at this period.)

* Use all available prints and pictures. Where possible provide copies for home study and amusement of students. This aids in arousing interest.

** This may or may not close the first year's course. It will be plastic in application insofar as the mentality of the pupils would permit.

† Too much emphasis cannot be laid on the necessity of actual parts for the inspection and demonstration of use by the pupils. Nothing is to be gained by theoretical work alone. AUTOMOBILE TOPICS believes that manufacturers would be glad to cooperate in supplying sample parts and perhaps entire motors to those communities and schools unable to purchase them.

†† Plan work similarly to opening of course.

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Letter from a Dealer

To AUTOMOBILE TOPICS

A BUSINESS national in its operation is destined to become extinct unless radical changes take place shortly. I refer to the Automobile Dealer.

Up to two or three years ago, a man representing as Dealer or Factory Agent, any good, dependable car for retail sale was considered lucky and regarded as conducting a profitable business.

Then the dealer sold most of his cars for cash. The public had nothing to trade in and hence almost every sale was a clean, profitable one. The demand was keen, which of course tends to quick sales with little overhead and other selling expense. The purchaser who did not have ready cash to pay for his new car first went to his own bank and arranged for his purchase money himself.

TIME and competition as well as imperfect or defective business vision on the part of dealers and manufacturers have so altered the chance for profit to the dealer that he is soon destined to GO.

It is hardly necessary to detail the many expensive burdens thrown on the Dealer by himself, the manufacturers and the public. The foremost burden undoubtedly is the cancerous TRADE-IN or second-hand custom which has and is undermining the "resource" column of the books of a vast number of dealers. This nefarious, unprofitable practice is encouraged by the manufacturers, demanded by the public and consented to by the dealers, usually to procure some ready cash.

The Automobile Dealer is now, in most states, taxed about as heavily and unfairly as the former saloon-keeper. Such taxation has been created on the idea that all automobile dealers are getting rich. This false theory was given birth by the reckless extravagance by dealers in advertising, elegant display rooms, banquets and other forms of expense usual to a so-called "up-to-date" dealer and for which manufacturers are largely to blame.

I am connected with a fair-size Dealership representing a very popular and good car—the best made, I do believe. I have resisted the money-losing practices herein recited to a large extent. My judgment rebels against them. At the same time I am guilty to some extent, although my financial condition and credit is not impoverished as is true of many fellow dealers. Yet I can see that unless the dealers get a better deal, it is to my interest to quit the business.

MY proposal is that I as well as all dealers must have a larger gross profit. I receive only 20 per cent gross commission, selling about 100 cars per annum now. The result is I shall do well to break even on a year's work. The automobile retail business, as I find it, is without profit except in the sale of cars. My contention is that a dealer should receive not less than 35 per cent gross in order to actually net 10 per cent per car, under proper accounting systems, when the year's work is done.

The automobile dealer at this time is only a "Bumping-Post" for the factory. The dealer pays cash in advance for his cars; he creates the business for the factory's product; he popularizes and perpetuates the demand for that product by advertising, service, etc.; handles all the "Trade-Ins" and Credit sales. But on the present average commission of 20 per cent gross, he hardly breaks even.

WHETHER the increased commission to dealers is absorbed by the factories or paid by the public is not the dealer's business but it is a certainty that dealers must have more gross profit so that a reasonable net profit will reward their hard work.

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Railroad Regulation of Prime Importance

Necessary Funds Represents Most Serious Problem of All

By GEORGE C. CONN, Director of Traffic, Buick Motor Company

RAILWAY systems of this Country are owned by the bond and stockholders. The principal bond holders are the great life insurance companies and savings banks. The holdings of stock are very largely in small lots; for example, there are over 50,000 holders of Pennsylvania Railroad shares. The safety of these investments, especially in bonds, is very important to every person who carries life insurance, because, in a way, he has become a railroad owner and the railroads are an integral part of our Nation's life.

They are such a very large factor in the finances of the Nation and in the incomes of the people, insurance companies and banks that the Nation cannot be prosperous if the railways are not successful. Business cannot move until the facilities are provided to move it.

A RECENT decision of the United States Supreme Court, in the Wisconsin Rate Case, sets forth the general principle that the railroads of the Country must be considered as a whole and not as separate State units. The Federal laws have reached a stage where no one body is really in positive control.

The Railway Wage Board fixes expenses and the Interstate Commerce Commission establishes the rates or income, and they bear no relation to each other.

Federal supervision of railways was unquestionably a good thing for all concerned, and certainly did not retard the building of railways. In 1887 there were but 156,000 miles of railroad, compared with about 235,000 miles today. In 1887 there were 1,000,000 freight cars and today there are about 2,500,000 and this is inadequate.

The cars today are also larger and the tons handled per car much greater. The invested capital in railways at the present time is about $20,000,000,000. Something must soon be done to place with one commission the entire regulation of the railways, otherwise government ownership will be the inevitable outcome.

There are a lot of railway problems before us. One is the wage problem, another the rate problem. There is the question of State vs. Federal control, and others all more or less important, but the one real serious problem is this: Where are the railways to get the money with which to buy new cars, engines and rails to move the business of the Country when we hit the grade?

Under normal pre-war times it required over 100,000 new freight cars per year to replace old cars. During the war and for a year thereafter, almost no new cars were built, and on January 1 last there were 125,000 less cars than on December 31, 1917.

Several large car orders have been placed recently, and a short time ago the New York Central Lines placed orders for 1,000 cars. This makes 61,000 cars ordered so far this year, compared with 28,358 new cars in the entire year 1921. There is still a great shortage below normal.

In no other country (excepting, possibly, Canada) have railways played so large a part in the national development. It is the lack of railways today that makes the interiors of Africa, Asia and South America one hundred or more years at least, behind the times.

WE have 6 per cent of the world's inhabitants, with 40 per cent of the railways, and yet, as the Country is emerging from one of the most severe business depressions ever known, we commence to realize that our facilities are inadequate and that millions must be expended to place the railways in position to meet the demands of commerce.

One of the very serious problems confronting all railways has been the fact that they have tried to keep their equipment in shape to handle their maximum business or "peak load" and this heavy traffic only lasts for a relatively short time.

Take the great Michigan fruit crop, for example. It requires several thousand refrigerator cars to transport it, but the movement is all within sixty to ninety days. The same is largely true of all other seasonable crops.

It has been found that by pooling all refrigerator cars, much greater efficiency is obtained, for when the cars have served Michigan, they can be used in California or Florida and kept in more active service throughout the Country.

THE same idea is now suggested for all classes of freight cars and unquestionably this will result in great economies which should be reflected in lower rates. The transportation charge enters into the cost of practically every thing we use and is in reality nothing less than a tax.

It may be difficult to locate or detect it on such articles as neckties or shirtwaists, but it enters very keenly into the price of articles like coal, cement and hay. The proper adjustment of the charge or tax so as to give the least trouble and greatest good is one of the absorbing questions of the day.

When business stops, shippers immediately commence to ask for lower rates and to blame all kinds of business conditions to the railroads, who are the first to feel the depressions in business and are, therefore, in the peculiar position of losing their business and being asked to reduce their rates at the same time; but history repeats itself with remarkable regularity and we know that each business depression is followed by a period of prosperity, and to meet this coming prosperity the railways must, in dull times, look ahead and spend money for improvements. Otherwise, they will be found wanting when the tide begins to turn.

If a healthy public opinion is formed concerning our railways, they will have little to fear and they will be able to continue their work of internal national development. We all know the tendency to make political capital out of the railways, but if we stop to consider that we must have good railways in order to handle the Country's business, we would hesitate before taking any action that would react to our disadvantage.

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SELLING GOODS AT RETAIL

AN old-timer in the business of selling was handing out some "do's" and "don'ts" to a young man who had just joined the ranks.

"Sonny," he concluded, "I could talk all night tellin' you what to do and what not to do, but there's little use. You've got to find out for yourself.

"One thing, though, I want to say. Remember it, too, for it'll come in handy—never lose your head so completely that you make it impossible to see your prospect the second time."

* * *

THERE'S room for thought in the fact that a picture frequently gets the message across quicker and more effectively than a plain, cold statement.

One dealer has made this thought productive of a real selling idea. On the wall of his salesroom he has had a blackboard placed. This he uses for rough sketches to bring out any particular point he may care to stress during his talks to prospective buyers.

* * *

WHAT the automobile dealer can accomplish in the way of making his women customers feel at home has been brought up for discussion in an article on ladies' rest-rooms appearing in the following pages.

This subject is particularly timely in view of the growing recognition of womankind as a power in influencing sales. For experience has proven that it is a poor sales policy indeed that does not court her interest.

It is with much interest, therefore, that those dealers who have not yet made a point of offering hospitality to members of the gentler sex will read of how it can be done.

Easily, too, and with little expense, as is shown clearly by the description of rooms of this kind that have proved instrumental in establishing feminine boosters, and in consequence increasing sales.

AS "SID" SNYDER SAYS

NEVER pays to take too much for granted. Havin' too much faith's most as bad as not havin' any. You can't be too sure of the ground you stand on.

* * *

Like the new farm hand that was met with a growlin' dog. "He won't bite," said the farmer. "Never bites anyone," said his wife. "Sounds well," replied the laborer. "You know he won't bite me, and your wife knows he won't bite me. But how about the dog?"

* * *

WHO owns the oldest car in your territory of the make you're now handling? Who is he? How long has the car been running? What is its record?

Such information as this proved productive of real business to the Van Alstyne Motor Corp., New York city, when it showed in its Broadway window a Hupmobile of ancient vintage but with a record that was decidedly interesting.

This record was plainly revealed to the passer-by who, judging by remarks overheard, was impressed. "Ain't such a bad lookin' bird, even now," one gentleman in shirt sleeves remarked to another bystander.

Which proved conclusively that the Company's message got over in one instance at least.

* * *

TOO many garages are used as congregating places for "bums." That's the plain language used by a salesman for an accessory manufacturer who has just returned from a two months' trip through the South and West.

It is something worthy serious consideration not only on the part of the shop man, but by every merchandiser, irrespective of what his particular line may be.

Too great friendliness evidenced by the proprietor soon breeds contempt. The crowd comes in—but not to buy. It is not that kind of a crowd.

Soon, the other kind—the buying crowd — stays away. And the owner finds himself confronted with a loyal band of "hangers-on" and little else.

Closing the doors of the corner saloon has made it necessary for the crowd to migrate. The merchandiser who has an eye to his future success will see to it that his place of business is not used as a substitute.

St. Louis Is Proud of This Corner



It is located at 19th and Locust streets and known as the home of the Weber Implement & Automobile Co., which handles the Lexington, Hupmobile and Studebaker

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"To the Ladies," Says the Car Dealer

Proves He Means It by Providing De Luxe Quarters for Their Comfort—It's Good Business, He Finds

IF the automobile dealer of ten or more years ago had been asked what he was doing to cultivate the goodwill of womankind in general, he would have smiled in anticipation of the joke he saw coming. "What kind of a business do you think I run?" the chances are he would have gasped out in astonishment. "I'm not sellin' hairpins or toilet water."

Ask him that same question today, however, and like as not he will lead the way to a room located at one side of the salesroom, fitted up with the taste which bespeaks the art of the interior decorator. "To the ladies," he will announce as he throws open the door.

With the subject thus introduced, he will proceed to point out the importance of such a reception and rest-room for women callers. He will go even farther and stress the importance of women themselves in influencing automobile sales.

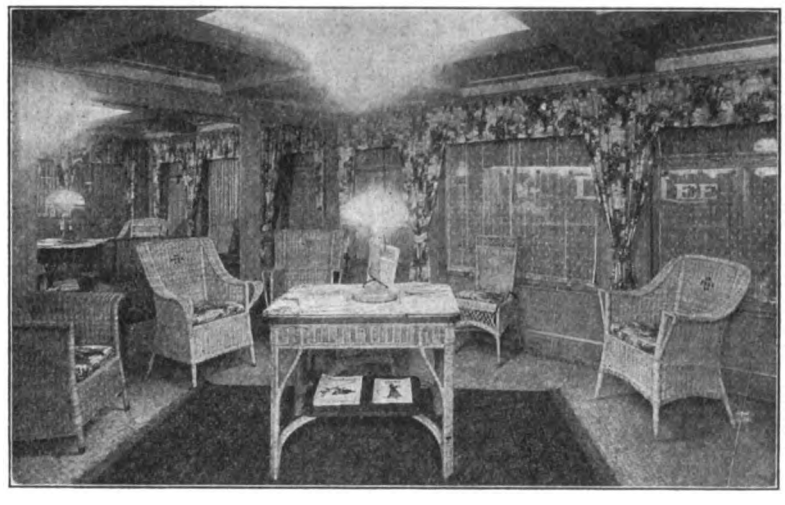
The car dealer of today has learned from experience that it pays to cater to the woman. He requires no further demonstration of the fact that it is she who influences sales more than anything else. One encouraging look from her and the transaction progresses smoothly to a successful finale. A dissatisfied expression crossing her countenance spells failure.

And how does he go about this matter of incurring her favor? By always considering her—seeing that she is courteously treated—made to feel at home in his establishment.

One merchandiser who has rounded up a large list of boosters among the gentler sex by reason of his numerous attentions, sums it up in this way: "A woman just naturally feels at home in a department store for the very reason that her tastes and requirements are carefully considered. I need the friendship of womankind to conduct my business successfully. Therefore, I have endeavored to make her feel just as much at home here as she would in a department store or specialty shop."

It is this feeling among those automobile merchandisers who are quick to see the trend their business is taking, that has resulted in the so-called ladies' reception room or rest-room, as a feature of the modern dealer establishment.

Such a room is best conveniently located—leading directly off the salesroom, perhaps, or on a mezzanine balcony that is reached easily. Its size is of little significance, so long as it be sufficient to provide the necessary facilities.



Drop lights on table or desk add a home-like touch to the rest-room in the Century Garage, San Francisco. Chintz hangings lend color

Of primary importance is making it attractive to its visitors. For, if it is to fulfill its purpose, it must be essentially a room that the woman will enjoy entering—that will be homelike in its atmosphere.

Ideal arrangement is that which makes possible one good-sized room with washing and toilet facilities adjoining. The door separating the two should have a full length mirror built in it. In the event that such a plan is impossible, a full length mirror or cheval glass should be provided in the rest room proper.

Decoration and equipment of the rest-room may be just as elaborate or just as simple as may be desired, depending upon how much of a feature the dealer cares to make of these strictly feminine quarters. Conditions under which he has to work best determine the extent to which he carries such plans.

Plain white walls, either calcimined or wainscoted, or decorated with a combination of the two, form an attractive background for a few good pictures. Such decoration is thoroughly sanitary, being easily kept fresh and inviting. White or cream net curtains at the windows lend a pleasing touch at little expense.

If hardwood, the floor of this room may be covered with a rug of some kind. A one-toned effect in some neutral shade has the advantage of harmonizing with any other color that may be used in the decoration. An item to be taken into consideration in selecting this floor covering is that the lighter the shade of the rug, particularly if it be on some gray or taupe tone, the less it shows dust and wear.

Determining what pieces of furniture shall adorn the room depends largely upon its size and shape. One or two comfortable chairs upholstered in some neat, effective design should be among the essentials. If these are large lounging chairs, they may be supplemented with two or three smaller wooden ones. A lounge or davenport of some sort is also desirable if space permits.

Some dealers have found that they have been of most service to their women friends by furnishing the room with a desk, on which is all the necessary material for writing letters, making out lists, and so on. In fact, one of these dealers makes this writing room, as he chooses to term it, a feature of his building, together with a large parking space in which he looks after the visitors' machines.

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Located as he is in a city which draws business from many outlying towns, he invites his customers to make this room a meeting place. Mrs. Smith, for example, who lives out in Owankee arranges to drive into town for a day's shopping. Her friend, Mrs. Jones, who lives in Brownville, plans to do likewise.

They get together and arrange to meet in the ladies' writing room at the Invincible Six Motor Co. "We can park our machines right there, you know," Mrs. Jones points out, "then we can go over our lists in that little writing room, and find out where we'd better start in."

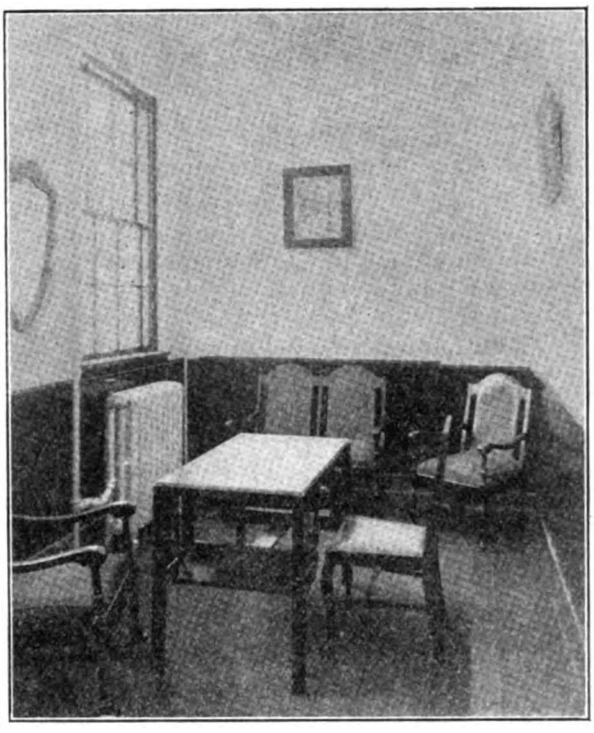
So successful has this dealer been in establishing his place of business as a meeting point that it assumes the aspect of a veritable transportation center. It can readily be seen just what this means to his business.

He makes it a point to act as host to the greatest extent possible. Through thus mixing in with his customers he is enabled to keep posted on the satisfaction each receives from his machine. He makes inquiries with this in mind.

Where some slight trouble is reported he gives instructions to his foreman to take the car into the shop and look it over. By the time the woman returns from her shopping trip he is prepared to report to her on the trouble. If it is a matter of making some minor adjustment, she finds it already done. If it involves considerable time, she is urged to come in again.

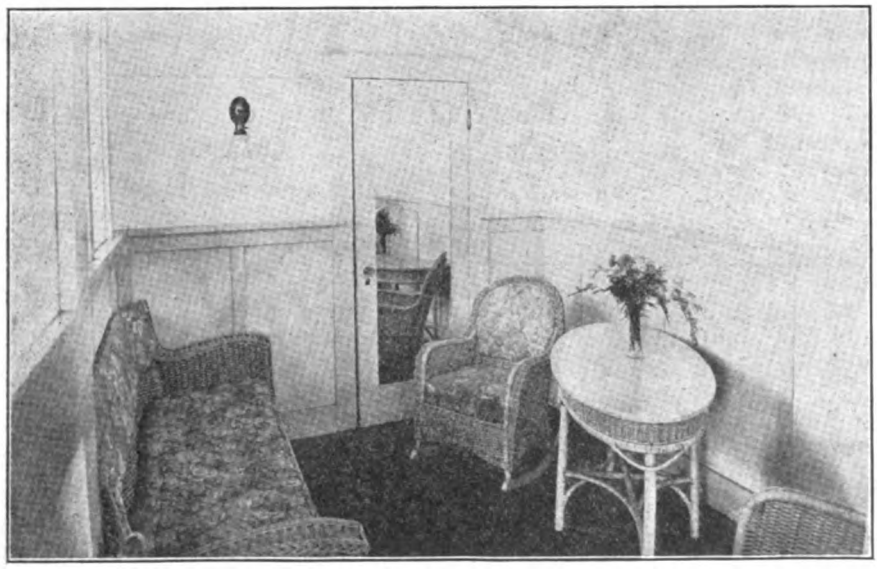
One feature of the rest-room which has not been taken up and which deserves special attention is its lighting. To maintain an atmosphere of comfort and rest, the lighting should be subdued. Drop lamps on the table or desk, with silk shades of a warm rose color diffuse a restful glow. In addition to these, more general lighting may be secured through ceiling lights or side brackets. Inexpensive parchment shades, shielding the side brackets add much to the whole effect.

In addition to the more important items of furniture already described, there are many smaller touches which may be added at little cost, yet which will have a favorable effect on the woman visitor. Frequently, it is these little things that count most.



An effective room into which the Darling Automobile Co., of Auburn, Maine, ushers its women friends

Potted plants, for example, placed here and there in jardinieres may always be counted on to add to the appearance of the room. A few magazines on the table, a book or two with an especial appeal to women readers—all these play an important part in lending atmosphere.



Wicker furniture is used to advantage by Toney Chisum, in Amarillo, Texas

If the furnishings of the room include a desk there are many items of equipment that may be added which will make it the more attractive. Small memorandum pads for making out lists, writing paper and envelopes, a good assortment of pens, and so on, should always be at hand.

An opportunity for the dealer to get in a little extra advertising is provided in the writing paper he furnishes. Neatly embossed with the name and address of his organization, and made up in small note sheets, to appeal to the feminine taste, this should prove effective in attracting attention to the service he is thus offering. Correspondence cards can well be used as a substitute for paper, if so desired.

Emphasis has already been laid on the value of including in the equipment of the rest-room some sort of full-length mirror. Smaller wall mirrors may also be used to advantage. In the first place they appeal to the woman visitor, and secondly they tend to make a small room look larger, which is something to be considered, particularly when the amount of space to be used for such a purpose is necessarily restricted.

Upkeep of the room must now be duly considered. A sense of order should always be present. Dust and dirt plainly visible will produce an unfavorable reaction on the fastidious guest. Mirrors and windows always should be spotless, the linen immaculate, so that the whole impression gained may be one of cleanliness and freshness.

It is such details as these that cause exclamations of delight, on the part of the dealer's feminine visitors. It is such things as these that make them boosters for him and for the machine he handles.

Small wonder, therefore, that he proudly opens the door to a room adjacent to his salesroom, while he proclaims proudly to the world in general, "To the ladies."

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LATEST OFFERINGS OF THE CAR MAKERS

Maxwell Engine Is a Highly Developed Unit

Three-Bearing Crankshaft Accurately Balanced—Engine Lubricated by Pressure System—Speedometer Drive on Transmission

ONE of the factors that has contributed much to the success of the new Maxwell has been its performance. The four-cylinder engine, developed over a period of years, has been constantly refined and improved to the point, where in the opinion of engineers of the Maxwell Motor Corp., Detroit, it meets every demand of practical performance.

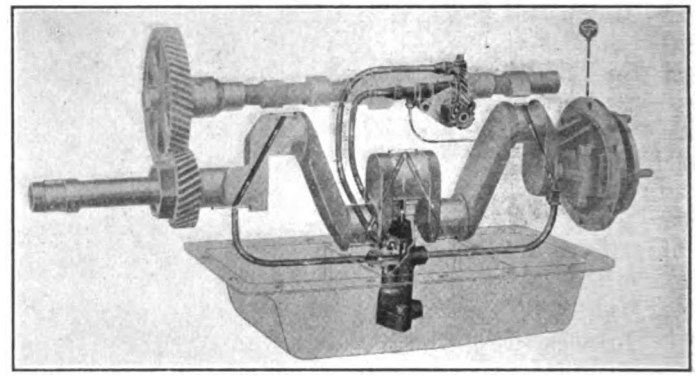
The crankshaft of the engine as it is now produced is minutely balanced in both static and dynamic tests. It is set in three main bearings, the front and rear bearings being 1⅞ inches in diameter and the center bearing 2¼ inches. These three bearings comprise practically one-third of the active length of the shaft.

Particularly interesting is the development of the engine oiling system. The oil pump is driven by a spiral gear on the camshaft. By a simple and efficient system, a flood of oil under pressure of approximately 10 pounds is pumped through large leads to the three main bearings of the crankshaft, which is literally floated in oil. Engine gears are constantly immersed in a flow of oil forced through the specially designed front bearing. Directly from the pump, a volume of lubricant is supplied to the connecting rod bearings, such lubrication passing trhough the drilled crankshaft.

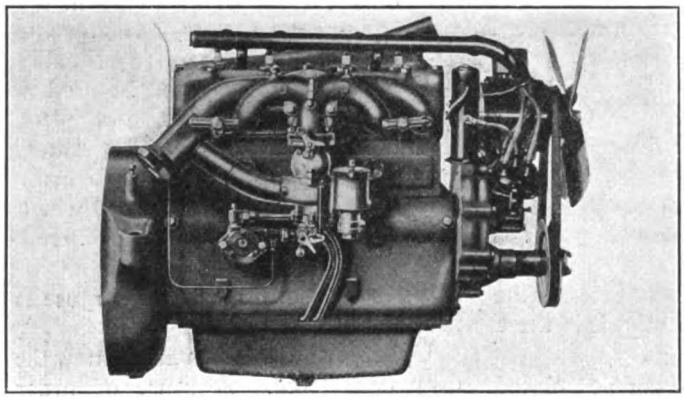
Camshaft is supported by three large bearings which steady the shaft and insure silent operation of valves. Front and rear bearings are 1¼ inches in diameter, center bearing 2 inches. The large cams are finished with minute accuracy. Flywheel, like the crankshaft, is balanced under both dynamic and static tests.

Clutch runs in an oil bath. Its engagement is smooth and action positive. Transmission is said to be 30 to 40 per cent larger than is required. The main gearset shaft is supported by a roller bearing at the front end and a double-row ball bearing at the rear. A fibre gear at the rear of the transmission case drives the speedometer shaft.

Smoothness of engine operation at low speeds, rapid acceleration, and low fuel consumption are due in great measure to the special carbureter and system of preheating gas before it enters the combustion chambers.



THREE-BEARING crankshaft of Maxwell engine is drilled for pressure lubrication system as shown.



Carbureter and manifold arrangement which preheats gas before entering combustion chambers

Olds to Make a Lower-Priced Closed Model

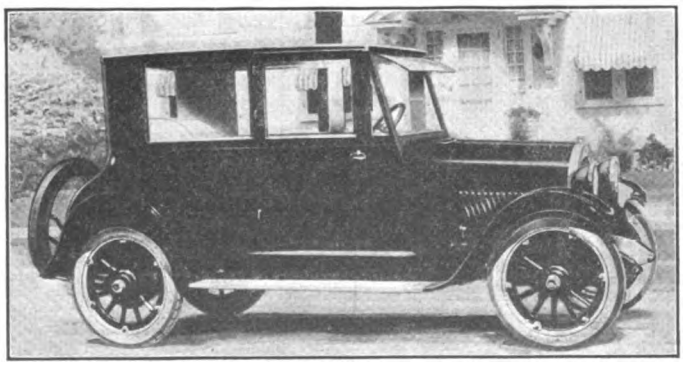
Five-Passenger Brougham to Be a Leading Type in Four-Cylinder 1923 Line—Is a Two-Door Design—Price Set at $1,425

ONE of the leading models of the Oldsmobile four-cylinder line for 1923 will be a five-passenger two-door medium-priced closed car. This new type, which was put into production September 1 by the Olds Motor Works, Lansing, Mich., has been styled a brougham by the manufacturer and it will sell at $1,425.

That much of the new body's details given out at this time indicates that it will be "a high-grade enclosed model and at the same time will meet the demands for a medium-priced car which will stand up under all conditions." The body is described as extremely strong.

In addition to the wide doors, there is an oblong window extending back from the door frame, on each side, to the very back of the body. Easy-operating mechanical equipment has been provided for the windows. The square rear window has been made generously large.

The entire body has been finished in high-grade upholstery, with new fittings. A metal sunshade has been mounted on the windshield. Under the rear deck,



BROUGHAM will be one of the leading models of the Oldsmobile four line this coming year. It is a two-door five-passenger type and will be put on the market to sell at $1,425

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there is a special-lock tool compartment.

Seating has been provided for five persons. In order to provide utmost comfort for the driver, 28 inches of legroom from front of driver's seat to end of cowl has been allowed.

Chandler Special Roadster Carries Extras

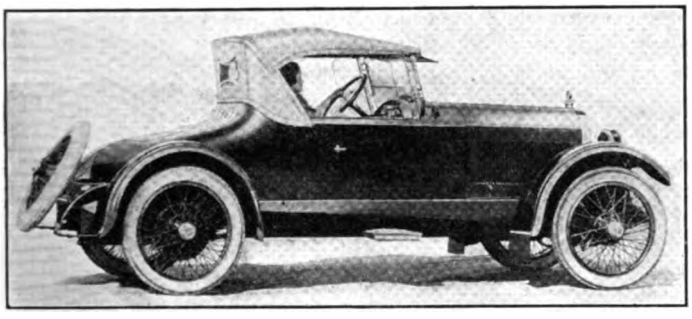
Maroon Body Set Off by Khaki Top—Polished Aluminum and Nickel Trimmings Add to Smartness—Makes Eleventh Model in Line

MAKING the eleventh body type in its line, Chandler Motor Car Co., Cleveland, is now introducing a khaki-topped special roadster. This model is listed at $1,595. It is the same body as the standard roadster but is finished and equipped more elaborately.

The body is in maroon, trimmed with polished aluminum and nickel, and with black individual fenders. The khaki top and wire wheels regularly furnished lend a distinctive touch.

The rear deck is embellished with polished aluminum bars that conform to the contour of the body and afford protection when the top is lowered. Other additional equipment furnished with this model include a visor attached to the windshield and beveled-glass windshield wings.

The special roadster is of two-passenger capacity. It is mounted on the standard Chandler chassis and includes, of course, nickel-shelled radiator, barrel-type head and cowl lights trimmed with nickel, and individual cast aluminum steps.



MAROON body of the new Chandler special roadster is set off by a khaki top and nickel and aluminum trimmings. This model sells for $1,595

Stutz Speedway Roadster Is Fully Equipped

New Two-Passenger Model Has Circular Trunk Sunk in Rear Deck—Variety of Colors with Upholstery to Match Are Optional

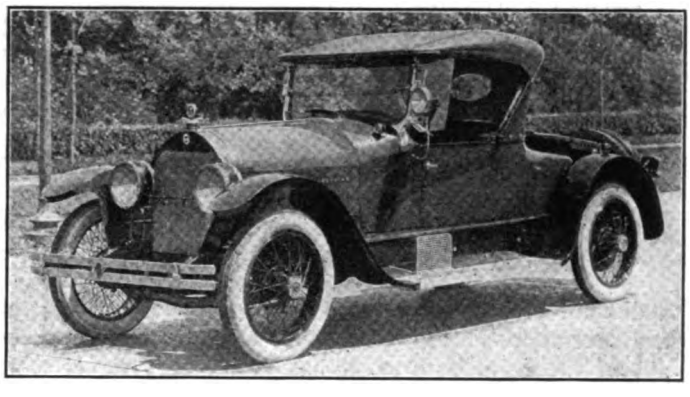
ABUNDANT equipment is included in the list price, $2,760, of the new two-passenger Speedway roadster model which the Stutz Motor Car Co. of America, Inc., Indianapolis, has just added to its line. Furthermore, the new roadster is finished in a variety of colors with upholstery to match.

One of the distinctive features of the Speedway roadster is a sizable circular trunk which fits into specially designed well in the rear deck. This is of basswood covered with patent-leather duck, bound at sides and ends with heavy genuine leather, and fitted with nickel trimmings. Inside it is lined with cretonne and holds two large suitcases.

Two extra wire wheels, fitted with cord tires, are mounted vertically at the rear of the body. They are furnished with weather-proof tire covers of moleskin.

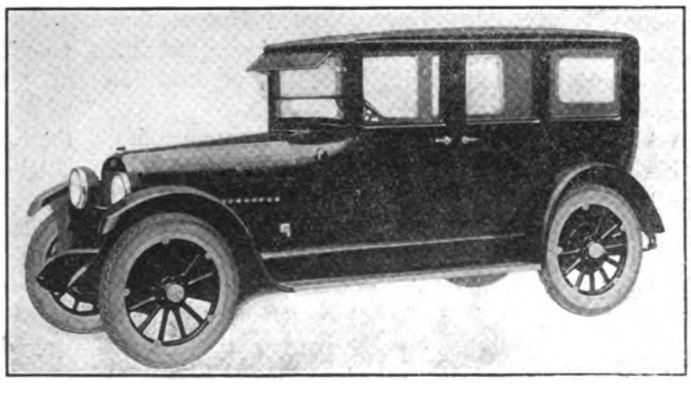
In addition to the barrel-type headlamps and spotlight which are standard equipment on all Stutz models, this roadster carries two small cowl lights which are miniatures of the headlamps and a parking lamp mounted on the left rear fender. A combination tail and stop light is also provided. Other details include a heavy double-bar bumper in front, plate glass windshield wings, adjustable cowl ventilator, automatic windshield cleaner, rear view mirror and individual scuff and step plates.

AN unusually complete assortment of equipment is furnished with the new Stutz Speedway roadster, including a circular trunk which is set into the rear deck of the body



Nash Six Line Now Includes Five-Passenger Sedan

TO its six-cylinder line, Nash Motors Co. has added a five-passenger sedan. This model, now in production, is priced at $2,040. It is mounted on the 121-inch wheelbase chassis and is the only closed type on that chassis. In general design, except for the elimination of the extra seats, the new five-passenger model closely follows the seven-passenger sedan, which is mounted on the 127-inch wheelbase chassis. It has been designed in response to requests from owners



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IDEAS THAT LEAD TO GREATER SALES

"$1,000 for a Name" Brings in the Crowds

ONE of the first qualifications of a successful window display is that it arouse interest—cause the passerby to investigate to see what it is all about. Then, once he has investigated, it causes him to make further inquiries by stepping over the dealer's threshold.

What confronts the accessory dealer today is the problem of devising some form of unique display that will "line 'em up" outside his place. It is a difficult problem to solve, but there are several instances where, with the aid of the manufacturer, it has been worked out with great success.

If, while walking down Main street, the eye was attracted to a window in which stood a curious little figure on one side of which was a sign reading: "A name—a name—$1,000 for a name," the chances are an investigation would follow. "What's it all about?" would be a very natural question for the passerby to ask himself.

So he would take another look, and see another sign on the other side of the little figure which read: "He who gives me a good name gets cash, but he who cannot suggest some name is a poor fish, indeed."

By that time he would have taken in the whole picture and recognized the fact that the Michelin Tire Co. was offering a prize of $1,000 to the person handing in the best name for the Michelin Tire Man. Looking more carefully at the exhibit, he would discover a poster which invited him to "Come in—we'll tell you all about it."

Provided he were a student of merchandising methods, the passerby, by this time become a window-gazer, would experience three distinct reactions. "A mighty effective way of getting publicity from the standpoint of both manufacturer and dealer, would be his first. Here is a dealer who believes in cooperating with the manufacturer, would be his second. A very clever window display, would be his third.

There were many window-gazers in Wichita, Kansas, a few weeks ago, who, while not students of merchandising methods, were conscious of receiving much the same impression, as they stood before the L. J. Frederickson Tire Co. What is more, they showed their interest by losing no time in stepping inside and being told "all about it."

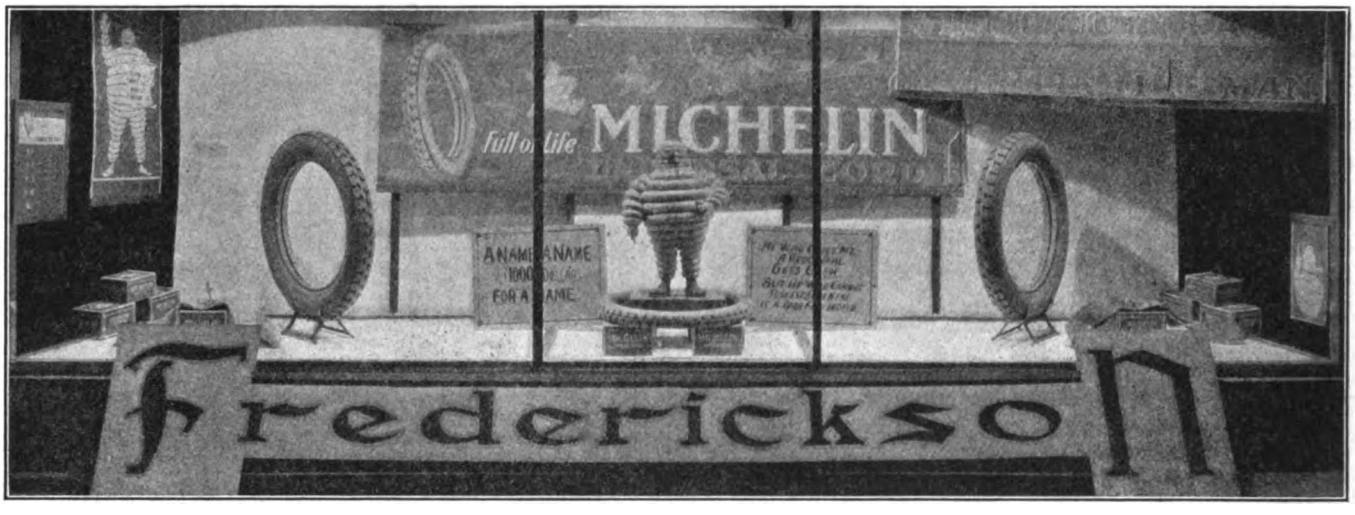
When the Michelin company first conceived the idea of launching a prize contest to secure a proper name for its popular "tire man," it recognized the importance of securing the cooperation of its dealers. So, in addition to the prizes offered anyone successful in providing a good name, rewards were also given to dealers for the best window display made during the contest.

Whereas, there is little doubt that such an incentive did much in the way of adding spurs to the dealers' efforts, those quick to sense the value of such a contest in affording opportunities for getting publicity would have put their very best efforts in it, anyway. To the mind of the keen merchandiser, it represented attractive bait with which to entice the public inside his store.

It gave the merchandiser, for example, the basis for putting together the most effective kind of a window display. There are few individuals who are not willing to stop long enough to learn how they may pick up $1,000. They may not be successful in the contest, to be sure, but it is worth a try. Anyway, it takes little time to think up some sort of name and send it in. So no time is wasted in finding out all the particulars.

This brings into the dealer's store people whom he might never hope to attract otherwise. While finding out what it is all about they look about them. If they see well-arranged stocks and an attractive layout, they come out impressed.

"Let me once get 'em inside my store" is the way one retail salesman once put it, "and I'll take care of the rest." A window display, such as that staged by the Frederickson company during the period of the Michelin contest cannot help but "get 'em inside."



"A name—a name—$1,000 for a name" read the sign placed next the Michelin Tire Man in the windows of the L. J. Frederickson Tire Co., Wichita, Kansas, during the Michelin contest. The crowd read, then stepped inside for details

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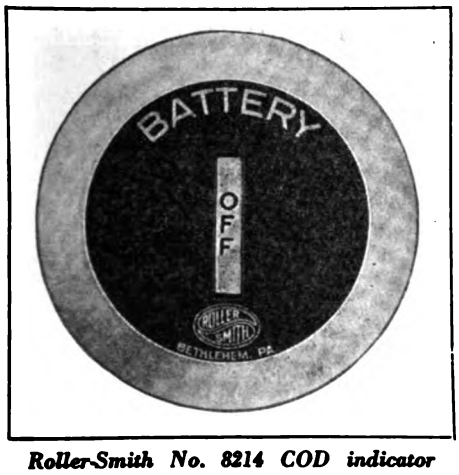
IN THE FIELD OF ACCESSORIES

ROLLER-SMITH INDICATORS FOR DODGE BROTHERS

Recommended for use on Dodge Brothers cars are Nos. 8214 and 8216 Type COD indicators manufactured by the Roller-Smith Co., Bethlehem, Pa. No. 8214 is designed for all Dodge Brothers cars up to and including serial number 37444 while No. 8216 is for use on cars of the same make carrying a later serial number.

No. 8214 is so designed that it can be inserted direct in the starting circuit and will carry the full cranking current without injury. No. 8216, on the other hand, is not intended for insertion in the starting circuit as this is not required. Both of these types are electrically and mechanically interchangeable with the Roller-Smith COD indicators which formerly were standard equipment on Dodge Brothers.

Capacity of these instruments is 30



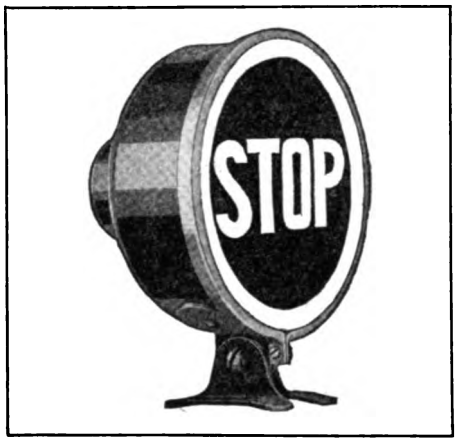
Roller-Smith No. 8214 COD indicator

amperes. The case is of the flush type with flat holeless rim. Body is two inches, over-all, 2 5/16 inches, and depth behind flange, not including studs, ½ inch. Mounting clamps are supplied at small extra charge, these not being regularly furnished due to the fact that the clamp which comes with the car can generally be employed. These indicators are finished in polished nickel, and the dial is black with silver inscriptions.

PROTEX WARNING SIGNAL IS SELF-ACTING

A powerful "stop" is flashed by the Protex signal which is being produced by the Protex Signal Co., Park building, Cleveland. This signal warns cars behind of the driver's intention to slow down, stop or turn, and thus minimizes danger of accident and collision.

Emphasis is laid by the maker upon the fact that it is self-acting. A slight pressure on the brake pedal turns the electric current into the signal lamp on the left rear fender. A bright, penetrating red light flashes the letters "stop"



Protex signal

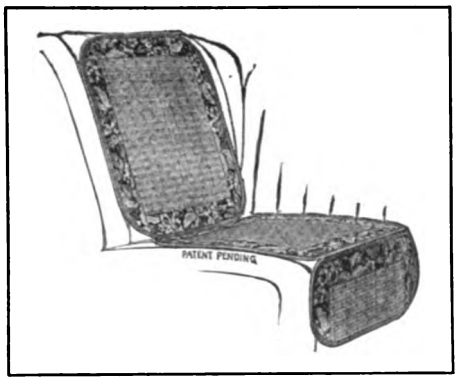
before the eyes of the drivers following. This light remains on until the brake pedal is released.

A reflector throwing the rays through patent lenses produces a light of such intensity as to make it clearly visible day or night, in rain or fog. Every care has been taken in the manufacture of the Protex signal to produce a warning device that will be dependable in every respect.

WEDFORD SEAT COVER IS MADE IN THREE PIECES

A cover so designed as to fit the back and seat cushions, also the front edge of cushions in any make or model of car is being manufactured by the Wedler-Shuford Co., 3540 Olive street, St. Louis, Mo. The Wedford De-Luxe Evr-Klean seat cover is durably made and assures the upholstery being kept clean.

It consists of three pieces of imported rice straw matting. The back is 19 inches



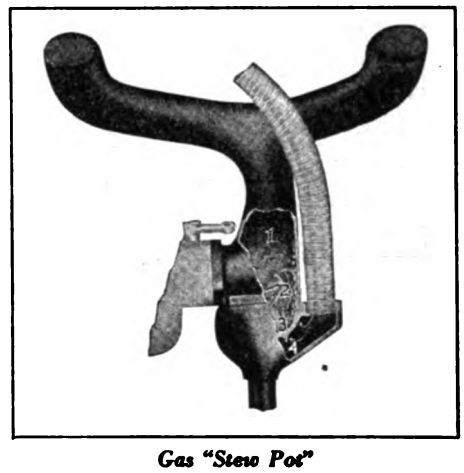
Wedford De-Luxe Evr-Klean cover

high, and 17 inches wide; the seat is 17 inches square and the flap is 7½ by 17 inches.

Each piece is faced with a 2½-inch strip of high grade khaki material which adds both to the appearance and the durability of the product. Reverse sides are covered with strong material and the edges are bound in such a way as to make each piece practically indestructible. Four tabs are sewed to each corner of the reverse side so that if it is desired the cover may be fastened quickly to the seat cushions. Price of the Wedford De-Luxe Evr-Klean cover is $2.

GAS "STEW POT" VOLATIZES THE HEAVY ENDS

Many of the difficulties encountered through use of low test gasoline have been overcome by the "Stew Pot" which has been placed on the market of late by the W. G. Engineering Co., East Moline, Ill. Interest in this device centers in the fact that instead of attempting to heat all the mixture it heats only the heavy



Gas "Stew Pot"

ends of the gas which require the heat.

This construction makes possible the gas vapors being drawn into the cylinders unmolested. The heavy gas, forming in drops, runs into the "Stew Pot" where it is vaporized by heat. Then it is drawn into the cylinder where it mixes with the other gas, forming a comparatively cool, highly explosive mixture. Tests conducted have revealed a material saving in fuel through use of the device and practically no dilution of crank case oil.

The Gas "Stew Pot" as a standard product is designed and produced for Ford cars. In addition, special demands are being filled by the manufacturer.

Imperial Device Adjusts Mixture

Adjusting the mixture has been made simple for the Ford owner through the Imperial carbureter control which is being manufactured by the Imperial Brass Manufacturing Co., 1200 West Harrison

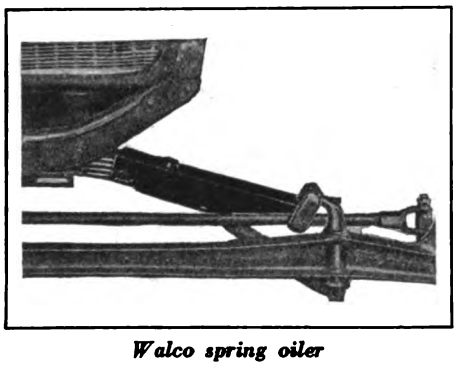
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street, Chicago. This device eliminates guesswork. Its dial on the instrument board shows just where the needle is set, indicating the mixture best suited for the car. The driver is thus enabled to adjust it at any time without changing his position. Price is 95 cents each.

WALTER SPRING OILER LINED WITH OIL-SOAKED FELT

A metal lubricating cover lined with oiled soaked felt which completely covers the springs and keeps them thoroughly saturated with oil is being produced by the Walter Manufacturing Co., 1010 Keyser building, Baltimore, Md. The Walco spring oiler was known formerly as the A. U. W. spring lubricating cover. Whereas at the present time it is being made for Fords only, the Company expects to develop models for other cars in the near future.

Application of the device is simple and serves to show its construction. First the rebound clips are removed from the springs. The absorbent material is soaked in engine oil or any light lubricant. It is then laid on the spring with the broad end toward the center of the auto-



Walco spring oiler

mobile, and wrapped with twine to hold it in place.

Metal covers of the spring oiler are then placed over the absorbent material and squeezed together. A spring clip bar holds the covers firmly in place.

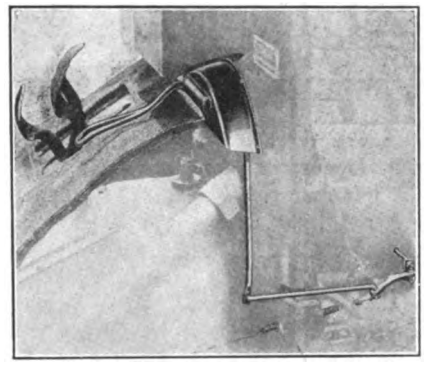
Price of the Walco spring oiler for front and rear springs is $5. West of the Mississippi the price is $6.

"FARCO" FOOT ACCELERATOR IS FORD DEVICE

A new foot accelerator designed for Ford cars is being offered by the Farco Manufacturing Co., 30 Church street, New York city. This device is on the market under the trade name "Farco."

A principal feature of this accelerator is that it mounts on the dash entirely independent of the floorboards and engine. Nor does its installation mutilate the machine in any way. This also eliminates the possibility of its becoming jammed or caught in the flocrboards or mat, and interferes in no way with their removal.

Construction of the device is simple. Its action is both positive and direct, all lost motion in both the hand and the foot throttle being eliminated. Complete,



"Farco" foot accelerator

ready for installation it sells for $2.75.

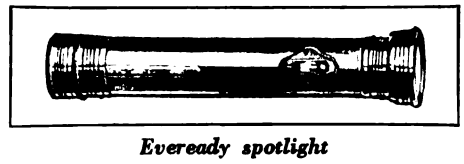
Bulldog Lock Safeguards Tires

A lock that affords complete protection against loss of tires through theft is offered the car owner by the Automotive Equipment Corp., 105 West Monroe street, Chicago. This is being marketed under the trade name of Bulldog tire lock with the sales slogan "It never lets go." The Bulldog lock consists of a steel cable, rubber covered, which cannot be sawed or broken, it is said. A hardened steel lock is used which is welded to the cable. Construction is such that the lock does not rattle nor chafe the tire. It comes in three lengths each of which sells for $5.

EVEREADY SPOTLIGHT THROWS BEAM 300 FEET

Popular among the wide line of products manufactured by the American Eveready Works, Long Island City, New York, is the Eveready spotlight, capable of throwing a beam of light 300 feet. This spotlight, which was first introduced to the trade a year and a half ago, has found ready favor by reason of its utility and compactness.

A very important feature of this flashlight is the small "head" which permits the light to be inserted in the side pocket of an automobile. Emphasis is likewise directed to the extra end cap which contains two extra Eveready Mazda lamps for emergency use. This makes it possible to have the light always ready for



Eveready spotlight

use, for by simply unscrewing the bottom cap a lamp will be found to take the place of one that may have burned out.

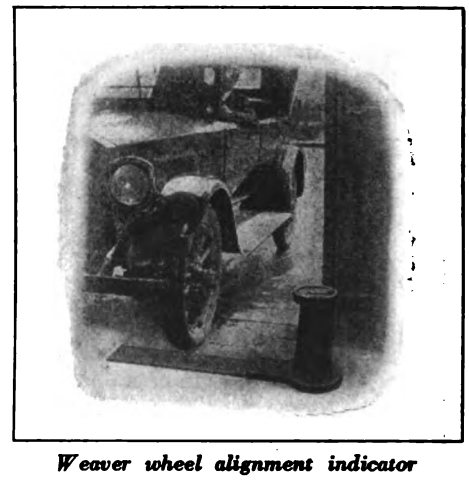
"Three-in-One" Keeps Ford Engine Cool

To eliminate three troubles encountered by Ford owners, the Hexagon Specialty Manufacturing Co., 3630 South Grand avenue, St. Louis, Mo., has placed on the market the "Three-in-One" attachment. This device has been designed to provide an accessible elevated timing system which assures perfect ignition, a force-feed type gear oil pump that provides efficient lubrication, and a positive gear-driven water circulating pump that keeps the engine cool at all times. The "Three-in-One" attachment is adapted to Ford trucks and Fordson tractors as well as Ford passenger cars. Price is $31.

WEAVER INDICATOR MEASURES RUNNING ALIGNMENT

To overcome troubles caused by misalignment of the wheels the Weaver Manufacturing Co., Springfield, Ill., well-known maker of garage and shop equipment is featuring the Weaver wheel alignment indicator. Briefly, this is merely an instrument designed to measure the side thrust with mechanical accuracy.

Its method of operation is simple. To measure the alignment of either front or rear wheels one of the wheels in question



Weaver wheel alignment indicator

is driven slowly over the plate. In the event that the wheels are out of line the resistance between them is relieved by the plate which is mounted on roller bearings. This is free to move toward the dial of the indicator or out, according as the wheel is toed in or out, while the other wheel remains on rigid ground.

Movement of the plate is communicated by a master hand to two set hands, one of which registers how much the wheels are toed in, the other, how much they are toed out. These hands remain stationary in the position deposited by the master hand until the reading has been taken.

They are then returned to zero by pressing a lever at the side of the dial. Top plate and rollers are automatically brought back to their original position as soon as the wheel passes over the plate.

The dial is calibrated for each size tire from 30 to 42 inches. Solid and pneumatic tires can be measured with equal accuracy. Both stationary and portable styles are designed for use with cars of all types.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

NEW YORK—NEW YORK.—A one-story garage is to be erected on a plot 100 x 100 feet, on the south side of 140th street, just west of Fifth avenue.—A three-story garage, on a plot 50.6 x 92, at 239-243 West Eighteenth street, has been leased by the Superior Garage Corp., to Joseph P. Canariato for twenty-two years, at a net annual rental of $10,500.—Forty-two automobiles, eight of which were sight-seeing buses, were destroyed in a fire which consumed the two-story garage of Samuel Kaufman, located at 752-760 Bedford avenue, Brooklyn.

MIDDLEWEST

ILLINOIS — CHICAGO.— Construction has been started on a two-story garage at 4440-48 North Clark street, to be occupied in September by the Sun-Rose Garage Corp.

MICHIGAN—ANN ARBOR.—An automobile accessory store has been opened by H. W. Richards.

WISCONSIN — APPLETON.—A. G. Schroeder will operate his business as the Appleton Storage Battery Service station.

FOND DU LAC.—A new fireproof building of concrete block, 40 x 60, will be opened as the Arrow Garage by the Jelinski brothers at Jefferson street and Oshkosh road. Full repair equipment has been installed for machine and mechanical repair work, in addition to an air station and two filling pumps.

MARINETTE. — Goldberg's Garage has been taken over by Henry Kaschke.

WAUKESHA.—Wm. Strack of Milwaukee, has purchased the Spring City Tire Co., from Ira Ludwig.

MISSOURI—AUGUSTA.—A storage battery business has been opened by Elmer Luetkemeyer.

BROOKFIELD.—A shop, equipped for all kinds of acetylene welding and automobile repairing, has been opened by the Love & Glenn garage in the rear of the Suits Motor Co.—R. O. Clarkson will manage the garage, 42 x 80, under construction at 217 West Helm street.

BUTLER.—Fire damaged Warren's garage and the Eggleson & Eads garage.

CLEVELAND.—A. J. Noyes, of West Line, has purchased the garage shop of H. S. Butts and has moved the equipment to his garage.

CLINTON.—Distribution of the Cadillac has been taken over by D. E. Hammond.

DE SOTO.—B. Huskey has purchased the Rozier Garage and has renamed it the Service Garage.—A concrete and iron warehouse and garage, 49 x 49, now being constructed for Col. R. Salisbury, will soon be completed.

HALE.—Huffmon and LaRue have completed a tile addition to the rear of the old garage building to be used as a work room.

HARTSBURG.—T. C. Menke has sold his garage to August H. Wintermeyer.

KANSAS CITY.—A brick, tile and concrete public garage will be erected for Leonard Everett at 2918-20-22-24 Troost avenue.

MACON.—Pearl Smith has acquired an interest in and will become local manager of the Associated Tire store.

MARTHASVILLE.—Hugo Meyer and Frank Morhaus will move their garage to Warrenton in the near future.

POTOSI.—George and G. Bedwell, of Ellington, have purchased a garage in which they will engage in the automobile repair business.

PRINCETON.—Schuyler King has purchased a building and lot. The existing building will be replaced by a modern garage.

ST. LOUIS.—Hugh H. Shields and H. P. McQuiston have formed a partnership operating under the name of McQuiston-Shields Motor Car Co., to specialize in the sale, trade and purchasing of used cars. The headquarters of the concern will be located in the two-story building at 4301-17 Locust street, formerly occupied by the Universal Painting Co.—Henry L. Michelson, formerly identified

(Continued on page 254, first column)

CHANGES IN RETAIL PERSONNEL

R. P. Reeks, automobile salesman, has joined the sales force of the Morten-Swalwell Motor Co., of Dallas, Tex., Maxwell and Chalmers dealers.

Merrill C. Smith, former Willard branch manager at Minneapolis, has been appointed service manager for the Auto Electric Service Co., Willard battery distributer for Alameda county.

Mark Nesing has resigned as manager of the West Side Garage on Central avenue, Tracy, Cal. Active management of the concern has been taken over by the owners, John B. Prendegast and J. Levand.

Ray L. Howard has severed his connection with Horst & Streiter, and has opened a garage in the Lacy building, 412 West Third street, Davenport, Ia.

ACTIVITIES OF THE WHOLESALERS

Edwards Motor Car Co., Milwaukee distributer of Dodge Brothers, has broken ground for a $100,000 building on Grand avenue, at 36th street. The building is expected to be ready for occupancy about December 1.

Stephen Haas, Philadelphia, has taken over for eastern Pennsylvania, New Jersey and Delaware the distribution of Ames bodies for Ford cars.

Reo Motor Car Co., of California, Stockton, Cal., has opened a branch at Miner avenue and El Dorado street, to handle Reo sales in San Joaquin, Amador, Calaveras, Tuolumne, and part of Stanislaus counties. Arthur M. Hammond and Leslie Murray have been placed in charge.

W. C. Howard Motors Co., Kansas City, Mo., is planning to procure larger quarters for its branch in Wichita. The concern is distributing agent for the Hupmobile in 38 Kansas counties.

Pennsylvania Rubber Co., Jeanette, Pa., plans to open a branch on Texas street to supply the local and southwestern trade.

Mac-Dry Battery Co., Los Angeles, Cal., has appointed John C. Shackleford as its representative for Boone, Cooper, Howard, Moniteau, Morgan, Pettis and Saline counties. His headquarters will be located in Boonville.

Winton Co., of Baltimore, Md., in addition to distributing the Winton Six, will handle the Oldsmobile.

F. J. Pierce, located at 601 E. Ludington avenue, Ludington, Mich., has been appointed distributer of the Cleveland.

Carl Thisted Co., Inc., state distributer of Republic trucks, formerly at Great Falls, Mont., has opened its main offices in Butte, with C. A. Carl in charge.

Price Brothers, located at 3420 Everett avenue, have been appointed state distributers and jobbers of Tungsten spark plugs and other Tungsten products.

R. T. C. Motor Co., Marshalltown, Ia., has been appointed direct factory agent for the Studebaker car for Hardin and Marshall counties and parts of Story, Tama and Franklin counties. John F. Risewick, formerly sales manager for the Sheriff-Blair Motor Co., Des Moines, Ia., will personally direct the branch.

Neel-Cadillac Co., Philadelphia, Pa., has appointed the F. W. Peters Motor Car Co., Bordentown, N. J., and Burlington, N. J., and Branson & Doerr, as Cadillac distributers for Vineland and Millville.

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IN THE TRADE

(*Continued from page 253, second column*)

with the Surplus Auto Accessory Brokerage Co. of Kansas City, has opened the Marathon Tire Co., at 3336 Locust street.

UNION.—New quarters of the Union Tire & Vulcanizing Co. have been completed. The concern will specialize in automobile repair work.

KANSAS—ATCHISON.—Carl W. Dingess and W. P. Peltzer have purchased the interest of James Patrick Smith in the Smith & Robbins Motor Co., 119 South Eighth street. The new concern will be known as the R. P. D. Buick Co.

BURRTON.—A repair shop handling automobile accessories will be installed in the rear of the Pioneer Pump Shop building by Roy G. Moore of Iola.

erect a garage.—Construction of a brick garage, at 117-121 Second avenue, east, for T. J. Ryan and J. W. Nash, will be started in the near future.

INMAN.—R. R. Krehbiel has sold his garage to G. P. Kliewer.

KIRWIN.—A. R. Cogswell has purchased the R. E. Downing garage.

LEAVENWORTH.—New quarters, at 420 Cherokee street, have been opened by the Davidson Brothers Motor Co., with Roy Morris in charge.—A new stock room is being added to the establishment of the R. W. Donovan Motor Co., located at 722-26 Delaware street. Several other improvements, including the addition of a complete line of accessories for Oakland and Overland cars, are being planned.

LEROY.—E. L. Kirkham, formerly

STAFFORD.—Howard Heilmuller has purchased Dwight Durham's battery station and has employed W. M. Houser.

STERLING.—Lester Fricker and L. B. Reimer have purchased the repair shop of White & Roberts. They will operate the business in the old Hanlon Machinery building under the firm name of Reimer & Fricker.

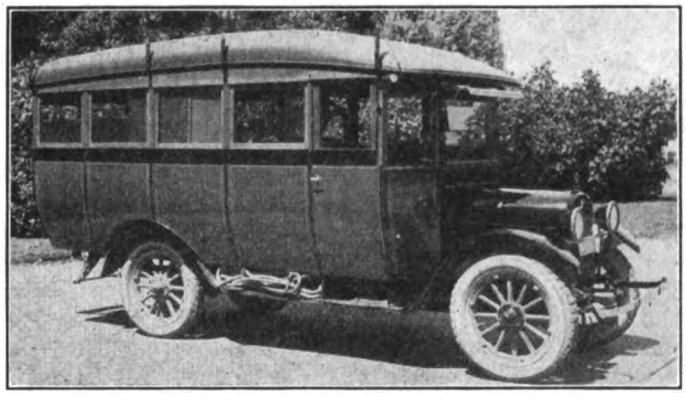
TOPEKA.—W. A. Brown has sold the automobile laundry and garage at 112 West Fifth street to W. A. Fry.

WAKEENEY.—As a result of a transaction by which W. L. Caston acquired a half interest in the Reichard garage, the name of the concern has been changed to Reichard & Caston Garage.

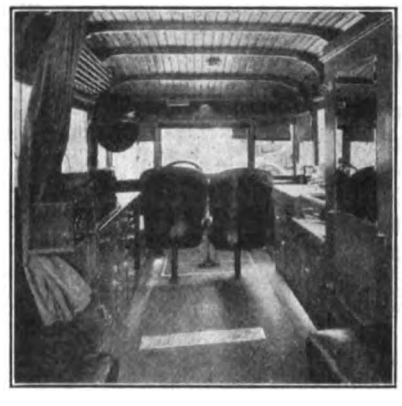
WICHITA.—F. E. Dunn, formerly connected with the Wichita Battery Co., has purchased the business of the Kenny

Reo Provides Traveling Hotel Accommodations

Motor Camping Vogue Responsible for the Idea



***THE** camping vogue is responsible for the Reo Auto-Bungalow designed by the Reo Motor Car Co. of California. It consists of a bungalow body mounted on a Reo Speed Wagon chassis of 128-inch wheelbase, and has a speed of 30 to 35 miles per hour. The height is sufficient to allow the occupants to stand*



***AMONG** the features included in the interior equipment are: desk, combination buffet and ice chest, Ottoman bed of Pullman type, closets, stove, sink and collapsible table*

CALDWELL.—An addition to the garage and machine shop of Jack Begley will provide a floor space of 35 x 80.

CHENEY.—Herman Wolter has moved from the building now occupied by the Cheney Motor Car Co.

ELLSWORTH.—A salesroom and office will be constructed just south of the O'Donnell hardware store for C. W. Phillips and T. G. O'Donnell, recently appointed distributing agents for the Buick motor car.

HUTCHINSON.—An automobile repair and supply shop, to cost $4,500, will be erected on North Main street, between Sixth and Seventh, for W. T. Getter.—Haskard Brothers, Reo distributing agents, have purchased the northwest corner of First and Adams streets, to

proprietor of a garage in Burlington, has purchased the Center garage building. J. M. O'Connor has joined as partner in the business itself.

McPHERSON.—J. H. Myers, Durant distributer, has opened a new garage and repair shop in the building formerly occupied by the A. M. Rice Top shop.

MANHATTAN.—W. A. Schade has been appointed Paige and Jewett distributer.

PRATT.—J. A. Kaufman has leased the new room being added to the rear of his present building at Fifth and Main streets, to the Bucklin Battery station.

QUINTER.—A. C. Denning Park has sold the Park garage.

SCRANTON.—E. G. Segilquist has purchased the Miller garage.

Brothers Motor Co., 221 North Lawrence. He will conduct the business under the firm name of the Dunn Electric Car Co. The new company will not only continue the agency for the Detroit and Milburn Electric cars, but will specialize in electric work on both gas and electric automobiles. Starting and lighting batteries will be carried in stock.—A new building completely equipped with all modern appliances will be opened by the Hill and Hill Service station, at 122 North Seneca, with George and Guy Hill in charge.

NEBRASKA—BLADEN.—John Jinkinson, of Blue Hill, has purchased the South garage.

HOLDREGE.—New quarters has been opened by the Northwestern Auto Park

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"I knew him when he was a boy"

What one is there of us that has not felt the glow of satisfaction over the outstanding success of a life-long friend! Often a surprise—seemingly "all of a sudden." Yet neither surprising nor sudden, when you stop to think back over each step of his progress.

THE United States Rubber Company—makers of U. S. Royal Cords—were first to conceive, make and announce the *balanced tire.* A tire in which there is such complete *unity* of action in tread and carcass that neither will give way before the other.

First to conceive, make and announce *a complete line* of tires—a tire for every need of price and use under *one standard of quality.*

First to tell the public about the good and bad in tire-retailing. (You remember the phrase "Go to a legitimate dealer and get a legitimate tire.")

First also to arouse industrial and trade minds to the need of a *new kind* of tire competition. (Competition for better and better *values.* Greater and greater public confidence.)

* * *

THESE high spots along the U. S. road to leadership indicate the *intent*—the will to win by the *quality route* in a price market.

Now that so many car-owners have given their verdict for quality tires in general, and U. S. Tires in particular—a number of dealers and car-owners whose vision has been clouded by "discounts," "sales" and what not, are beginning to remember that they "knew him when he was a boy."



United States Tires are Good Tires

Copyright 1922 U. S. Tire Co.

U. S. Royal Cord Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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Co., having located with the Henry Rothman Harness Co.

NORTHWEST

MINNESOTA—NEW ULM.—A garage, to cost $16,000, will be erected for A. C. Ochs.

ST. PAUL.—A garage with 100 feet frontage on Selby avenue near Western avenue is being erected for Melvin T. Tenneson and George R. Schroeder. The new firm will operate under the name of the Angus Motor Car Co., Inc.

MONTANA—MILES CITY.—D. Johnston and G. M. Peterson have sold their interests in the Parkview garage to August E. Nergaard.

SOUTHWEST

ARKANSAS—FT. SMITH.—Construction of a $35,000 annex to the Ford building has been started. The new addition which fronts on 11th street will provide a floor space of 70 x 140 and will cost approximately $35,000.

KINGSTON.—Work on a concrete garage has been begun for Virgil Weathers.

LEACHVILLE.—J. T. Welsh and his son, G. R. Welsh, have opened their garage in the brick building on First street, operating as Welsh and Welsh.

LITTLE ROCK.—Fred C. Furth, trustee in bankruptcy, will sell the entire stock of the Arcade Motor Co., recently declared bankrupt.

PARAGOULD.—Benyon Kitchens purchased the Grand Central Garage and building formerly owned and operated by Orville Thompson, for $12,000. He has sold the garage to Ross Adams, who will operate the business while B. Kitchens retains the building.

PINE BLUFF.—A. B. Cameron and W. A. Hughes have purchased the radiator shop of R. R. Harday at 210 Walnut street.

OKLAHOMA—BROKEN ARROW.—Baker & Oliver have sold their repair shop to Carl Dalton and Harry Showman.

CLINTON.—A fire-proof brick garage and automobile salesroom will be erected for C. M. Calm.

MANGUM.—Wigham & Tucker have sold the Midway garage to J. Hughes.

TULSA.—In addition to distributing Ford cars, the Ryan Motor Co., located at 223 North Main street, has secured the Lincoln agency.

TEXAS—DALLAS.—A new home is being constructed for the Quick Tire Service, Inc., distributer of United States tires, at North Harwood and Federal streets.

FT. STOCKTON.—J. D. McFarland and Chas. Kirkland have purchased the W. W. Taylor Garage, located in the Parks building on the corner of First and Water streets.

GALVESTON.—Dow & Co., Ford distributers, have moved to their new quarters on Avenue C, between 21st and 22nd streets.

MIAMI.—J. A. Covey & Son's garage, under assignment, has been sold to the Bank of Miami. J. A. Montgomery will remain in charge until Sept. 1, when the business will be completely reorganized and a new manager chosen. The new concern will operate as the Miami Motor Co.

NAVASOTA.—Chas. W. Leigh has purchased a half interest in the Barnes Motor Co., local Chevrolet agents. He will have charge of the company's office while Barnes, his partner, devotes his entire attention to promoting sales.

SAN ANTONIO.—Southern Auto Repair and Machine Co. is now located in its new quarters at 101 West Travis street.

NEW MEXICO—VAUGHN.—W. B. Bender and William Lewis have opened the Lewis and Bender Auto Repair Co., on East Main street.

PACIFIC COAST

WASHINGTON—DAYTON.—H. C. Roush has sold his interest in the Ford Service Garage to his partner, R. E. Dawe.

SEATTLE.—Sound tires will be distributed by Atkins & Rowan, located at Harvard avenue and Pike street.—James Brennan has sold his interest in the Motor Parts Co., a crankshaft and cylinder grinding concern, located at 817 E. Pike street, to Robert S. Taylor, automobile engineer, and associates.—H. D. Newlee, formerly in charge of shop and service departments for the Mitchell Motors & Service Co., has leased the repair department of the Waterfront garage, 83 University street.

SOUTH TACOMA.—An automobile top, body, fender and radiator shop has been opened by the Dolge-Stoffer Co., at 5640 Union avenue.

TACOMA.—Sherman Lyons and Jack McKee have opened the Lincoln Battery station at 38th and G streets. They plan to handle Gill batteries.

OREGON—EUGENE.—Distribution of Franklin and Durant cars in Lane county has been taken over by the Lane County Auto Co., located with the Fisk Motor Co., on Seventh avenue.

HOOD RIVER.—W. S. Kaestner has been appointed Durant and Star dealer.

PORTLAND.—A Westinghouse battery shop at 14th and Morrison streets, has been opened by Jack Tait, formerly battery department manager of the Covey Motor Car Co.

CALIFORNIA—BAKERSFIELD.—Wilkes Brothers have opened the Glennville garage on Summit avenue.

EL MONTE.—Charles J. Glasser and Joseph Classon have taken over the Central garage.

EL SEGUNDO.—Distribution of the Ford and Fordson has been taken over by the Turner Brothers, located in the El Segundo garage.

FRESNO.—B. Murden, temporarily located at 1228 Van Ness avenue, has been appointed Rickenbacker agent for Fresno county.

FULLERTON.—G. R. Jones, head of G. R. Jones Motor Co., has located in the new Lilley garage on West Wilshire street.—New quarters have been opened on West Wilshire boulevard by the G. R. Jones Garage.

HIGHLAND PARK.—A brick garage, providing 3,000 square feet of floor space, is being erected for the repair department of the Quality Service Station, operated by Goodwin & Yates.

LAKEPORT.—Harold D. Abercombie and Clarence R. Burriss have opened the Enterprise Garage on Main street.

LOS ANGELES.—The Slauson Avenue Garage, Slauson avenue and Pacific boulevard, has been purchased by H. V. Gilbert and H. C. Illo.—To accommodate its growing business, a two-story building is being erected by the Liberty Rubber Co. at Los Angeles and 11th streets.

ORANGE.—Sisson Brothers have opened their garage in larger quarters in the former Stimson building on West Chapman avenue.

POMONA.—Acquiring the agency for the Chevrolet, W. E. Horne and J. F. Slagel have leased the White Garage on East 2nd street.—P. S. Little has taken over the lathe repairing department of A. M. Littlepage Autox Co. and will operate it as a separate business.—To cost $8,000, an attractive two-story front, 60 feet long, is being erected on the building of Clark Brothers Garage.—J. W. Meyers has sold Meyers Oakland Service, official Oakland service station on North Garey avenue, to Jones & Nicholson.

PETALUMA.—J. J. King has leased a new building which will offer 2,400 square feet of floor space. He will operate it as an automobile repair shop.

ROSEVILLE.—E. H. Horton and W. H. Luck have opened the Superior Garage—J. Hawkins has sold his interest in the Dodge Brothers agency to his sons, Walter B. and Norman K., who will continue the agency as Hawkins Brothers. The accessory sales department has been purchased by Langston & Hakl.

SAN LUIS OBISPO.—Forrest E. Brown has moved his Franklin and Durant agency to larger quarters at 855 Higuera street.

SAN DIEGO.—Justin Hammond has opened a salesroom at Broadway and Fourteenth street to handle Haynes cars.

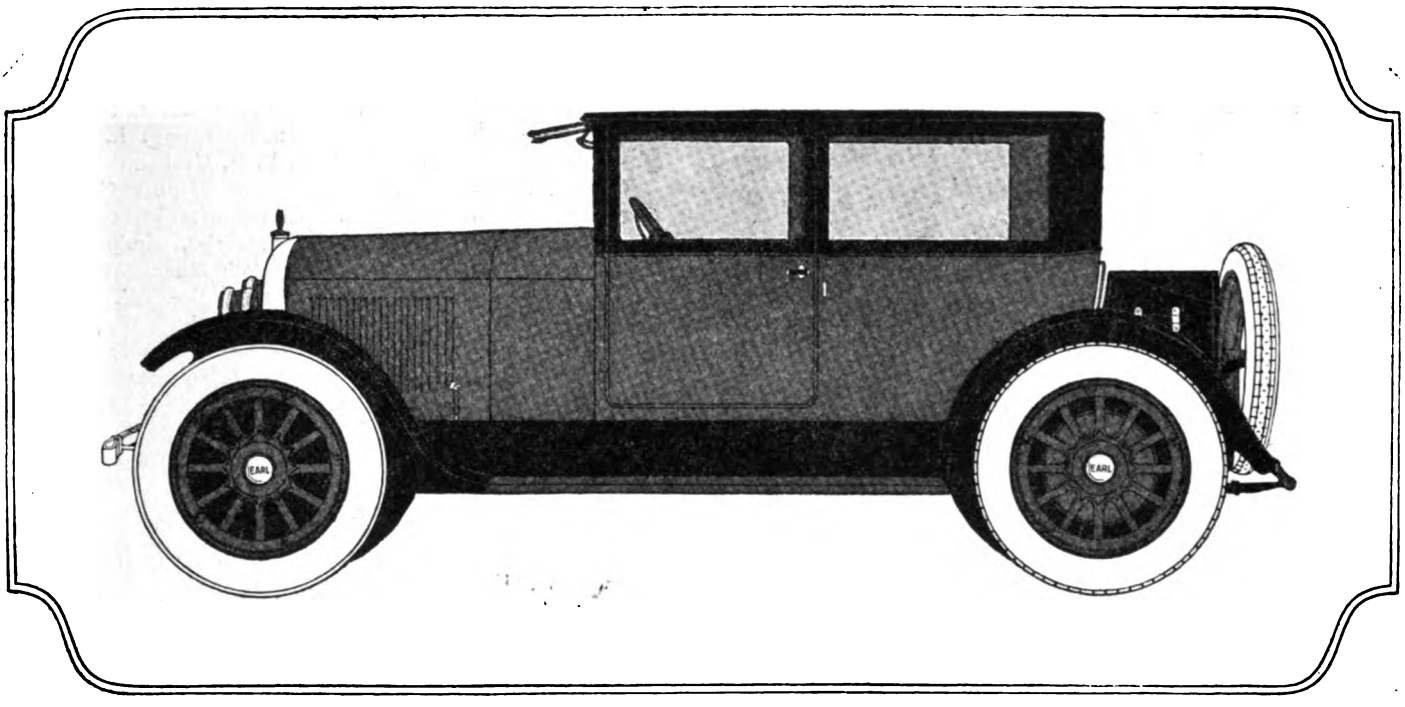
STOCKTON.—Cutting & Lusignan, Maxwell and Franklin dealers, have moved into their new two-story, $35,000 building on California, near Channel street.

TAFT.—Midway Battery & Tire Co., 308 Center street, has been opened by M. R. Ferguson.

VENTURA.—W. L. Magby has taken over the Ventura Garage and will retain his former business, the Magby Garage.

VISALIA.—C. M. Burnett has purchased the interest of Lee E. Bigler, his partner in the Automotive Supply Co.

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COMPLETE EQUIPMENT INCLUDED IN CABRIOLE PRICE, $1395—TRUNK, BUMPER, MOTOMETER, SUN VISOR, ETC.

Two Big Markets for EARL *Cabriole*

Distinction and equipment strike business and professional men as well as women

JUDGED by retail sales, the Earl *Cabriole*—completely equipped for $1395—is proving almost as popular among business and professional men who need a *personal utility car* as among women drivers, to whom its distinction and ease of handling appeal so strongly.

The fact is physicians, architects, realtors and business executives have learned that the seating capacity of a coupe is too limited to meet the necessities of many important business and social occasions.

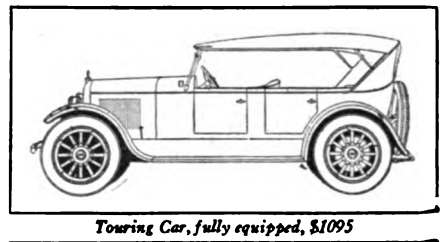
Here the Earl *Cabriole* serves as *two cars in one.* It seats four big men in comfort, with plenty of leg room. Yet its compact, close-coupled design, its sweeping lines and contours, make it *look right* when the owner is driving alone. And driving the *Cabriole* for either man or woman, is so easy that it's no task at all.

Cabriole buyers appreciate, too, its *complete equipment.* No other closed car embodying so much comfort, beauty, convenience, economy and all-weather utility includes so many high-grade features and accessories for $1395. Touring trunk, for instance, with cover, two suit cases and hat box; bumper; motometer; sun visor; one-piece windshield with wiper; Sparton horn and really complete equipment.

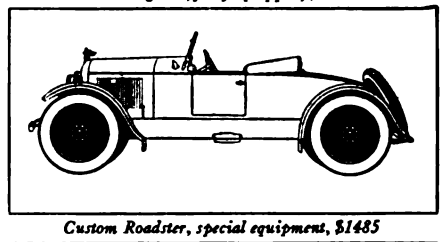
The *Cabriole* rounds out the great Earl line. If your territory is open, write or wire me for full information.



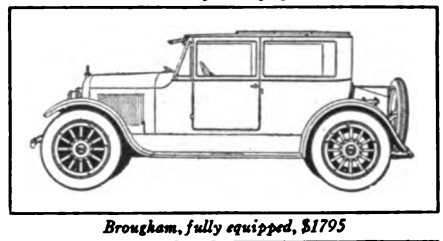
President and General Manager



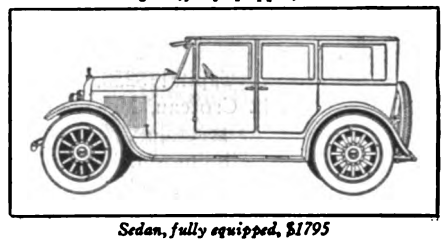
Touring Car, fully equipped, $1095



Custom Roadster, special equipment, $1485



Brougham, fully equipped, $1795



Sedan, fully equipped, $1795

Touring Car	$1095
Cabriole	1395
Custom Roadster	1485
Brougham	1795
Sedan	1795

Prices f. o. b. Jackson

EARL MOTORS, INC.

JACKSON MICHIGAN

"The right line, at the right price, with the right dealer discount"

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INCORPORATIONS

NEW YORK.—Arthur Gallow Trucking Corp., Bronx, N. Y. Capital $10,000. Incorporators: M. Gross, M. V. Mohr.

Brooklyn Motor Sales Corp., Brooklyn, N. Y. Capital $100,000. Incorporators: F. A. Gehrhardt, O. M. Murphy.—Grove Motor Sales Co., Brooklyn, N. Y., has increased its capital from $5,000 to $15,000.

Non-Puncture Tire Co., Binghamton, N. Y. To manufacture tires. Capital $50,000. Incorporators: G. A. Reynolds, G. A. Reynolds, Jr., F. H. Wilbur.

Excelsior Auto Repair and Machine Works, Mamaroneck, N. Y. Capital $5,000. Incorporators: A. M. Bull, A. Lamb, F. H. Bull, Jr.

Miller & Sprengeler, White Plains, N. Y. To manufacture motor vehicles. Capital $6,000. Incorporators: D. S. Miller, O. Sprengeler, A. M. Miller.

NEW JERSEY.—Safety Vault Auto Co., Jersey City, N. J. To manufacture automobiles to protect valuables in transit. Capital $100,000. Incorporators: Frank H. Houck, Andrew Curry, John J. Eagan.

Yellow Cab Co., Paterson, N. J. Capital $25,000. Incorporators: Albert V. D. Snyder, Ira J. Ackerman, Albert H. Kraemer.

Ace Rubber Co., Town of Union, N. J. To manufacture, buy, sell, import and export tires and tubes. Capital $50,000. Incorporators: C. A. Wilson, E. H. Unkles, C. H. Lambelet, C. W. Keuffel.

Spartan Rubber Co., Trenton, N. J. To manufacture tires and tubes. Capital 26,000 shares, 1,000 preferred, 25,000 no par value.

DELAWARE.—Burkoe Tire & Rubber Co., Dover, Del. To manufacture tires and tubes. Capital $350,000. Incorporators: C. H. Jarvis, L. B. Phillips, J. M. Satterfield.—Convoy Corp., Dover, Del. To manufacture tires, tire fabrics, tire materials and accessories. Incorporators: C. H. Jarvis, L. B. Phillips, J. J. Hartnett.

Bear Motor Car Co., Wilmington, Del. To manufacture flying machines. Capital $300,000.—Broadway Auto Co., Wilmington, Del. To deal in automobiles. Capital $100,000.—Ferguson Motor Supply Corp., Wilmington, Del. To deal in automobile rims. Capital $250,000. Incorporators: T. L. Croteau, M. A. Bruce, C. H. Blaske.

Great Garage, Wilmington, Del. Capital $150,000.—M. and M. Sales and Service Corp., Wilmington, Del. To repair automobiles and conduct service stations. Capital $100,000.—Paynter Corp., Wilmington, Del. To manufacture tires, tubes and rubber goods. Capital $300,000. Incorporators: T. L. Croteau, M. A. Bruce, C. H. Blaske.

Rochester Rubber & Textile Co., Wilmington, Del. To manufacture tires, tubes, rubber goods, accessories, etc. Capital $1,500,000. Incorporators: M. M. Lucey, M. B. Reese, L. S. Dorsey.—West York Motor Co., Wilmington, Del. Capital $100,000.

MASSACHUSETTS.—National Automatic Service Co., Fitchburg, Mass. To deal in automobiles. Capital $100,000.

NORTH CAROLINA.—Citizens Tire and Auto Supply Co., Charlotte, N. C. To deal in tires. Capital $100,000. Incorporators: R. Sams, L. D. Walker, C. M. Strong.

TENNESSEE.—Old Hickory Tire & Tube Co., Nashville, Tenn. To distribute tires and tubes. Capital $6,000.

KENTUCKY.—Kentucky Motor Car Co., Covington, Ky., has decreased its capital from $50,000 to $25,000.

Short's Tire Service, Louisville, Ky. To deal in tires and accessories. Capital $100,000. Incorporators: J. T. Short, C. V. Lusske, J. T. Short.

Somerset Motor Co., Somerset, Ky. Capital $1,000. Incorporators: M. L. Gover, W. A. Ford, C. Ford.

OHIO.—Roxanna Tire & Rubber Co., Akron, O. To manufacture tires, tubes, etc. Capital $10,000. Incorporators: J. E. McCormack, C. N. Justice, G. D. Moore, W. B. Trosfer, E. W. Baker.

Kirschner Tire & Supply Co., Cincinnati, Ohio. To manufacture and deal in tires and tubes. Capital $10,000. Incorporators: A. Silverstein, B. Fletcher, H. Kirschner, W. C. Groh, J. W. Cowell.

Singleton Tire Sales Co., Cleveland, O. To deal in tires and tubes. Capital $10,000. Incorporators: H. T. Singleton, W. F. Frye, G. W. Cowell, G. F. Stolman, P. S. Lietz.—West Side Chevrolet Co., Cleveland, O. Capital $50,000. Incorporators: Charles W. Fields, L. S. Fuller, W. W. Chapman, Robert T. Mitchell, F. J. Kasal.

Fidelity Service & Adjustment Co., Dayton, O. To deal in tires and tubes. Capital 2,000 shares no par value. Incorporators: H. F. Daench, H. W. Pleasant, E. L. McCleary, P. Ackerman, E. C. Baver.

Kenton Chevrolet Sales Co., Kenton, O. Capital $20,000. Incorporators: Albert Williams, John E. Hanna, Avis Williams, Evans Hanna, Soma E. Hanna.

Bucher Sales Co., New Philadelphia, O. To deal in tires and accessories. Capital $25,000. Incorporators: B. S. France, G. W. Bucher, L. C. Taylor, J. D. Bucher, S. W. Bucher.

Huebner Tire & Supply Co., Toledo, O. To deal in tires. Capital $10,000. Incorporators: R. H. E., H. L., C. and L. Huebner.

Standard Automobile Supply Co., Wooster, O. Capital $10,000. Incorporators: A. W. Sieglaff, W. M. Cramer, H. J. Smith, F. C. Strausbaugh, G. M. Lemmon, William Brown, R. Miller.

INDIANA.—Carburetor and Accessories Co., Indianapolis, Ind. To deal in automotive parts and accessories. Capital $17,000.

ILLINOIS.—Hunt-Graham Tire Co., Aurora, Ill. To manufacture tires. Capital $20,000. Incorporators: L. H. Hunt, J. A. Graham, E. K. Graham.

Moses & Morris Motors Corp., Chicago, Ill. To manufacture and deal in automobile accessories, equipment, etc. Incorporators: Folk Moses, Milton Morris, Henry Moses, Lee W. Carrier.—Pathfinder Tire & Rubber Co., Chicago, Ill. To manufacture tires and accessories. Capital $1,000. Incorporators: S. H. Silverman.—Postal Life Syndicate, Chicago, Ill. To manufacture automobile tires and accessories. Capital $25,000. Incorporators: P. and R. Reinsberg, E. Klauber.

Simmons Tire Corp., Chicago, Ill. To manufacture tires. Capital $100,000. Incorporators: C. E. Tracy, H. L. Feigenholtz, H. S. Tracy.—Stover Rubber Co., Chicago, Ill. To manufacture tires, tire making machinery, etc. Capital 500 shares no par value. Incorporators: M. C. Suhr, E. E. Levy, I. K. Stover.

WISCONSIN.—Schultz Bray Auto Sales Co., Evansville, Wis. Capital $15,000. Incorporators: Wm. F. Schultz, John J. Bray, Caroline D. Schultz.

Diestler Tire Co., Kenosha, Wis. To deal in tires. Capital $24,990. Incorporators: H. O., H. A. and V. M. Diestler.

Tractor & Truck Improvement Co., Merrill, Wis. To manufacture and deal in mechanical devices representing improvements in design and equipment of tractors, motor trucks and power farm operating equipment. Capital $25,000. Incorporators: J. G. Frogner, R. E. Kile, Dan. Healy.

House That Jack Built, Milwaukee, Wis. To furnish technical information and shopping service to motorists, including the purchase of tires and accessories. Capital $1,000.—Scholzen Spring Cushion Co., Milwaukee, Wis. To manufacture springs for motor car cushions and upholstering. Capital $25,000. Incorporator: N. Scholzen.—Simplicity Engine & Mfg. Co., Milwaukee, Wis., has increased its capital to $50,000.

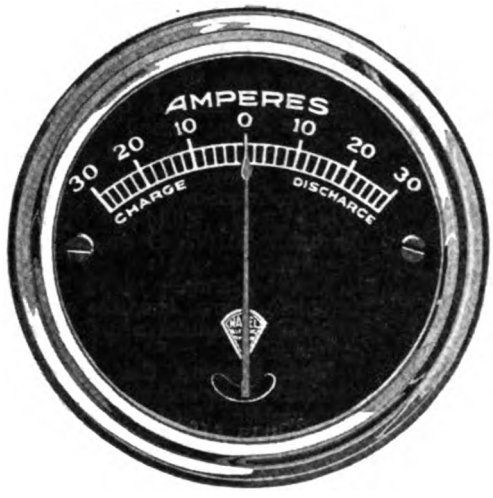
Super-Traction Truck & Motor Co., Shiocton, Wis. To manufacture chassis. Capital $50,000. Incorporators: W. E. Gosch, Rudolph Schwandt, John D. Kreen.

IOWA.—American Automobile Cleaners, Davenport, Ia. To wash, clean, inspect and grease cars. Capital $25,000.

WASHINGTON.—Marysville Motor Co., Marysville, Wash. Capital $5,000. Incorporators: C. H. Wulff, C. T. Haines.

Helix Piston Co., Seattle, Wash. To manufacture pistons. Capital $30,000. Incorporators: P. T. O'Connor, F. A. Tutthill.—Lexon Piston & Ring Co., Seattle, Wash. To manufacture pistons and rings. Capital $100,000. Incorporators: Michael Faessen, Fred E. Kimball,

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The dependable performance of the Nagel Ammeter, its enduring accuracy, is recognized by automotive engineers generally. Its wide acceptance as standard equipment is evidenced by the fact that it has been installed on more than three million motor cars and trucks. These include more than fifty well-known makes.

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AMMETER
THE W.G.NAGEL ELECTRIC CO.
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CALENDAR

Detroit, Mich., Aug. 29.—Convention, National Safety Congress.

Decatur, Ill., Aug 30-Sept. 9.—Industrial Exhibition and Automobile Show.

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Toledo, Ohio, September.—Annual Convention of the Ohio Automotive Trades Assn.

Minneapolis, Minn., Sept. 2-9.—Minnesota State Fair.

Sacramento, Cal., Sept. 2-10.—Automobile Show, auspices of the Motor Car Dealers' Assn., State Exposition Grounds; Royal Miller, manager.

Colorado Springs, Colo., September 4. Annual Automobile Races, auspices of Pikes Peak Auto Highway, F. C. Matthews, traffic manager.

Peoria, Ill., Sept. 4.—National Implement and Vehicle Show.

Hartford, Conn., Sept. 4-9.—Automobile Show, Connecticut Fair Grounds.

Indianapolis, Ind., Sept. 4-9.—Automobile and Accessory Show, to be held in connection with the Indiana State Fair, auspices of the Indianapolis Automobile Trade Assn., Auto Show Building; J. B. Orman, manager.

Spokane, Wash., Sept. 4-9.—Annual Automobile Show, to be held in connection with the Spokane Interstate Fair; B. J. Garnet, manager.

Wilmington, Del., Sept. 4-9.—Automobile Show, to be held in connection with the Delaware State Fair.

Findlay, Ohio, Sept. 5-8.—Automobile Exhibit to be held in connection with the County Fair, auspices of the Hancock Automotive Trade Assn., Fair Grounds; Earl D. Rummell, secretary.

Charlotte, N. C., Sept. 6-8.—Industrial Tractor Show, auspices of the Ford Motor Co.

New York, N. Y., Sept. 7.—First Fall Meeting, Automotive Service Assn. of New York.

Rio de Janeiro, Brazil, Sept. 7-Nov. 15.—Automobile Show during International Exposition.

Modesto, Cal., Sept. 9-16.—Automobile and County Industrial Show, auspices of the Stanislaus County Auto Tradesmen's Assn.

Louisville, Ky., Sept. 11-15.—Used Car Show, to be held in connection with the Kentucky State Fair, auspices of the Louisville Auto dealers' Assn.; George T. Holmes, manager.

Syracuse, N. Y., Sept. 11-16.—New York State Fair.

Red Bluff, Cal., Sept. 11-17.—Automobile Show, to be held in connection with the Second Annual Tehama County Fair, auspices of the Tehama County Fair Assn., Fair Grounds; George Wahl, manager.

Buffalo, N. Y., Sept. 13-15.—Annual Credit Meeting of the Motor and Accessory Manufacturers' Assn., Lafayette Hotel.

Chicago, Ill., Sept. 14-15.—National Used Car Conference of Trade Association Secretaries, auspices of the National Association of Automobile Show and Association Managers.

Sioux City, Iowa, Sept. 15-19.—Automobile Exhibit, to be held in connection with the Interstate Fair, auspices of the Motor Trades Bureau, Interstate Fair Grounds; Milton E. Duggan, manager.

The Hague, Netherlands, Sept. 15-20.—Annual Automobile Show.

Kansas City, Mo., Sept. 16.—Opening meet of the new Kansas City Board Speedway.

Rome, Italy, Sept. 18-23.—Second Annual Meeting of the International Chamber of Commerce.

Cleveland, O., Sept. 18-28.—Exhibition of Closed Cars during the Merchants and Manufacturers Exposition, auspices of the Cleveland Automobile Manufacturers' & Dealers' Assn.; Herbert Buckman, manager.

New York, N. Y., Sept. 23-30.—Closed Car Show, auspices of Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of German Automobile Manufacturers' Assn., Kaiserdamm Hall.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Ventura, Cal., Oct. 4-8.—Automobile Show, to be held in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

London, England, Nov. 3-11.—Olympia Automobile Show.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, manager.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Boston, Mass., March 10-17.—Passenger Car, Truck, and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

* Tentative.

HOUSE ORGAN KEYNOTES

I believe that work is a blessing.

I believe that the work I am doing is worth while.

I believe that the interests of mankind are mutual, and that business is simply organized service.

I believe that the only way life can be made happier and living cheaper is for everyone to do his full duty.

I believe that incompetence, laziness, or greed in an employe is not only unfair to the employer but a sin against the whole body of society.—*Cadillac Cheer.*

The best business man isn't always the one who is quickest to see through a proposition. It is the one who is quickest to see a proposition through.—*Republic Round Table.*

Success results largely from the sum of little things well done.—*Between Us.*

Keep going—and keep on keeping going.—*Chevrolet Sales Speeder.*

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YOU can sell Ajax Tires to advantage.

Growth in popularity of Ajax Tires has brought Ajax demand to the point where the dealer's turn-over is extremely rapid.

Ajax prices are always competitive; quality the very highest. The Ajax policy is ever the same fair, square way of doing business.

Stability—high quality—co-operation—the three big features of the Ajax Dealer's Franchise.

Write

AJAX RUBBER COMPANY, Inc.
NEW YORK CITY
Branches in Leading Cities

The **AJAX CORD**
With New Features





Ajax Paragon | Ajax Truck Tire | Ajax Road King

There is an Ajax Tire to best meet every service requirement

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PUBLISHER'S OBSERVATIONS

TEACH THEM EARLY

GAS power—the internal combustion engine—is revolutionizing the world. It has invaded the power house, the railroad, shipping; in agriculture its uses are manifold and literally amazing. Its influence in energizing the automobile is overwhelming. But it is still ascending toward its zenith; wider and more numerous applications for it are being found almost every day.

¶ Merely to instance a few of its revolutionizing influences on the farm alone is eye opening. The internal combustion engine has removed the farm from its isolation and brought it nearer the village, the town and the city, for the application of fluid transportation is tantamount to an actual removal from a remote to an accessible location. It has thus in a measure stayed the depopulation of farming areas, increased their value, popularized them.

But it is hard to say whether this, or the enhancement of farm productivity is the greater service. The treadmill and the windmill have been displaced. In their stead has come the dependable, facile and compact motive power, which is cheaper to operate, more reliable, and which can be kept for nothing during the inevitable seasons of idleness. Besides supplanting the workhorse, the internal combustion has released, for other and more productive uses, four acres of land for every horse, at the lowest estimate.

But further and still more remarkable applications are to follow, even on the farm. Up to now the tractor has been used to draw a slightly modified form of the old horse-drawn implements. By contrast, the newest appliances, instead of deriving power from their own wheels, as does a mowing machine, for example, are connected through a rotating shaft with a power takeoff from the engine of the tractor. Does this not prove that the long predicted revolution of cultivating and harvesting machinery is at hand?

Tillage processes and equipment will be adapted to the uses of the new motive power. The adaptation will be rapid, when judged in terms of the history of the spade and the plow, but perhaps slow, as progress is viewed in this age of haste and impatience. Another generation will witness more progress along these lines than has this, because of the constantly growing influence of specialization, but not without encouragement.

¶ Your boy may go to college, but your neighbors' sons, from the other side of the railroad, or the other side of the river (whichever may socially bisect your town) will quit the grammar school to get them the first jobs that come to hand. Some of these will become self-made men, but all will start the business of life handicapped by lack of practical knowledge. Have you given much thought to their future as it may affect your son's business?

¶ AUTOMOBILE TOPICS believes the internal combustion engine will outlive the gasoline era and reach a multitude of uses still undreamed. It believes the automobile industry alone must expand far beyond its present enormous proportions, but that other applications are still in their infancy. It believes also that popular education for the next generation is necessary to bring this vision to pass.

The idea is set forth at some length in a special article appearing in this issue. Accompanying it is a brief suggested outline for a course of instruction designed for assimilation by the youthful mind.

Instruction concerning automobiles and the internal combustion engine in its other applications has been popularized to some extent already. There are night schools, special courses in high schools, and, of course, many special schools of instruction for automobile drivers. But do the existing media fulfil the requirements of the great future? Manifestly, they do not.

¶ At what age did your boy lug home his first armful of catalogs from the automobile show? How old was he when he narrowly escaped being gassed in the garage, having climbed in through the window for purposes of secret practice with the starter? Well you remember the moonlight night when you were aroused to find both boy and car missing!

It is perfectly rational to suppose that popular instruction of growing children in the applications of the simplest and cheapest form of prime mover will be a good influence in shaping the destinies of a still more mechanical epoch than this that is now passing. Certain of the simpler mechanical forms are readily assimilated; indeed are already more or less familiar. Certain of the basic principles could be introduced with benefit. Even the history of the internal combustion engine and the automobile, together with the names of the men who have played a vigorous and effective part in bringing gas power to its present greatness, should be developed in digestible form, before accurate memory of men and events passes.

¶ In all this is opportunity for service of simplicity and great usefulness, looking toward the bright line of the horizon. Are there minds keen enough to appreciate the possibilities, hands willing enough to give a lift, that the elders of tomorrow may reap greater and more far-reaching benefits than the elders of today?

It is believed that there are; that the suggestion will not fall on barren soil and that practical support will be forthcoming. Educators and public spirited men of the automobile and associated industries are appealed to for expressions of view, for criticisms, amendments to the plan, for further suggestions.

¶ If you believe such an educational movement as has been outlined would benefit the Country in terms of cheaper power, more fluid transportation, traffic safety, say so. Tell the Editors you approve.

But more especially tell your neighbors. Write a letter to the School Board. Help put the idea across!

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Your needs—complete. If you use sheet metal of any type in automobile construction, we can furnish a product specially adapted to your requirements. We combine good materials with the most approved manufacturing methods.

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"THURITE" Deep Drawing Sheets, Etc.

Our Long Terne Sheets are specially adapted for the making of gasoline tanks, etc. This Company will be pleased to extend to the industry assistance in the solution of particular problems involving use of sheet steel products.

We manufacture Sheet and Tin Mill products for all purposes. Black Sheets, Galvanized Sheets, Special Sheets for stamping, Formed Roofing Products, Tin and Terne Plates, etc.

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Export Representatives: United States Steel Products Company, 30 Church Street, New York City; 36-38 New Broad Street, London, E. C.

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In Stockton, Kansas—

"As an Oldsmobile dealer, I feel I should write you of the success of the Oldsmobile here in my territory, especially the new models. I have sold about an equal number of the Light Eight and new four cylinder models. They sure are a big success, having never caused a bit of trouble on any test they have ever been put to. ***My customers are satisfied customers.***"

THE WIZARD GARAGE
(STOCKTON, KANSAS)
George Beckley

When a dealer can say "My customers are satisfied customers" he is building his business on a bedrock foundation.

It means that the cars he sells are not simply "fair" or "medium" but are high grade in every particular and so recognized everywhere.

Oldsmobile cars are in demand because they dominate their class for sheer beauty and physical refinement, backed by chassis excellence representing the very finest workmanship and materials.

Satisfaction on the part of Oldsmobile owners is the reason for the success of Oldsmobile dealers.

Why not get into this class? Dealer connections are still available—perhaps there is such an opportunity right in your territory.

Act quickly, if you are interested. A letter, a wire, or a phone call will bring you the information you want.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation



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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											**(SEE FOOTNOTES)**
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter-Dem.Wheels	3¼x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3⅛x4¼	Con	L	H	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5					760	4				3⅝x4	Own	L	H	T		Soo	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680	2	860	5	C	3¼x4	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	550	5		550	2		850	2	895	5		3⅝x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980	2	1,440	5	C, K, N, P	3⅞x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3⅝x4¾	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3½x5¼	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,095‡	5	1,385	5	B	3½x5	Lyc	L	H	T		Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	1,235	4	1,335	5	C, D K, P, T	3⅝x4½	Own	L	H	T		Eag	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3⅞x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D H	895	2	C, D, H	1,095	2	1,345	5	C, D, H	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275	5	1,545	5		3⅝x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5		985	2		1,400	3	1,450	5		3½x5	Gry	H	H	T		Sco	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Dixie Flyer	995	5	D, G, O	1,095	4	D, E, G, O	1,395	3	1,395	5	D, G, N, O, V	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, V, Z	1,395	4	1,795	5	C, E, H, N, T, V, X, Y	3⅞x5¼	Own	L	H	T		Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C, D, H, N, O, P, T, U, b	3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5					1,295	5				3½x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5		1,225	4	C, D, M, P, Z	1,595	4	1,745	5	P, V	3⅛x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335	2	1,785	5	C, O, N, P, V	3¼x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	4		1,795	4	1,795	5		3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,375	5	B	1,350	2		1,875	4	2,095	5		3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	G, I	2,175	4		2,650	4	2,785	5	A, H, I, N, V	3⅝x5½	Own	H	C	P		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T			Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4			B, D, H, J, L, O, U	4⅜x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T		Til	A-L	A-L	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3⅛x5⅛	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z	3 985	2	A, D, G, J, L, Z			4,650	4		4¼x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	5,250	7	B, G, 2I, L	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				7,000	5	G	4x5½	Own	S	C	P		Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D, K¹	975	2	B, D, K¹	1,225	3	1,550	5	B, D, C, G, K¹	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S		31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, V	3¼x5	Own	L	H	P		Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C, D, K, P, W	1,445	4	1,545	5	N, O, V	2⅞x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	W-M	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3⅛x4½	Own	H	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4¼	Fal	H	H	T		Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1,145	2	C, K, P	1,595	4	2,295	5	C, D, K, P, T	3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P									3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C D, P	1,175	3	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R	1,395	4	R						3½x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, K¹	1,250	2	B, C, D, G, K¹	1,875	4	2,050	5	B, D, G, K¹, S	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P, Z	1,275	2		1,795	5	1,795	5	V	3½x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4½	115	Velie "58"
Piedmont "6-40"	1,285	5										3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	K, J						1,795	5		3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Elgin "K-1"	1,295	5	C, D	1,345	4	C, D, H, K, Z	1,695	4	1,695	5	C, H, N	3½x4¼	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.00	33x4	118	Elgin "K-1"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Liberty	$1,295	5		$1,495	5	C, D, G, H, K, O, T, Z	$1,695	2	$2,245	5	C, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.66	32x4	117	Liberty
Moon "6-40"	1,295	5							1,695	5		3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3½x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3¼x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D, P, G, T, V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	O	1,895	4		2,275	4	2,345	5	O	3¼x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	G-L	Sal	S	5.0	32x4	121	Auburn
Columbia	1,475	5		1,475	4		2,295	4	2,350	5		3¼x4½	Con	L	H	P	T	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia
Jackson	1,485	5	G, K	1,685	4		2,985	4	2,985	5		3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	2,355	4	2,435	5	B, G	3⅜x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4	1,985	5		3⅛x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Mitchell	1,490	5	A	1,790	5	A C D F H I K T V W	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3⅝x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O	1,545	2	D, G, H, K¹, O	2,095	3	2,395	5	D, G, H, K¹, O, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5		1,500	4							3⅛x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Velie "48"	1,585	5	H, Z	1,800	4		2,485	4	2,485	6	V	3¼x4¼	Con	L	H	P		Str	A-K	Bjr	B&B	Dur	Tim	S	4.67	32x4	115	Velie "48"
Davis "61"	1,595	5		1,695	4		2,095	4	2,195	5		3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	2,550	7	A	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.0	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, K¹, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, K¹, O, S	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "A-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	4.66	32x4	120	Westcott "A-44"
Hudson	1,695	7	B	1,645	4		1,745	5	2,295	7		3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	126	Hudson
Lexington "23"	1,695	5		2,045	5		2,345	4	2,545	5		3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
Stanwood	1,765	5		1,765	2		2,750	3				3¼x4½	Con	L	H	P		Str	A-K	Wes	B&B	G-L	S-P	S	4.5	33x4	118	Stanwood
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-48"	1,785	5	B	1,785	2		2,785	4	2,785	5		3¼x4½	Con	L	H	P		Ray	Del	Del	B&B	B-L	Tim	S	4.66	32x4	122	Moon "6-48"
Moon "6-58"	1,785	7										3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S		32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	4.66	32x4½	122	Case "X"
Jordan	1,795	5	B, D, G, Z	1,895	2	B, D, G, M, Z	2,785	5	2,785	5	B, D, G, Z	3⅛x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅞x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Franklin	1,950	5	A, G	1,900	2		2,750	3	2,850	5		3¼x4	Own	H	H	A		Own	A-K	N-E	B&B	Own	Own	E	4.33	32x4	115	Franklin
Comet "C-53"	1,985	5							2,985	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, O	2,100	4	C, D, E, G, O	2,950	4	3,000	5	C, D, E, G, O, N	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3⅜x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4	3,825	7		3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3¹⅞x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5¾	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	P	T	Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,600	7	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	4,250	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"
Packard Single-Six	2,685	7	C, G, O M						3,525	7		3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**SIX-CYLINDER PASSENGER CARS—Continued**																											(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X			$3,795	4	A C F G H J K O P T X	3⅝x5¼	Con	L	C	P		Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5		2,975	2				4,500	5		3⅝x5¼	Con	L	C	P		Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5½	Own	H	H	P		Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P		Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, G	3,100	4	A, B, G	4,300	4	5,100	7	A, B, G	3⅝x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P		Ray	Del	Del	War	War	Tim	S	4.91	35x5	132	Winton "40"
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3⅝x5¼	Con	L	C	P		Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4	4,800	7		3¾x5¼	Own	S	C	P		Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H J M O T W Z				4,900	3	4,900	5	A C D G H J M O T W Z	3⅝x5	Own	H	H	A		Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P		Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			6,500	5	A, G, H, O	3⅝x5¼	Con	L	C	P		Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5							6,825			3¾x5¼	Own	H	S	P		Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A, B, C, D, G, J, M, O, Z	6,300	4	A, B, C, D, G, J, M, O, Z	7,500	4	7,500	7	A, B, C, D, G, J, M, O, Z	4½x6	Own	T	H	P		Ray	Spl	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X			11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P		B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z									4½x4¾	Own	L	H	P		Own	B6s	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
EIGHT-CYLINDER PASSENGER CARS																												
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	2,145	5	D, N, O, P, V	2⅞x4½	Own	L	H	P		Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P		B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, Y, Z	3x5	Own	L	C	T		B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3½x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Cole	2,485	5	A, B, G, N	2,485	4		3,185	4	3,685	5	A, B, G, N	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Standard	2,500	7	A, D, G	2,500	4	A, D, G	2,750	4	3,200	7	A, D, G	3¼x5	Own	L	H	P		Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Apperson	2,645	7	A, G	2,620	4		3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T		Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3½x5	Own	L	H	P		B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3½x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2		5,350		6,000			3½x5¼	Own	L	H	P		Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O X Z	5,800	4	A B E G H I J M O X Z	7,150	4	7,650	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5		6,500	4		7,800	4	7,800	7		2⅞x5	Own	H	V	P		Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
TWELVE-CYLINDER PASSENGER CARS																												
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

† **TWO-DOOR CLOSED TYPE:** Regular coupe listed except where low-priced two-door closed model is included in line. Latter is distinguishable in most cases by passenger capacity. ‡ **Four-Door.**

ENGINE: Ans—Ansted; Con—Continental; Due—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lyc—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wei—Weidely.

VALVES ARRANGED: H—in head; L—at side; N—side and head; R—horizontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith.

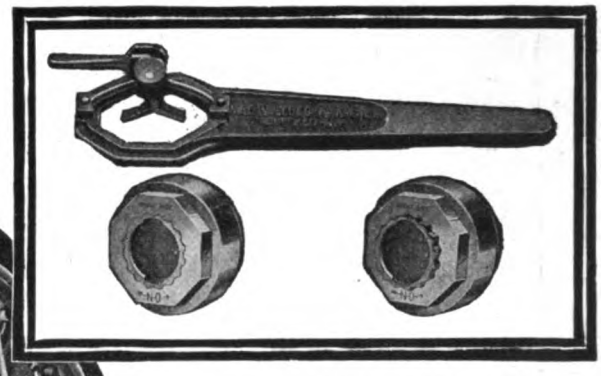
IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Leece-Neville; N-E—North East; Rmy—Remy; Scn—Scintilla; Sim—Simms; Spl—Splitdorf; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; Rck—Rockford; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

REAR END: Adm—Adams; Col—Columbia; Fln—Flint; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

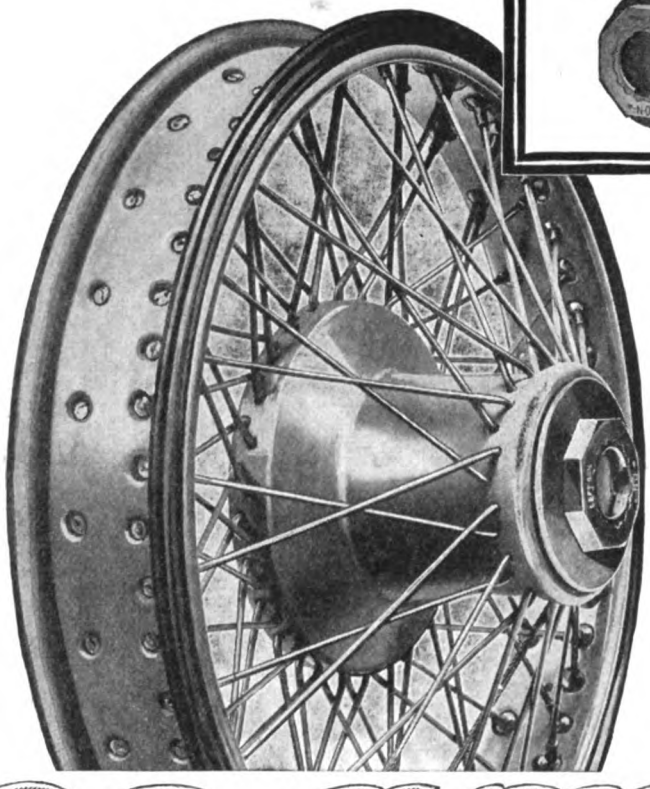
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The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.



WIRE WHEELS

—and why they are a good investment

The foremost builders of high-grade cars, such as Rolls-Royce, Packard, Marmon, Cadillac, etc., know that Wire Wheels are a good investment. They KNOW that Wire Wheels not only add smartness and distinction to the appearance of a car but they also are a good investment because:

—they improve the easy-riding qualities of the car;

—they rob tire-trouble of its terrors and, therefore, increase the pleasures of motoring;

—they increase tire mileage and, as a result, save money for the owner;

—they provide additional safety for the passengers, due to the strength of the triple rows of spokes.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:

New York—835 11th Ave. at 57th St.
Philadelphia—328 North Broad St.
Chicago—2900 So. Michigan Ave.
Detroit—433 Leland Street
Los Angeles—1216 So. Grand Ave.
San Francisco—1690 Pine St.

five wheels, triple spoke, detachable at hub

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Snappy Cap for Fords

Bethlehem



Sells On Sight—And No Wonder

First Ford owner who saw the first Snappy Cap grabbed it and just naturally WOULDN'T give it up.

"Gee, fella, ain't that practical?"—says he. "And ain't she there with the old looks, hey?"

Grammar is fine, but sincerity is better. And Snappy Cap will hit any Ford owner just the same way. Is hitting 'em wherever they see it.

Glossy black top-cap; brilliant, graceful nickel arms and body. Press the trigger—it flies open; click it shut, and it stays shut.

Screw Snappy Cap down and leave it there for keeps. Fill the radiator without fuss at all.

And the price of it! They do just grab at it.

If you can be shown, we will cheerfully send you a sample Snappy Cap on suspicion—and you tell us later shall we bill it or not.

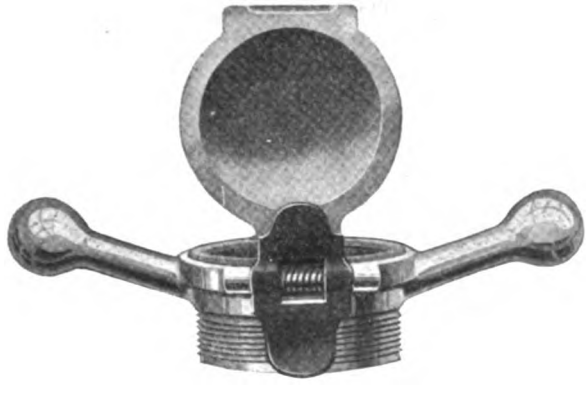
We are just that sure of it for your Ford trade.

Where shall we mail it to catch you?

BETHLEHEM SPARK PLUG CO.
Bethlehem, Pennsylvania

bethlehem

betterments *for* motordom



Bethlehem Sure-Sellers now include Snappy Cap for Ford Radiators and Quickway Socket Wrench for all motorists. And there are MORE coming. You'll take notice when they arrive!

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In Return for Your Personal Interest and Energy

It is our conviction that the personal interest and energy of American automobile merchants, *in business for themselves,* supply a good share of the balance and driving force behind the motor car industry.

To interest distributors and dealers of this type and make the Stephens franchise permanently profitable to them, our selling plan embraces four fundamental ideas:

1. Territories large enough to support balanced sales and service organizations and insure regular and satisfying returns.
2. Discounts liberal enough to afford ample profit margins.
3. A high-grade motor car *manufactured* by expert engineers and craftsmen, in a factory whose low fixed charges and overhead are reflected in its extraordinary quality and moderate price.
4. A re-organized, re-financed and powerfully capitalized Company behind this great motor car, guaranteeing stability and permanence to Stephens distributors, dealers and owners alike.

Every Stephens contract renews itself automatically, year after year, unless it is cancelled. Every Stephens distributor and dealer can build on a groundwork of confidence that his business will remain *his own indefinitely.* Every dollar which his energy and ability add to the value of the Stephens franchise *is his dollar.*

There is nothing unselfish in this attitude. We believe in distributors and dealers. We want good ones. We know that the stronger and more self-sufficient our distributors and dealers are, the sounder and safer the basis on which Stephens will operate.

We would like to satisfy you that each of these Stephens ideas is important to the future of *your* business—and that the Stephens franchise will guarantee that future. Write today for our contract terms and open territories.

R. W. Lea

Executive Vice-Pres. and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.

Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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—goes a long way to make friends

General achieves new Leadership in Sale of Cord Tires

Is not the success of a tire maker—the manner in which the sale of his tire increases—a good indication of the character of the tire? May it not be a reliable guide for shrewd tire dealers—those who seek the utmost repeat orders for their own efforts?

In forty-three of the hundred largest cities the most successful tire dealer—the one with the largest and most successful business—is the General dealer.

In fifteen more of the hundred largest cities the General dealer shares leadership or stands second.

While in the seventy cities next in size (from 25,000 to 65,000 population) the General dealer leads in twenty-six.

The most astonishing fact, to some, is that all General Tires are bought for cars in use. Generals are sold only through dealers. Thus, each purchase of a General represents the mature judgment of an experienced tire user. And the General factory is to-day operating 100% capacity.

Isn't this the kind of a tire that builds something permanent for its dealers? Doesn't it interest you? We'll be glad to send full particulars of our Class "A" dealer arrangement.

THE
GENERAL
CORD TIRE

THE GENERAL TIRE AND RUBBER COMPANY
Dept. F-9
AKRON, OHIO, U. S. A.

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The price of the new and very powerful H. C. S. is $2,475.00. There are *no* "extras" such as these:

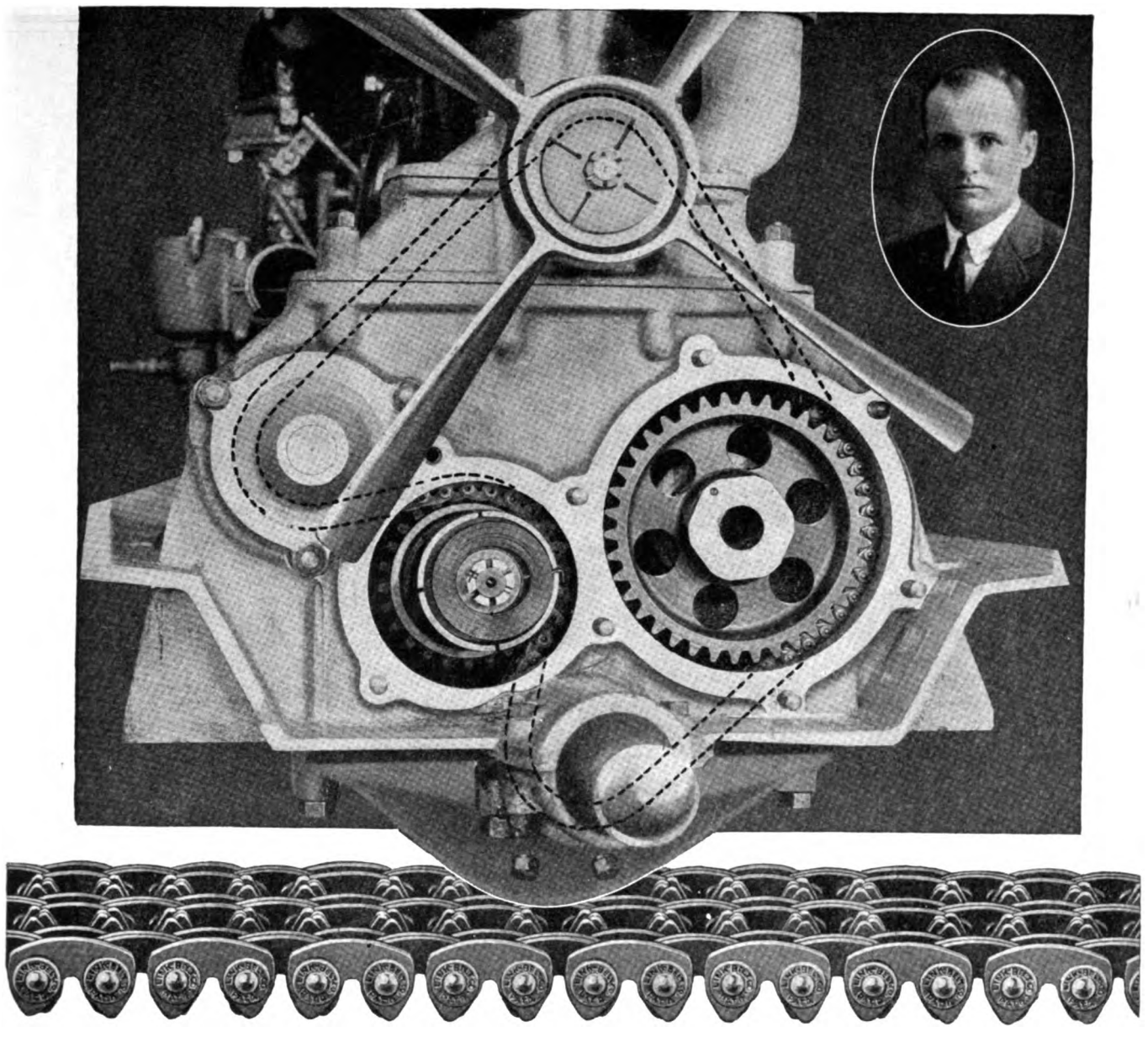
Squeaky Fenders	Misfit Side Curtains
Squeaky Springs	Leaky Top
Loose Doors	Oil Leaking Parts
Tight Steering Gear	Rasping Brakes
Sticky Gear Shifts	Slow Starting Engine

It is the kind of a car for which there are no apologies; and that is the kind of an account which runs up the old bank balance.

H. C. S. Motor Car Company
INDIANAPOLIS, U. S. A.

Make this Your Personal Car

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WHEN the Brewster Engine was being designed a maximum of smoothness, flexibility and quiet running were essential features which Chief Engineer Frank C. Chapman wanted to build into it. That he succeeded is only too well known throughout the industry.

The quiet running of the Brewster engine is due in no small measure to the Link-Belt Silent Chain "Front End" Drive (of the successful "back type" now being used in many famous motors.)

Notice the Link-Belt automatic adjustment in the illustration. In reality it acts as a vibration dampener, the flexible chain drive assisting it in absorbing vibrations, resulting in a smoother-running engine. The chain operates the camshaft, the fan and the auxiliary shaft—automatically, without any attention from the car user.

Let our engineers and yours work out a plan for your new engine.

LINK-BELT COMPANY, INDIANAPOLIS 974

LINK-BELT

SILENT CHAIN FRONT END DRIVES

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INTERNATIONAL

Has a New Motor Truck Contract
Featuring

Lower Prices! Bigger Business!
Greater Profits!

Never before has the outlook been so good for the International Motor Truck dealer. In one great stroke his contract has been revised, his quality line *reduced in price,* and the terms made more favorable.

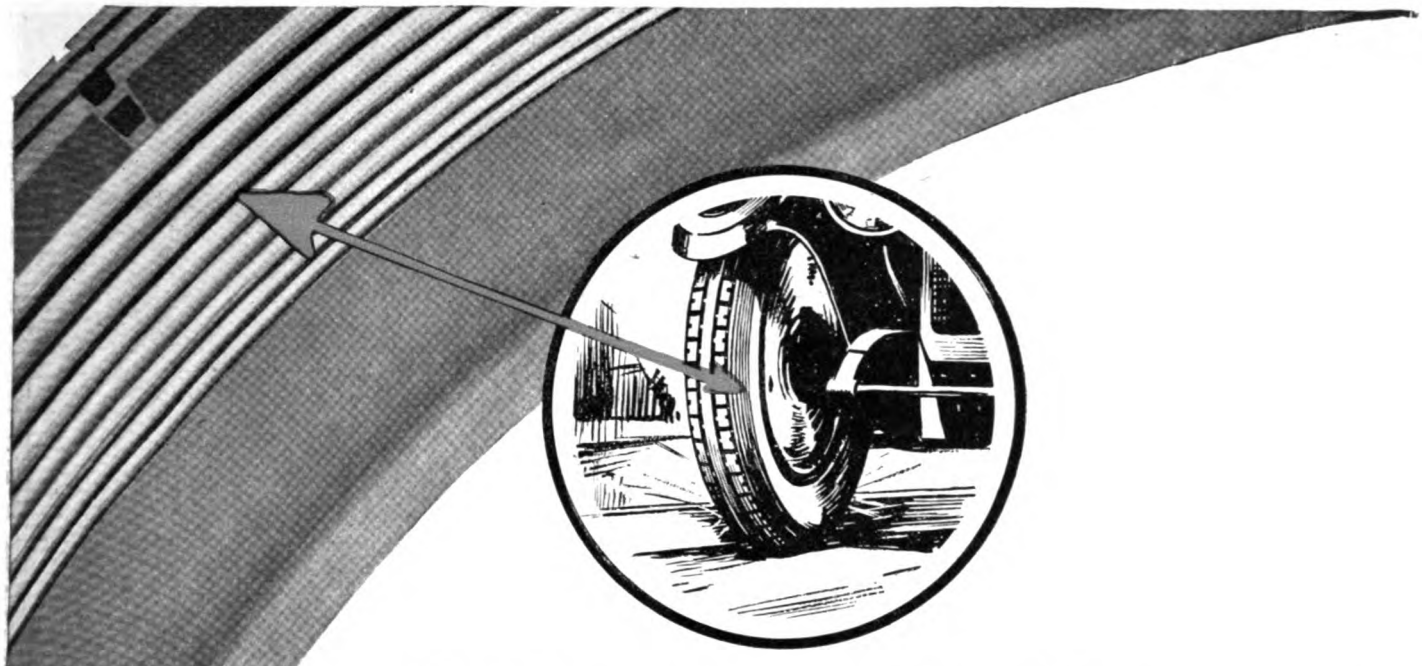
He now has a 2,000-lb. Speed Truck at $1250—a complete line of heavy-duty trucks up to 10,000 lbs. capacity—a special passenger bus chassis—haulage units for every prospect. He need turn none away.

Naturally such a favorable contract is popular. Yet there may be a vacancy in your territory that you can fill by acting quickly. Write, wire or phone for complete information on our NEW CONTRACT for 1923. It pays to sell Internationals—the "low-cost hauling" trucks.

INTERNATIONAL HARVESTER COMPANY
of America
Chicago *(Incorporated)* **U S A**

93 Branch Houses in the United States

Digitized by Google



Sidewall Protection

Curbs, ruts, stones and all of the other enemies of tire sidewalls have but little effect upon the eight graduated corrugations of live rubber on the sidewall of Corduroy Cords.

In building quality cord tires with the added feature of Sidewall Protection, the Grand Rapids Tire & Rubber Corporation solved a difficulty that for years perplexed the entire tire industry.

The sidewall at last has been strengthened against the sidewall cuts and bruises that heretofore caused 80% or more of all blow-outs.

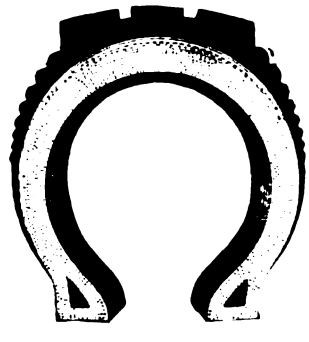
Good territory is open for tire dealers of the right sort. Write for special Corduroy Cord proposition.

GRAND RAPIDS TIRE & RUBBER CORPORATION
Grand Rapids, Michigan

Corduroy Cords

Sidewall Protection

(Patented)



Look at the stout corrugations flanking the sidewall. Note the thickness of the tread, the cords embedded in pure gum, the extra heavy breaker and strip, the braided steel wire bead.

Digitized by Google

MERCER

Mercer is going to mean more than ever to dealers

YOU'VE heard about "psychological moments" and "getting in on the ground floor." Here is a tip from headquarters—Mercer is going to mean more than ever to dealers.

Responsible dealers who believe in the automobile business and not in the automobile "game" will be able to gain some very interesting news by approaching us sincerely on the subject of a Mercer agency.

MERCER MOTORS COMPANY
TRENTON, N. J.

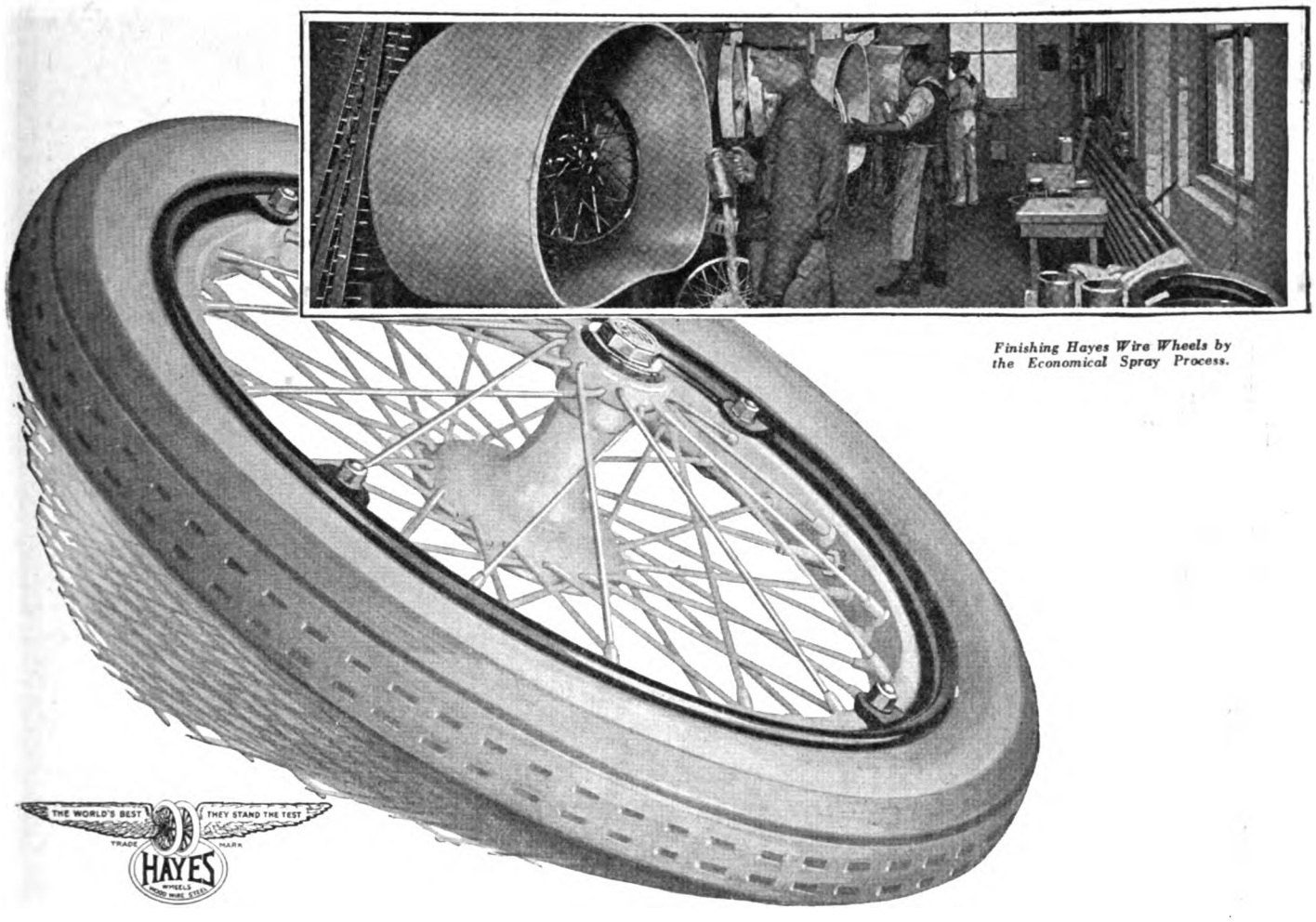


Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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HAYES

DEMOUNTABLE AT THE RIM



Finishing Hayes Wire Wheels by the Economical Spray Process.

THE progress of an institution is in direct proportion to the pride of its workers in every process. Hayes dominance in the automotive wheel industry is a direct result of sincere endeavor in making the best product obtainable from fine materials and the fine spirit of craftmanship.

Every man in the huge Hayes factories has a personal interest in his work and a pride in the Hayes name. Growing and gaining from year to year, Hayes wheels in wood, wire or steel have reached a place of eminence in the industry—until today considerably more than half of all automobiles produced are Hayes wheel equipped.

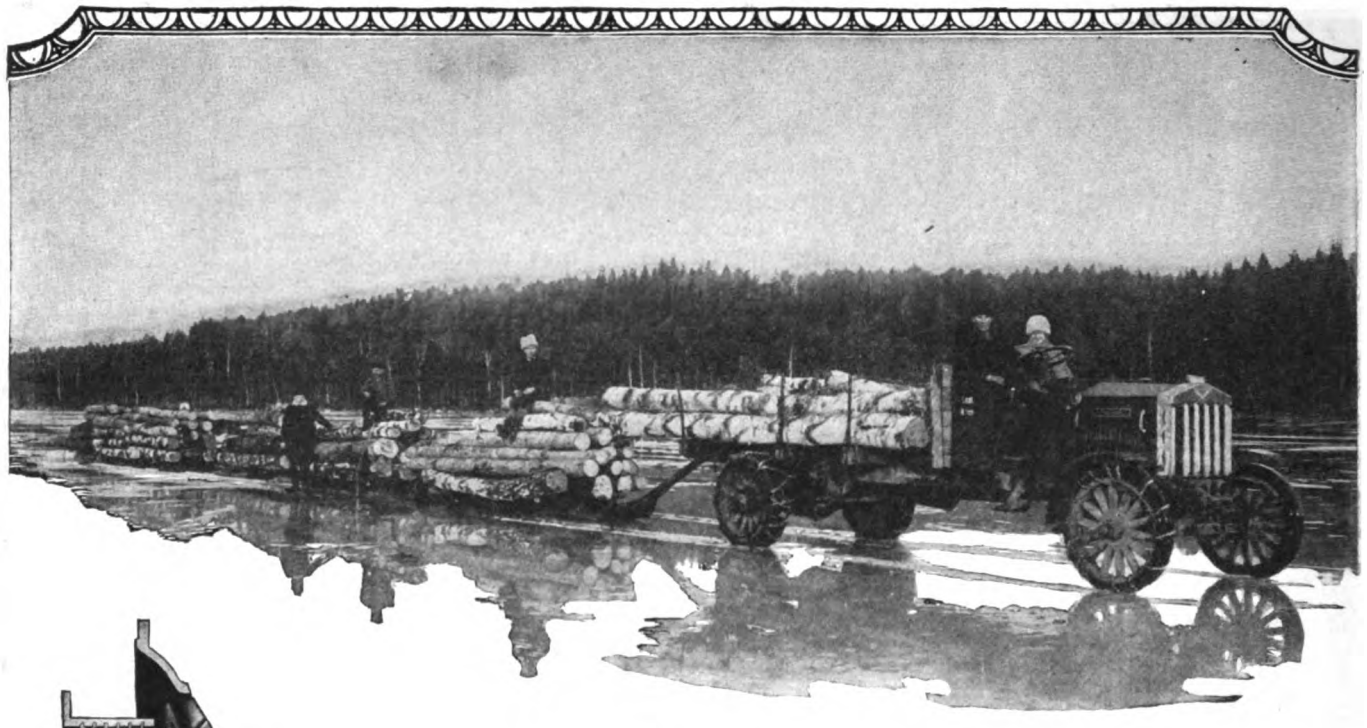
We offer to manufacturers the full co-operation of our large resources and volume production in planning our poduct to suit their requirements. Let us consult together about your future wheel needs.

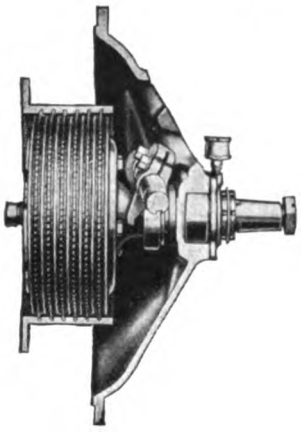
(44)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

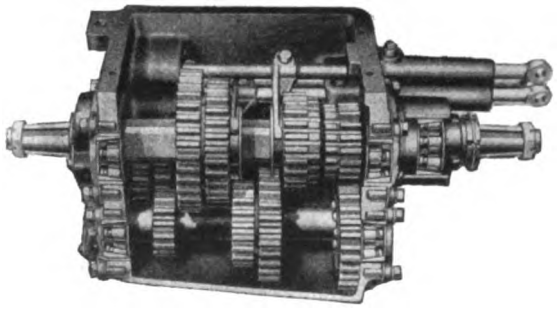
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Meets Requirements of Foreign Service

IN building American trucks for use abroad, be sure to select units that require a minimum of replacement.



Brown-Lipe Gear Transmissions, clutches, and control sets are as sturdy and as unlikely to need replacements as the highest type of engineering skill, workmanship, and carefully selected materials can make them.

In case of accidental injury, genuine replacement parts are quickly obtainable and they always fit.

BROWN-LIPE-GEAR
TRANSMISSIONS

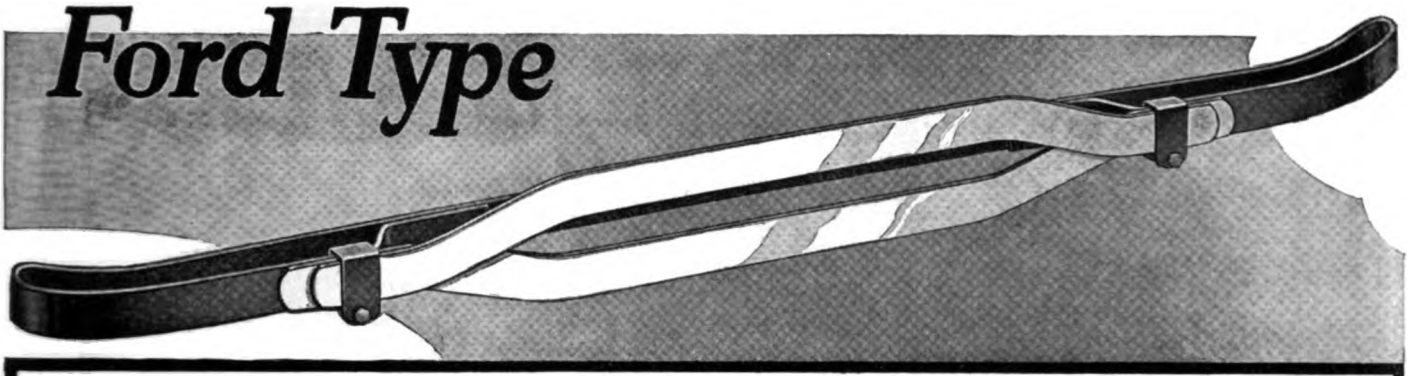
BROWN-LIPE-CHAPIN
DIFFERENTIALS

Both at Syracuse, N.Y.

Digitized by Google

WEED SAFETY BUMPER

Ford Type



A Money-Maker for You!

A wide faced bumper for Ford Cars! For beauty of design, strength and rigidity, there is no bumper made for Ford Cars that compares with it.

Made of 1¾-inch spring steel, hardened in oil and tempered. So designed and constructed that it will absorb the heaviest smash as effectively as the every-day bumps that crumple mudguards, break headlights and crush radiators. No other bumper can go over, under, or in between its wide buffers. It stops them all.

Fits all models of Ford cars, front and rear; is easily attached, and does not interfere with shock absorbers or any working parts. Ford dealers sell more than half the cars of all makes sold in this country. They create a market for 250,000 bumpers every month.

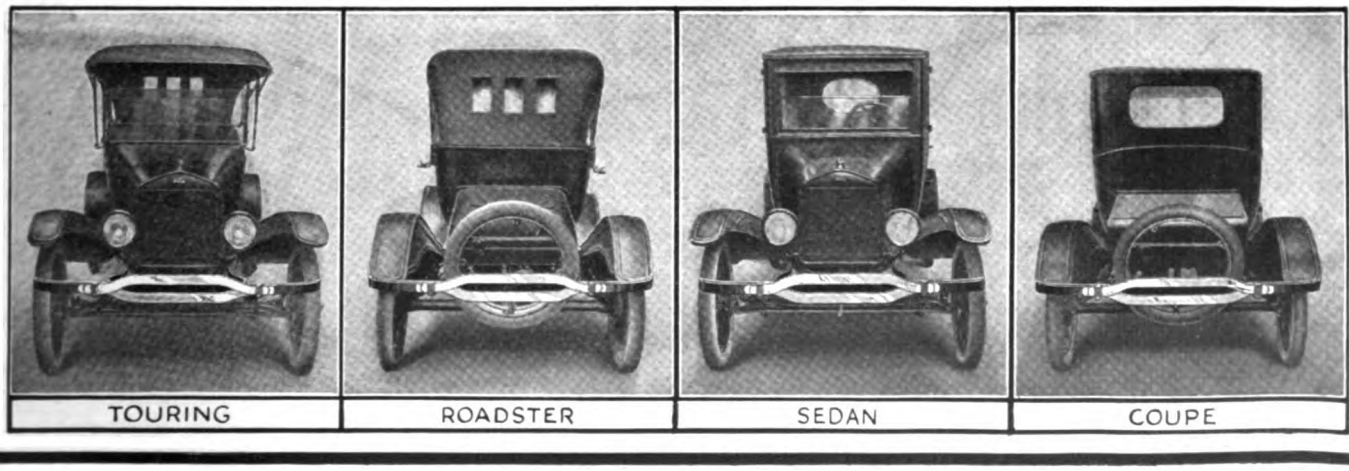
Get your share of this bumper business and "bumper" profits by stocking *Weed Safety Bumpers for Ford Cars* now.

Sell every Ford owner in your locality. They want this bumper—it sells on sight!

Order from your jobber today

LIST PRICES:
Front Bumper—Black Enamel, $13.00; with Nickel-Plated Front Bars, $14.00
Rear Bumper—Black Enamel, $14.00; with Nickel-Plated Front Bars, $15.00

AMERICAN CHAIN COMPANY, INCORPORATED
Bridgeport, Connecticut
In Canada: DOMINION CHAIN COMPANY, LIMITED, Niagara Falls, Ontario
District Sales Offices: Boston Chicago New York Philadelphia Pittsburgh Portland, Ore. San Francisco



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GEARS

form the all-important link between the power unit and the wheels of every automobile.

They are called upon to absorb shocks and impacts by suddenly applied thrusts by the careless chauffeur.

They must retain their pitch, developed with geometrical precision under, the most severe service.

Therefore, the steel from which they are made must excel in strength, hardness, toughness, wear resisting and anti-fatigue qualities.

VANADIUM STEEL

combines all these properties in the highest degree, and advantage should be taken thereof where "perpetual service" gears are the goal.

VANADIUM CORPORATION of AMERICA

120 BROADWAY

NEW YORK CITY

Detroit, Michigan—849 Book Bldg.

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Through—

Asbestos

and its allied products

JOHNS-MANVILLE
Serves in Conservation

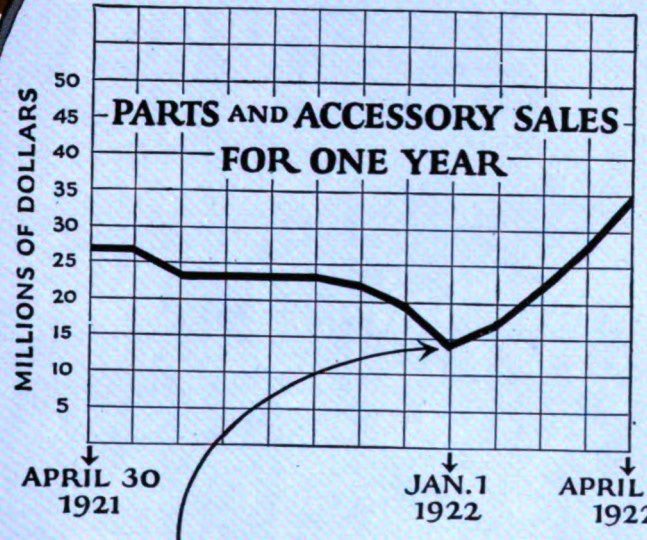
Heat Insulations, High Temperature Cements, Asbestos Roofings, Packings, Brake Linings, Fire Prevention Products

JOHNS-MANVILLE

AUTOMOTIVE EQUIPMENT

ASK 'EM
TO BUY

This chart shows how it pays



here's where they began to ask 'em to buy

See how accessory sales have almost trebled since dealers started *asking 'em to buy!*

It pays!

Ask 'em to buy the products shown on the next two pages. They are easy to sell because they share a name that is highly respected in the automotive field.

Digitized by Google



Ask 'em to reline

That is the way to get the brake lining business. Inspect the brakes, from time to time, of all the cars in your garage and tell the owners the conditions you find.

If it is necessary to reline—recommend it to the car owner.

He will appreciate the care which you have taken. And when you reline tell him that you are using Johns-Manville Non-Burn. He knows through our national advertising that "Brakes are safer and last longer with Non-Burn".

Secure the Non-Burn window display from the distributor near you.

Johns-Manville Speedometer for Ford Cars

Ask 'em to buy this sturdy mileage recorder. It enables Ford owners to tell how far—how fast—how many miles per gallon.

Catalog No. 3020.

Johns-Manville Automotive Jewett Ring Packing

For use wherever a ring of small cross section is required—particularly adapted for water pump shafts. Contains no rubber or rubber substitutes. You can make a tight gland packing in quick time.

Johns-Manville Automotive Seigelite Sheet Packing

—of high tensile strength, when immersed in water it becomes extremely tough; for gasketing water manifolds, differential housings, carburetors, etc.

Digitized by Google

Johns-Manville Asbestos Friction Clutch Facings

These facings will enable you to give much better service in facing clutches.

You will notice that they are drilled and countersunk for mounting—which means a saving on the repairman's time sheet. They are accurately ground on face and do not have to be worn in.

For your convenience we have placed a stock of Johns-Manville Clutch Facings, for all standard cars requiring disc facings, at a Distributor's near you. (See list on next page.)

You can get as many as you want, as often as you want—quickly.



ns-Manville
utomotive
rvice Sheet
Packing

ndable wher-
high tempera-
are encount-
on intake and
ust manifolds,
der heads, etc.

Johns-Manville Automobile Tape

—is guaranteed not to dry out. It stays sticky. Attractive display package.

Johns-Manville Hub Odometer

—an accurate mileage recording device for commercial cars—can be quickly attached. Grease-proof and permanent.

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CHOOSE YOUR DISTRIBUTOR

Alabama
Moore-Handley Hardware Co., Birmingham
Johnson Tire & Auto Co., Montgomery

Arkansas
Crow-Burlingame Co., Little Rock

California
Chanslor & Lyon Co., Fresno
Chanslor & Lyon Co., Los Angeles
Featherstone, E. A., Los Angeles
McCoy Motor Supply Co., Los Angeles
Waterhouse & Lester Co., Los Angeles
Weinstock-Nichols Co., Los Angeles
Chanslor & Lyon Co., Oakland
Weinstock-Nichols Co., Oakland
Kimball-Upson Co., Sacramento
P. W. Gavin Company, Inc., San Diego
Chanslor & Lyon Co., San Francisco
Electric Appliance Company, San Francisco
McCoy Motor Supply Co., San Francisco
Waterhouse & Lester Co., San Francisco
Weinstock-Nichols Co., San Francisco
California Auto Supply Co., Stockton

Colorado
Auto Equipment Co., Denver
Foster Auto Supply Co., Denver
Motor Accessories & Tire Co., Pueblo

Connecticut
Hessel & Hoppen Co., New Haven
Motor Tire Service Co., Putnam

District of Columbia
National Electrical Supply Co.
Rubel, Chas., & Co.

Florida
Baughman Company, G. Norman, Jacksonville
Baughman Company, G. Norman, Miami
Baughman Company, G. Norman, Tampa

Georgia
Alexander-Seewald Co., Atlanta
Ozburn-Abston & Co., Atlanta
Cody Co., W. E., Columbus

Illinois
Automobile Supply Co., Chicago
Chicago Automobile Supply House, Chicago
Electric Appliance Company, Chicago
Motor Car Supply Co., Chicago
Sheridan Auto Supply Co., Chicago
Tenk Hardware Co., Quincy
Washington Auto Supply Co., Washington

Indiana
Orr Iron Co., Evansville
Lomont & Co., Ft. Wayne
The Gibson Co., Indianapolis
The I. J. Cooper Rubber Co., Indianapolis
Goodlin Auto Equip. Co., South Bend

Iowa
Cedar Rapids Pump Co., Cedar Rapids
Sieg Co., Davenport
Herring Motor Co., Des Moines
Repass Auto Co Waterloo

Kansas
The Frank Colladay Hardware Co., Hutchinson
Watson-Weldon Co., Salina
Southwick Auto Supply Co., Topeka
Massey Hardware Company, Wichita

Kentucky
Peaslee-Gaulbert Co., Louisville

Louisiana
Electric Appliance Company, New Orleans
Shuler Auto Supply Co., New Orleans
Cupples-Lonergan, Inc., Shreveport

Maine
Bigelow & Dowse Co., Bangor
The Farrar-Brown Company, Inc., Portland

Maryland
Auto Supply Co., Baltimore
Coggins & Owens, Baltimore

Massachusetts
Bigelow & Dowse Co., Boston
Linscott Supply Co., Boston
Motor Tire Service Co., Fitchburg
Bigelow & Dowse Co., Springfield
Duncan & Goodell Co., Worcester
Motor Tire Service Co., Worcester

Michigan
Bowman Gould Co., Detroit
Roehm & Davison, Detroit
Tisch Auto Supply Co., Grand Rapids

Minnesota
Kelley-Duluth Co., Duluth
Minneapolis Iron Store Co., Minneapolis
Reinhard Bros. Co., Minneapolis
Williams Hardware Co., Minneapolis
Nicols, Dean & Gregg, St. Paul

Missouri
Joplin Supply Co., Joplin
The Faeth Company, Kansas City
Ayers Farmer Auto Supply Co., St. Joseph
Beck & Corbitt Iron Co., St. Louis
Fred Campbell Auto Supply Co., St. Louis
Geller, Ward & Hasner, St. Louis
Hermann-Sanford Company, Springfield
Joplin Supply Co., Webb City

Montana
Northwestern Auto Supply Co., Billings

Nebraska
Nebraska Buick Auto Co., Lincoln
Western Auto Supply Co., Omaha

Nevada
Nevada Auto Supply Co., Reno

New Hampshire
Thompson & Hoague Company, Concord

New Jersey
Economy Auto Supply Co., Newark
Pruden Hardware Co., Newark

New York
Albany Hardware & Iron Co., Albany
Martin-Evans Co., Brooklyn
H. D. Taylor Co., Buffalo
Barker, Rose & Clinton Co., Elmira
Weaver-Ebling Co., New York City
Pruden Hardware Co., W. E., New York City
Whittemore-Sim Co., Inc., New York City

North Carolina
Carolinas Auto Supply House, Charlotte
Automobile Supply Co., Wilmington

North Dakota
Grant-Dadey Company, Fargo

Ohio
The Penn. Rubber & Supply Co., Akron
C. & D. Auto Supply Co., Cincinnati
The I. J. Cooper Rubber Co., Cincinnati
The Penn. Rubber & Supply Co., Cincinnati
The Penn. Rubber & Supply Co., Cleveland
The I. J. Cooper Rubber Co., Columbus
The Penn. Rubber & Supply Co., Columbus
Justus & Parker Co., Columbus
The I. J. Cooper Rubber Co., Dayton
The Penn. Rubber & Supply Co., Toledo
The Penn. Rubber & Supply Co., Youngstown

Oklahoma
Severin Tire & Supply Co., Oklahoma City
Joplin Supply Co., Tar River
Racine Tire Co., Tulsa
Tulsa Motor Supply Co., Tulsa

Oregon
Wiggins Company, Inc., Portland
Chanslor & Lyon Co., Portland
Waterhouse & Lester Co., Portland

Pennsylvania
Motor Accessories Co., Allentown
General Motor Supply Co., Altoona
The Penn. Rubber & Supply Co., Erie
Front Market Motor Supply Co., Harrisburg
General Auto Supply Co., Harrisburg
Johnstown Auto Co., Johnstown
General Auto Supply Co., Lancaster

Pennsylvania—Continued
The Penn. Rubber & Supply Co., Oil City
Berrodin Rubber Co., Philadelphia
Gaul, Derr & Shearer Co., Philadelphia
Roberts Electric Supply Co., H.C., Philadelphia
Dyke Motor Supply Co., Pittsburgh
Jackson Motor Supply Co., Pittsburgh
General Auto Supply Co., York

Rhode Island
Belcher & Loomis Hardware Co., Providence

South Carolina
Franke Co., Inc., C. D., Charleston
D. W. Alderman, Jr., Inc., Florence
D. W. Alderman, Jr., Inc., Greenville

South Dakota
L. & L. Motor Supply Co., Sioux Falls

Tennessee
Southern Auto Supply Co., Chattanooga
The I. J. Cooper Rubber Co., Knoxville
Ozburn-Abston & Co., Memphis
Auto Supply Co., Nashville
The I. J. Cooper Rubber Co., Nashville

Texas
Electric Appliance Company, Dallas
Ferris-Dunlap Co., Dallas
Tri-State Accessories Corp., El Paso
The Equipment Company of Texas, Fort Worth
Meyer Co., Jos. F., Houston
The Southern Equipment Co., Houston
The Southern Equipment Co., San Antonio
McCauley-Ward Motor Supply Co., Waco

Utah
Inter-Mountain Electric Co., Salt Lake City
Motor Mercantile Co., Salt Lake City

Virginia
Owens-Merritt, Danville
Piedmont Hardware Co., Danville
Crump Co., Benj. T., Richmond
Talman Auto Supply Co., Richmond
Meadows-Price Co., Roanoke

Washington
Chanslor & Lyon Co., Seattle
Reynolds & Reynolds, Seattle
Chanslor & Lyon Co., Spokane
Holley-Mason Hardware Co., Spokane
Chanslor & Lyon Co., Tacoma
Reynolds & Reynolds, Tacoma

West Virginia
Williams Hardware Co., Clarkesburg

Wisconsin
Clemons Auto Supply Co., Eau Claire
Andrae & Sons Co., Julius, Milwaukee
Shadbolt & Boyd Iron Co., Milwaukee
Tisch Auto Supply Co., Milwaukee
Western Motor Supply Co., Milwaukee

Wyoming
Auto Equipment Co., Casper

CANADA

Alberta
Motor Car Supply Co., Calgary
The Chapin Co., Ltd., Calgary
Wood, Vallance & Adams, Ltd., Calgary
Motor Car Supply Co., Edmonton

British Columbia
Wood, Vallance & Leggat, Ltd., Vancouver

Manitoba
Wood, Vallance, Ltd., Winnipeg

New Brunswick
Lounsbury Company, Ltd., Newcastle

Nova Scotia
J. J. Snooks Ltd., Truroo

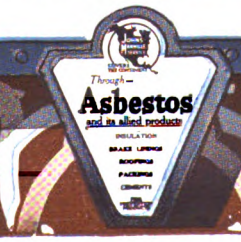
Ontario
Whites, Limited, Collingwood
Nicholson Sales & Service Co., Hamilton
A. Chown Company, Kingston
James Cowan, London
Just Motors Limited, Ottawa
Samuel Trees & Company, Toronto
Bowman Anthony Co., Windsor

Saskatchewan
Wood, Vallance, Limited, Regina

JOHNS-MANVILLE Inc., Madison Ave. at 41st St., New York City

Branches in 56 Large Cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto



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Stewart Ford Necessities

Offering Dealers a Profitable Selection from a Custom-Bilt Line of Standard Products



Model 160 Ford Speedometer
Color dials tell when to lubricate. Complete $15.00.

Warn-O-Meter Model 173-B
The day and night protector against motor overheating. Complete with cap, $10.00.

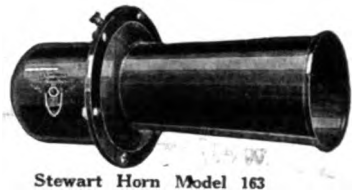




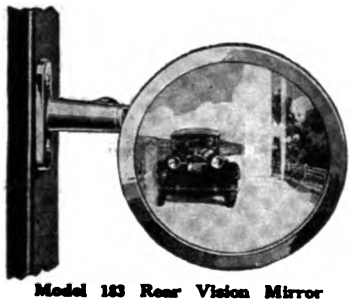
Stewart-Warner Carburetor and Vaporizer.
Gives more power, more speed, better pick-up and an average saving of 38% in gasoline consumption. Eliminates carbon and fouled plugs. Complete, $20.00.



Model 179 Searchlight
For open or closed cars. Complete with mirror, $6.00. Price of mirror, $1.00.



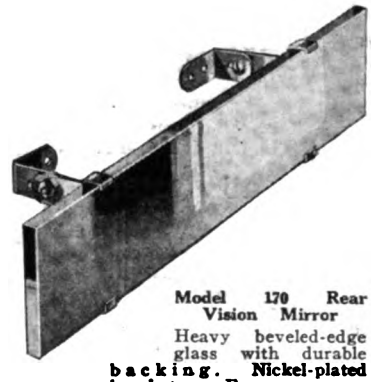
Stewart Horn Model 163
Absolutely reliable. Its deep warning blast commands instant attention. Complete, $6.50.



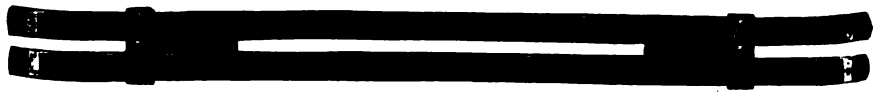
Model 183 Rear Vision Mirror
Four inch, beveled glass. Case finished in black enamel. Complete, $4.00.



Stewart Stop Signal
The big, bright signal with the hand. Demands instant attention. Electrically perfect. Complete, $5.00.



Model 170 Rear Vision Mirror
Heavy beveled-edge glass with durable backing. Nickel-plated brackets. For open or closed cars. Complete, $2.50.



Double Rail Autoguard Model 196
A special lightweight model for Fords. Double rails extending the full width of the car afford 100% protection.

Quickly and easily anchored to car frame with new improved all-steel installation. Models for front and rear. In black enamel, $13.00; in nickel, $17.00.

Stewart

PRODUCTS USED ON 7 MILLION CARS

STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, U. S. A.

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HARTFORD

TIRES & TUBES

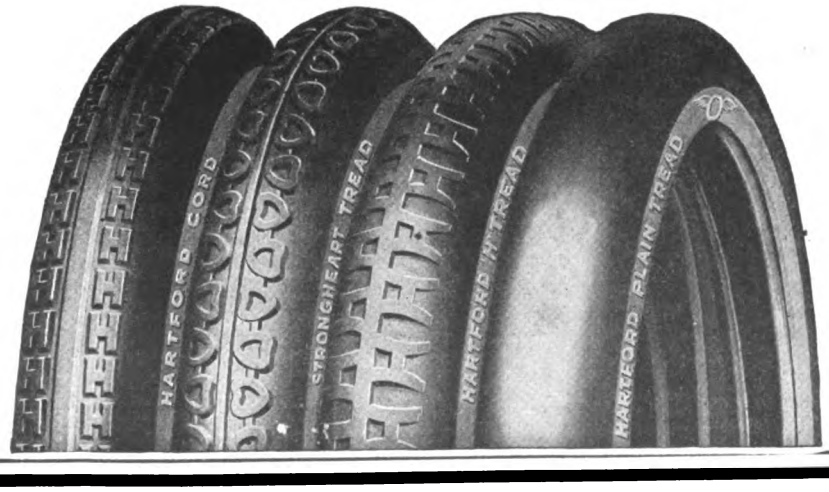
THE dealer hears a lot of talk from year to year about how well some particular brand of tires—if he takes it on—is going to do for him.

The established Hartford Tire Dealer knows from profitable experience that the *most generous retailing proposition in the world* comes from the makers of Hartford Tires.

Because the most generous policy a manufacturer can follow is to absolutely safeguard the retailer's business through the utter dependabilty of his product.

Hartford Rubber Works Company

1790 Broadway **New York**



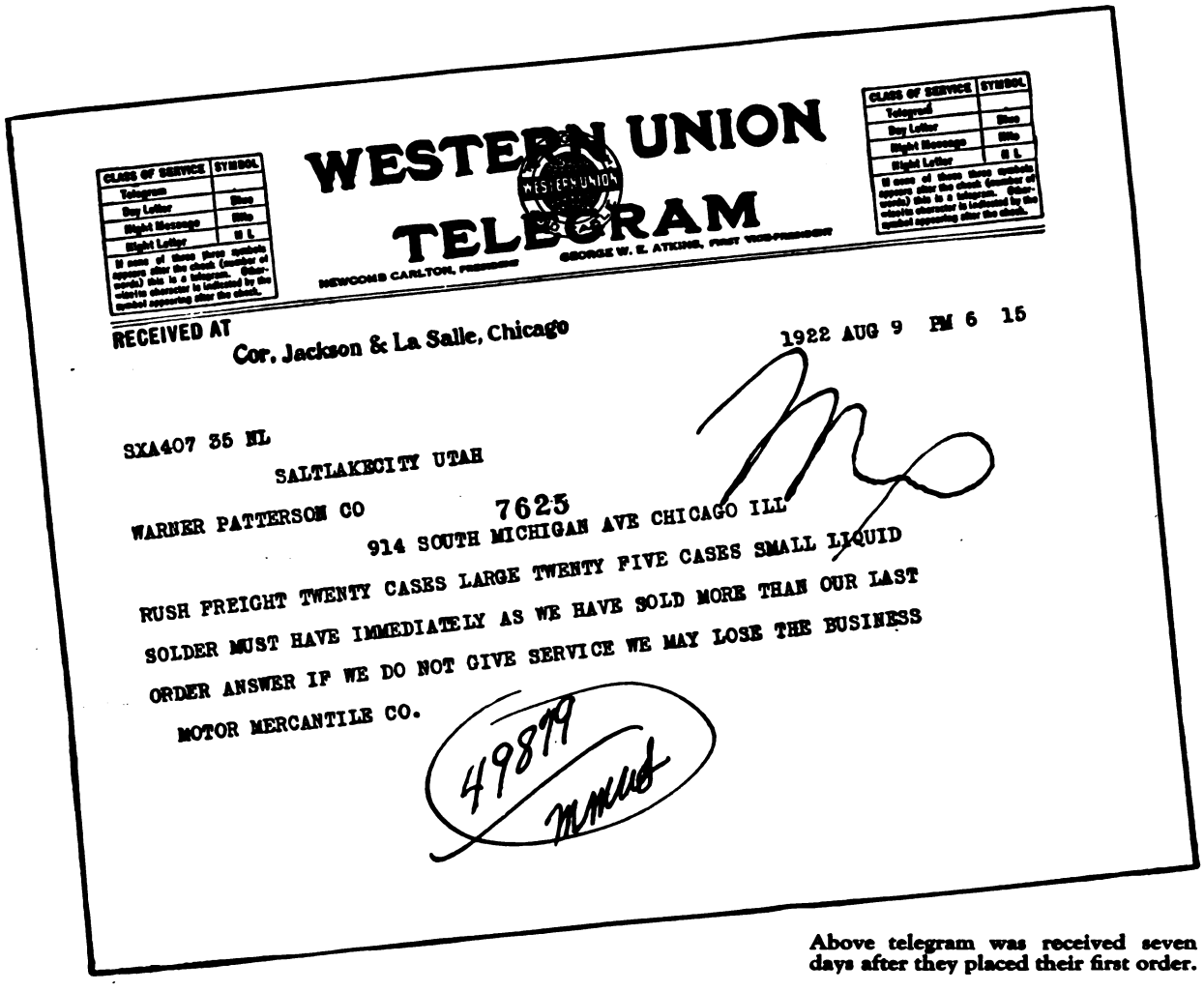
Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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WARNER LIQUID SOLDER

Finds leaks and stops them in Radiators, Hose and Pump Connections, Gaskets, etc.

How's This for Turnover?



WESTERN UNION TELEGRAM

NEWCOMB CARLTON, PRESIDENT — GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT

RECEIVED AT Cor. Jackson & La Salle, Chicago 1922 AUG 9 PM 6 15

SXA407 35 NL

SALTLAKECITY UTAH

WARNER PATTERSON CO 7625

914 SOUTH MICHIGAN AVE CHICAGO ILL

RUSH FREIGHT TWENTY CASES LARGE TWENTY FIVE CASES SMALL LIQUID SOLDER MUST HAVE IMMEDIATELY AS WE HAVE SOLD MORE THAN OUR LAST ORDER ANSWER IF WE DO NOT GIVE SERVICE WE MAY LOSE THE BUSINESS

MOTOR MERCANTILE CO.

49879

Above telegram was received seven days after they placed their first order.

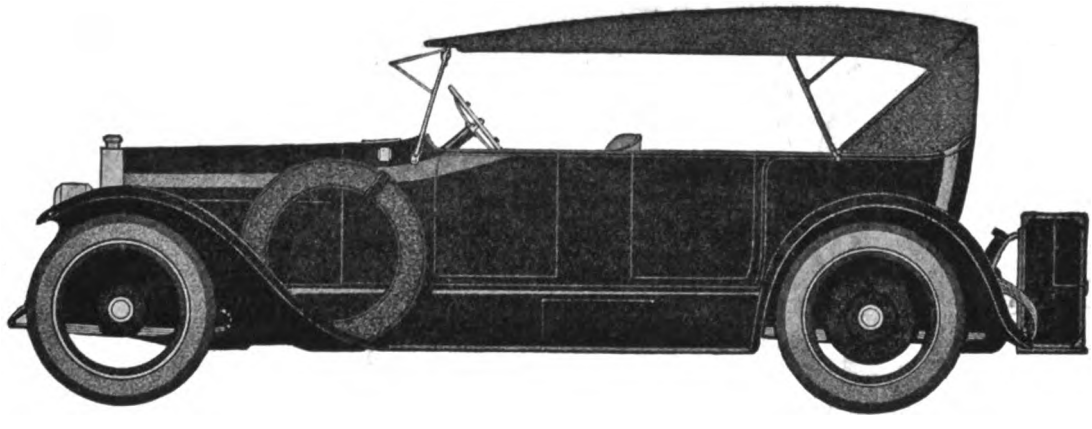
Wise Dealers and Jobbers Get Busy

Enough Said!

WARNER-PATTERSON CO.

914 So. Michigan Ave., Chicago, Ill.

Digitized by Google



Seven-Passenger Custom-Body Touring $7,150

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

Digitized by Google



"Jim-mie!"

"You're a sweet-looking object! Dinner's getting cold, and by the time you're ready it will be all spoiled!"

* * *

Jimmie is perfectly aware of it—but he also knows it's no time for him to express his thoughts in speech.

He's not fit for dinner, nor for conversation—either as to hands, face, clothing, or temper.

But he's sure of one thing—he's going to buy a new car.

Before he buys it, he will be very careful to ask several questions, things he didn't ask when he bought this one—

One of those questions will be, "Who made the axles?"

It isn't easy to select a motor car, and unless one has unusual mechanical ability, he has to take many things on faith—or a friend's say-so, perhaps. But there are some parts of a car—very important ones, too—where you can be *sure*, because they are accepted as standard by car owners and dealers everywhere.

Tell any old hand you expect to buy a car with Timken Axles, and he's apt to say: "Timken? Ah, you can't go wrong there."

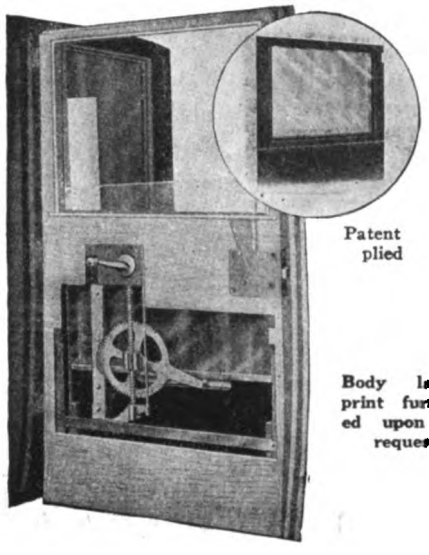
And that's just what the buyer wants to know—the things in regard to which he can't go wrong. Timken Axles have been assurance to motor car buyers of good sound construction for over seventeen years.

THE TIMKEN-DETROIT AXLE CO., DETROIT, MICH.
Sole Representatives in the British Isles:
AUTOMOTIVE PRODUCTS COMPANY, 3, Berners Street, London, W. 1

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Innovation in Mechanical Window Lifts



Patent applied for

Body layout print furnished upon request

Ten Paramount Features that Appeal to Both Body Builders and Motorists

1 Unit construction
2 No chains to become loose or scratch glass
3 Self aligned
4 Simple installation; merely set six wood screws
5 No counterbalance
6 Shock-absorbed and ball-bearing
7 Automatically locks at any point
8 Fits in narrowest standard door construction
9 Noiseless
10 One standard model fits all windows up to 22 inches in height

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East Grand Boulevard and Dubois Street **Detroit, Mich.**

Also now supplying a large number of the representative motor car manufacturers with
WINDSHIELD ASSEMBLIES FOR CLOSED BODIES MOULDINGS DOOR HINGES DOOR LOCKS

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There is not one serious argument to be advanced in favor of not buying a tire-pressure gauge.

Every man, woman or child who runs an automobile not only should have one, but MUST have one if he, she, or it, cares anything about the mileage to be gotten out of tires and gasoline.

Running on under-inflated tires not only wears out the tires long before their time, but uses up a lot of gasoline for nothing.

PRICE $1.25



Do not hesitate to press upon your customers the purchase of a TWITCHELL gauge.

It shows that you are interested in their getting maximum service out of their tires and maximum efficiency out of their fuel consumption.

We are increasing our advertising in Consumer publications, and registration records show a million more car owners this year than last. This means a greater demand for Twitchells. Be ready to meet this demand.

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More work from the same cleaning tanks— Or more equipment and more men?



AS production increases, the cleaning of work in process of manufacture must keep pace. This often results in a condition where it apparently becomes necessary to provide for increased equipment and labor in order to keep up with the growing volume of cleaning work.

But many plants and shops have found that there is another way to solve this problem. They have found that by using Oakite materials and methods they could avoid the expense of extra equipment and would not have to put more men on the job. The reason is that Oakite cleans faster than the materials they have been using, and cleans with absolute thoroughness.

This fact is well emphasized by the experience of a large electrical equipment plant. Increasing demand for its products created a cleaning problem. Based on the equipment and materials in use, it was evident that the capacity of the cleaning room had to be doubled.

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RADIUS RODS
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Any Analysis of Steel

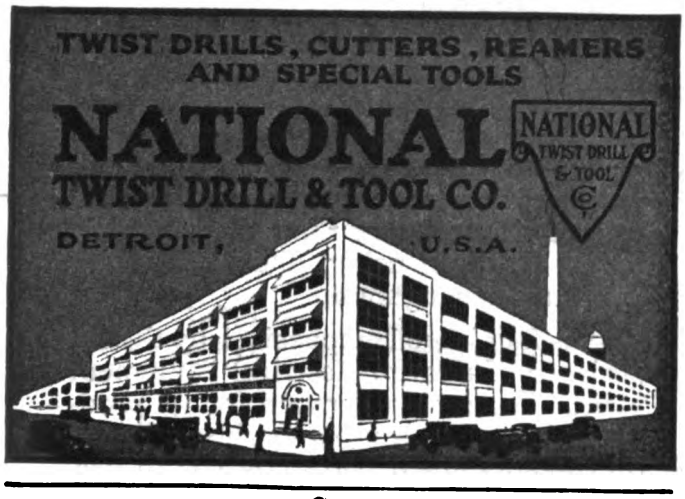
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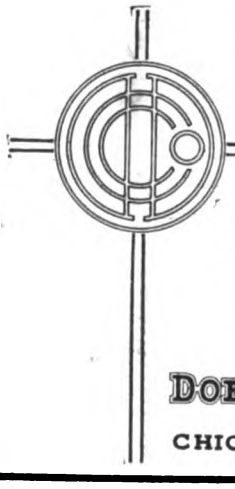
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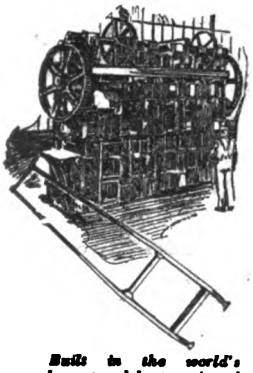




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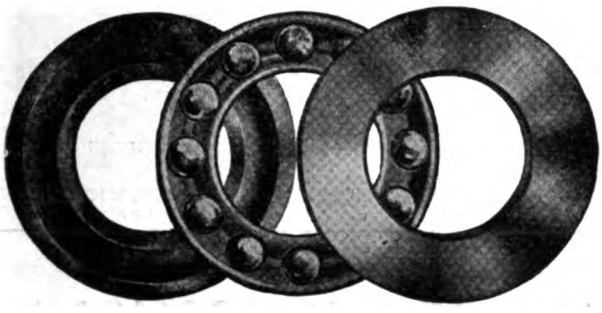
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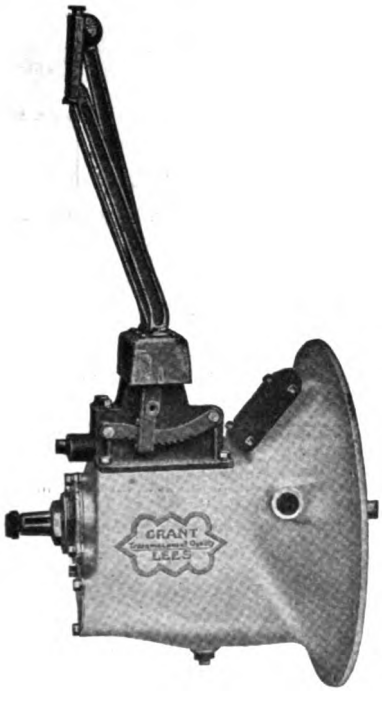
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Lancaster, Penna.
Detroit, Mich., Office, 1012 Ford Bldg.
E

Conditions warrant a closer co-operation between Buyer and Seller.

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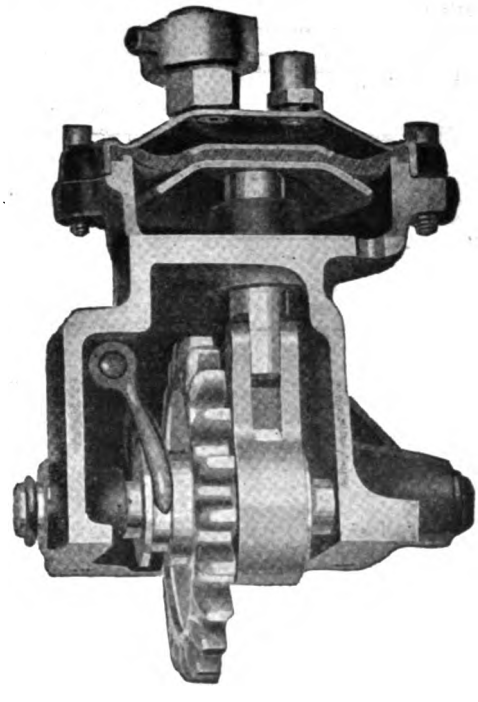
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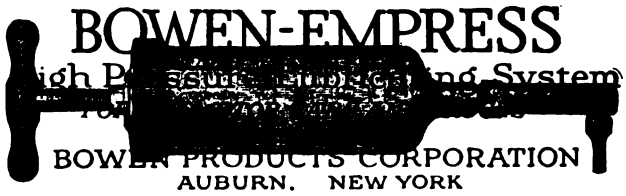
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Chicago, Illinois

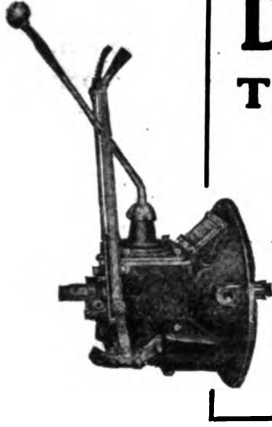
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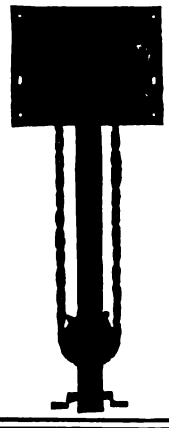
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CABLE
The vital nerve system of a motor car.
Nowhere is recognized merit of greater
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Your Cooling System must be
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You need Fedders.
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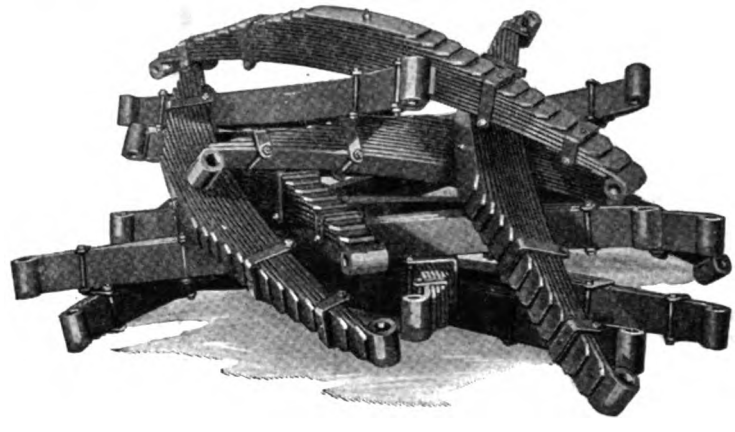

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HEAVY DIE FORGINGS
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CHAMPION
DROP FORGINGS
Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.
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Standard of the World



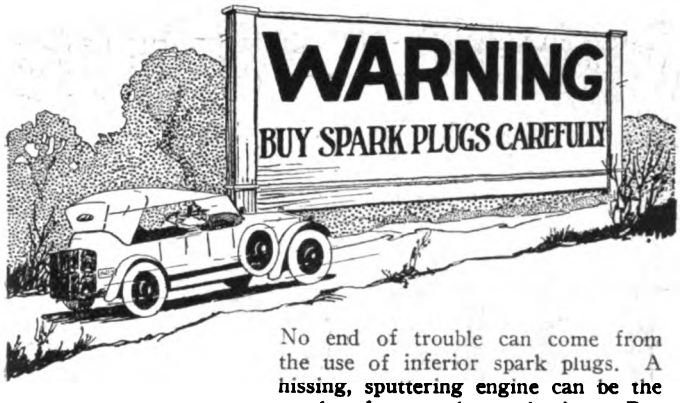
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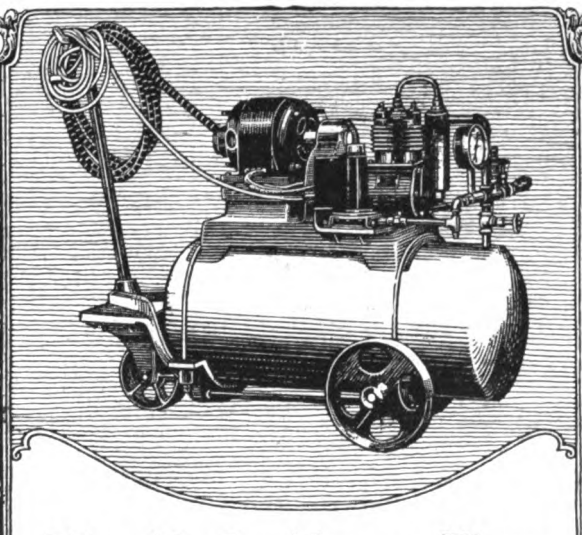
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"775"

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Busy Ever Since

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The New Model H Tank Outfit—either stationary or portable—with either regular alternating current motor or direct current motor, is the most economical and serviceable garage pump designed. Tank guaranteed for 150 lbs.—constant working pressure. Delivers 2 1-2 cubic feet of free air per minute—a quick and steady worker—fully guaranteed. Send for complete description of three other models.

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INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc.... 261
American Chain Co., Inc.. 279
American Sheet & Tin Plate Co..... 263

B

Bassick Manufacturing Co. 291
Bearings Co. of America.. 289
Bethlehem Spark Plug Co. 269
Bowen Products Corp..... 290
Bower Roller Bearing Co. 290
Brown-Lipe Chapin Co.... 278
Brown-Lipe Gear Co..... 278
Budd Wheel Co..... 210
Buick Motor Co..... 217
Bunting Brass & Bronze Co 216

C

Cadillac Motor Car Co.... 236
Central Steel Co..... 292
Chalmers Motor Car Co... 212
Champion Machine & Forging Co..... 292
Cleveland Automobile Co.. 296
Courier Motors Co..... 291
Crosby Co..... 288

D

Detroit Carrier & Manufacturing Co..... 289
Detroit Pressed Steel Co.. 206
Dodge Brothers..... 218
Doehler Die-Casting Co.... 288
Durant Motors, Inc., Back Cover
Durston Gear Corp..... 291

E

Earl Motors, Inc..... 257
Eclipse Machine Co..... 291
Edmunds & Jones Corp.... 289
Electric Auto-Lite Co..214, 215

F

Fedders Manufacturing Co. 292
Firestone Tire & Rubber Co. 290
Fisk Tire Co., Inc..... 213
Flint Varnish & Color Works 211
Frenchtown Porcelain Co.. 294

G

Gabriel Manufacturing Co. 291
General Tire & Rubber Co. 271
Goodrich Rubber Co., B. F. 219
Grand Rapids Tire & Rubber Corp 275
Grant-Lees Gear Co..... 289
Grant Motor Car Corp.... 291

H

H. C. S. Motor Car Co.... 272
Hartford Machine Screw Co. 294
Hartford Rubber Works Co. 282
Hayes Wheel Co..... 277
Hupp Motor Car Corp., Inside Back Cover

I

International Harvester Co. of America, Inc..... 274

Digitized by Google

INDEX TO ADVERTISEMENTS

J

Johns-Manville, Inc..... 280a

Jordan Motor Car Co., Front Cover

L

Lang Body Co..... 205

Link-Belt Co..... 273

M

Mather Spring Co..... 293

Mercer Motors Co..... 276

Morse Chain Co..... 290

Motor Wheel Corp..... 290

N

Nagel Electric Co., W. G. 259

Nash Motors Co..... 220

National Twist Drill & Tool Co..... 288

New Departure Manufacturing Co..... 287

Nordyke & Marmon Co., Inside Front Cover

Norma Co. of America.... 207

O

Oakley Chemical Co..... 287

Olds Motor Works..... 264

P

Packard Electric Co..... 292

Park Drop Forge Co..... 292

Perfect Window Regulator Co. 292

R

Remy Electric Co..... 208

S

Sharon Pressed Steel Co.. 292

Smith Corp., A. O.,..... 288

Smith & Co., Joseph N.,... 286

Stephens Motor Car Co., Inc. 270

Sterling Engraving Co.... 292

Stevens-Duryea, Inc..... 284

Stewart-Warner Speedometer Corp..... 281

Stromberg Motor Devices Co. 291

Studebaker Corp. of America 209

T

Timken-Detroit Axle Co... 285

Twitchell Gauge Co..... 286

U

Union Drawn Steel Co.... 288

Union Switch & Signal Co. 288

United States Rubber Co. 255

V

Vanadium Corp. of America 280

W

Warner Gear Co..... 290

Warner-Patterson Co..... 283

Whitney Manufacturing Co. 286

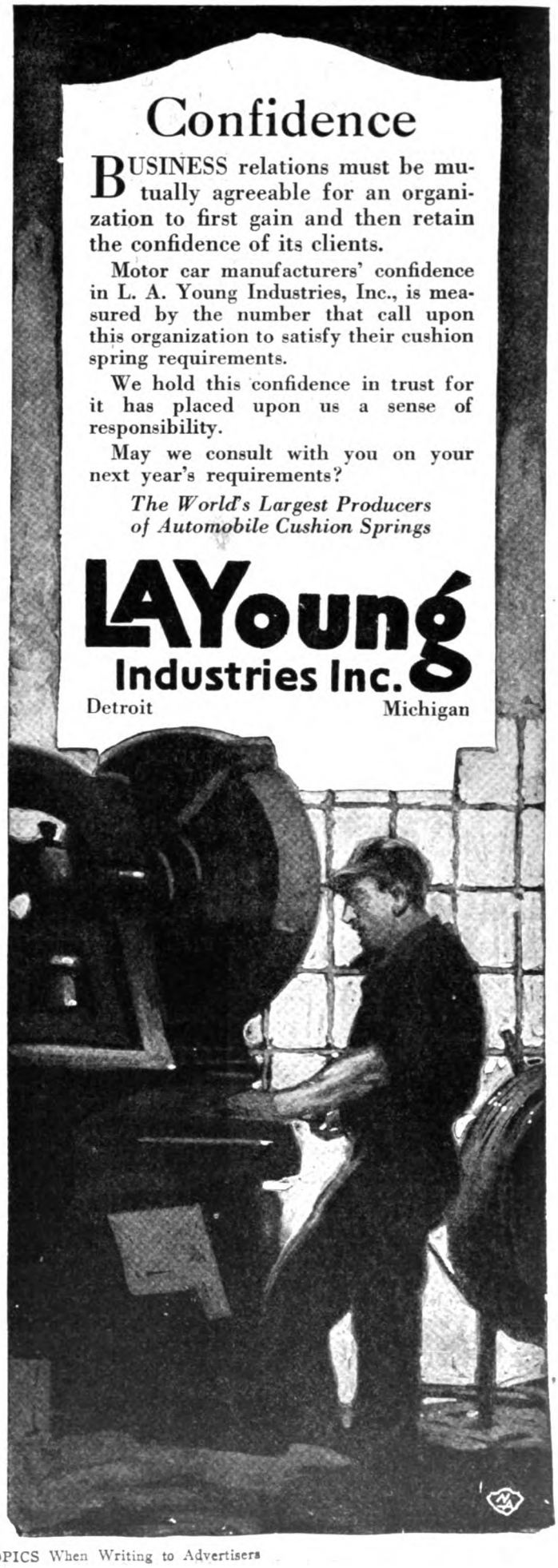
Wire Wheel Corp. of America 268

Wyman-Gordon 290

Y

Yale Storage Battery Co.. 291

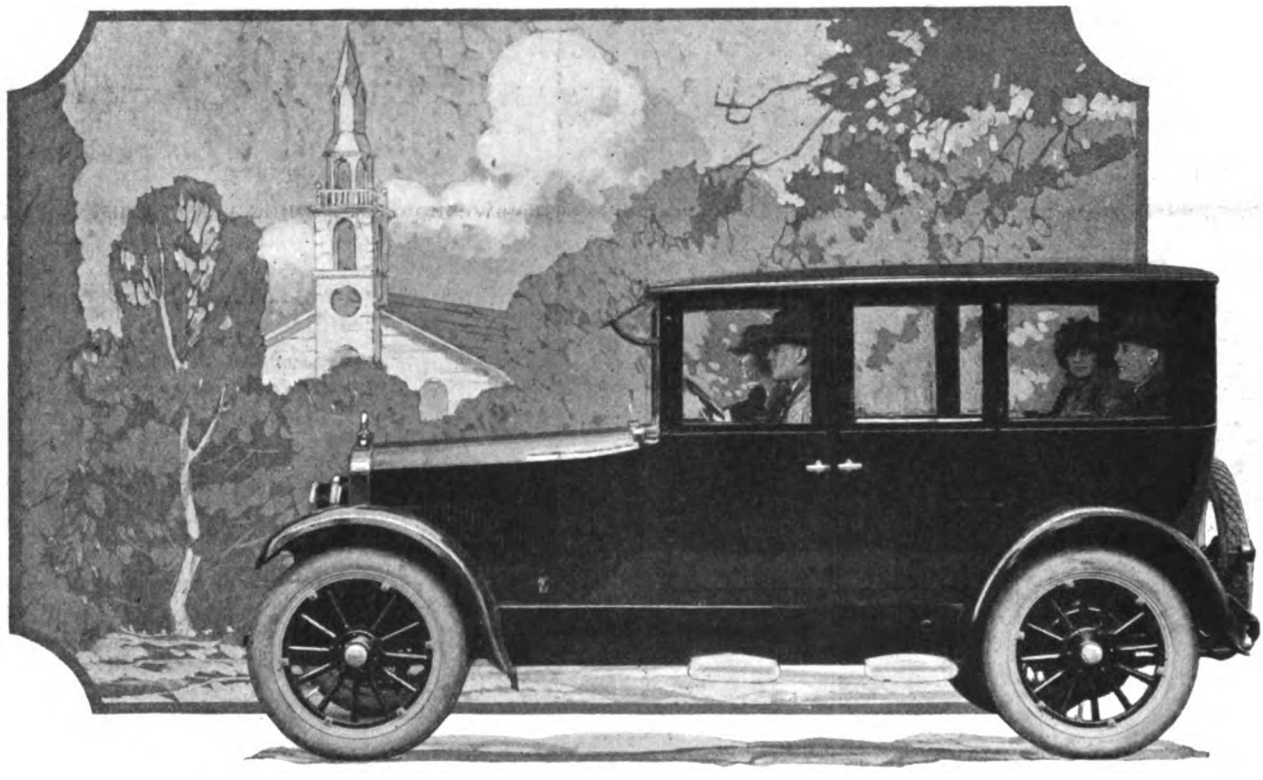
Young Industries, Inc., L. A. 295



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CLEVELAND SIX

THE WONDER CAR OF THE YEAR



New Low Prices Widen Its Selling Field

IT is a remarkable achievement to have created the smartest car of its size and the greatest value of its class, in the new Cleveland Six.

But to have established the new low prices which permit the widest ownership of this fine car is an unqualified triumph.

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Effective August 2nd, 1922

Touring Car	$1095
Roadster	1085
Five Passenger Sport .	1260
Coupe	1495

All Prices F. O. B. Cleveland

SEDAN

$1585

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Sales Mount Higher and Higher—Good Will Increases as New Owners Multiply— Other Interesting Facts

Reports from Hupmobile dealers all over America are to the effect that the demand for the Hupmobile continues to increase; that high sales records are being displaced by records still higher.

Many of our dealers inform us that motor car owners everywhere are commonly remarking that their next car will be a Hupmobile.

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The Hupmobile is apparently more desired than ever. Its hold upon the confidence and the imagination of the public is increasing monthly—and daily.

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They are discovering many amazing and gratifying things about the Hupmobile.

All Classes Form the Hupmobile Market

Many never thought it possible, for instance, that a car which gave so much in the way of brilliant, consistent performance and durability, could actually be operated and maintained for less than many cars whose main appeal is price.

As the knowledge of the remarkable economy of the Hupmobile grows and spreads, new thousands of owners of lesser cars are added to those who will never be satisfied until they have a Hupmobile.

On the other hand, owners of cars which cost much more to buy and to maintain, are coming to the Hupmobile as the one car which gives them practically every advantage in performance, at much less expense.

Hupmobile Dealerships for Sound Business Men

Sound business men, nearly everywhere in America, can become Hupmobile dealers.

They can enjoy the prestige, and the profits, which attach to a Hupmobile dealership.

Direct your inquiry to us, today.

Hupp Motor Car Corporation
Detroit, Michigan

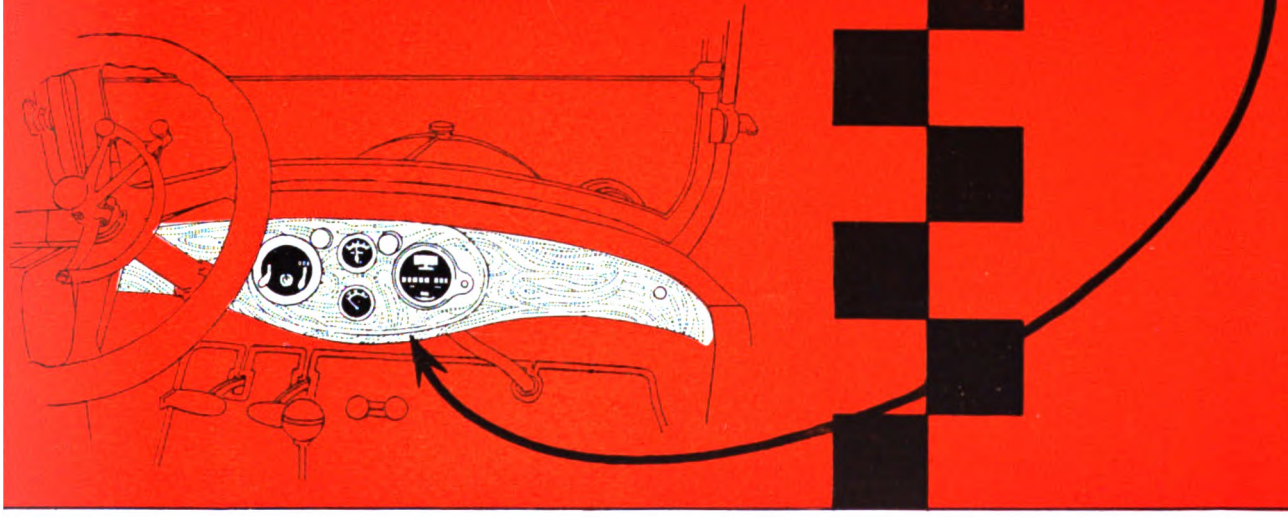
Hupmobile

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"Just a Real Good Car"

DURANT

SWITCHES and instruments in the Durant are within easy reach and in constant view of the driver.



DURANT

DURANT MOTORS, INC., *1819 Broadway, New York City*

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 4 | PUBLISHED WEEKLY NEW YORK, SEPTEMBER 9, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



Can You Park?

What has been called a most important contribution to the literature of the Automotive Industry, a really usable and readable booklet entitled *"Good Driving Is Mostly NICE-STEERING"* will be sent upon request.

Dealers and salesmen—everyone—are finding this an invaluable treatise.

It *does* help!

TIMKEN

Tapered ROLLER BEARINGS

CANTON, OHIO

© 1922 The Timken Roller Bearing Co Canton Ohio

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LAIDLAW
CLOSED CAR UPHOLSTERY CLOTH

BEAUTY and Durability are the first essentials of any closed car upholstery cloth.

These qualities make every style of our new line of English Bedford Cords, a most desirable fabric for use in any type of enclosed car.

LAIDLAW BEDFORD CORDS

Because of their new and unusual coloring and design are especially adapted for use in show cars.

Write for Samples

THE LAIDLAW COMPANY, INC.
16 West 60th Street
New York

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Car Name-plates Furnished Free with the Bumpers You Buy

Stewart Autoguards *to* Advertise the Car You Sell

Model 175



$22
Western Price $25



Double Rail Clamp

AN entirely new idea which is meeting with great favor. A car name-plate furnished absolutely free with every bumper you buy. The Stewart Autoguard center clamp is now made so that the Stewart name-plate can be taken out by loosening two screws and be replaced by the name-plate of the car you sell.



Car Name-plate Inserted

The car name appears in nickel against a brilliant red background. Let Stewart Autoguards advertise and protect the cars you sell.

Below is a list of cars for which name-plates can be secured without cost from Stewart-Warner Products Service Stations and Distributors, or from the factory direct.

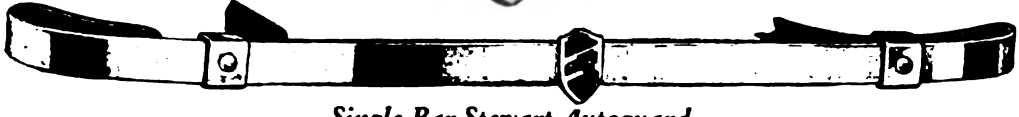
STEWART-WARNER SPEEDOMETER CORPORATION
CHICAGO, U. S. A.

Buick	Durant
Cadillac	Essex
Case	Franklin
Chalmers	Gardner
Chandler	Haynes
Chevrolet FB and 490	Hudson
Cleveland	Hupmobile
Cole	Jordan
Columbia	Lexington
Dodge	Liberty
Dort	Lincoln



Marmon	Reo
Maxwell	Rickenbacker
Mitchell	R & V Knight
Moon	Stearns
Nash	Stephens
National	Studebaker
Oakland	Stutz
Oldsmobile	Velie
Overland	Willys-Knight
Packard	Wills Ste. Claire
Paige	Winton

Model 158



Single-Bar Stewart Autoguard

$11 to $18
Increase In Western Prices

Stewart

PRODUCTS USED ON 7 MILLION CARS

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LEADERSHIP
Quality-Price-Service

Low first cost, backed by quality and service, assures low final cost. Republic leadership is founded on the ultimate cost.

REPUBLIC TRUCK SALES CORPORATION
ALMA, MICH.

REPUBLIC

Republic has more trucks in use than any other exclusive truck manufacturer

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, SEPT. 9, 1922 NO. 4

TABLE OF CONTENTS

Swayne Brings Back News of the World..... 313
Flood of Motor Cars Engulfs 1921 Output..... 313
Jennings Is Promoted by Dodge Brothers..... 314
Engineers Handed New Assignments by Maxwell. 314
Buick Expands Personnel in Michigan Territory.. 314
Hupp Plans to Cut Its Capitalization..... 315
Star to Be Moved to Elizabeth Soon..... 315
Dodge Brothers Uncover Steel Sedan..... 315
Packard Employes Forego Usual Vacation..... 316
Plan to Discontinue Bearings Service Co. 317
August Breaks More Willys Co. Records..... 317
Gardner Produces 6,300 Cars in First 7 Months.. 317
Locomobile to Keep Policies Unchanged..... 318
Stearns Six Speeds Business Decidedly..... 318
Gray Sends Train of 40 Cars to New England.... 318
New Peerless Gets Rousing Reception..... 319
Ford Files Another Record of Finances..... 319
Mack Truck Sales Smash Precedent..... 319
Fisher Body Makes Report for Quarter..... 320
Stromberg's Second Quarter Shows Gain..... 321
Noted Men to Judge "Good Roads" Essays..... 322
McLuney Builds Strong Organization on Coast... 322
Palm to Head Division for Bishop & Babcock.. 322
People Given Parks by Dodge Brothers..... 323
Courier Plans Big Things for New Car..... 323
Claire Barnes Joins Forces with Rankin..... 323
Trouble's Antidote Is Fight, Wilmer Says..... 324
Anti-Truck Attack Overreaches Itself..... 324
Limited Output Retards British..... 324
Parity in Tire Prices Shown by New Lists..... 325
Tire Makers Record Less Output in July..... 325
Has Marking Scheme to Foil Car Thieves..... 326
Electric Unit Men Meet at Old Orchard..... 326
Retail Sales Forge Upward in August..... 327
Schedule 59 Makes for Closed Car Show..... 327

FEATURES IN THIS ISSUE

Fitting "Made in U. S." to the World..... 331
Presents a Radically Different Spring..... 334
Selling Goods at Retail..... 335
Served with a Dash of Atmosphere..... 336
Latest Offerings of the Car Makers..... 338
Ideas That Lead to Greater Sales..... 341
In the Field of Accessories..... 342
With the Wholesalers and Retailers..... 343
Calendar 350
Table of Passenger Car Selling Points (copyrighted) 355-357

Alphabetical Index to Advertisers..... 390

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
WORCESTER, MASS. CHICAGO, ILL. CLEVELAND, OHIO

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Check This List and Note Zenith Preference Here and Abroad

THE automobile industry will appreciate the satisfaction this organization feels in reading the list of automobile manufacturers here and in Europe who have standardized on Zenith Carburetors. Add to this the truck, motor cycle, airplane, war tank, hydroplane, speed boat and racing car builders who use Zeniths exclusively and the list becomes extraordinary.

United States Passenger Cars Zenith Equipped

Anderson	Driggs	Meteor	Romer
Brewster	Elgin	Monroe	Standard Eight
Chalmers (export)	Fox	Noma	Tulsa
Chevrolet	Hatfield	Norwalk	Wills St. Claire
Comet	Kurtz Automatic	Oldsmobile	Washington
Crow Elkhart	Maxwell (export)	Ranger	Yellow Cab
Daniels			

French Cars Zenith Equipped

Alba	Cottin Desgouttes	Leon Bollee	Roy
Aries	Crespelle	Lorraine Dietrich	Salmson
Ballot	De Dion Bouton	Mors	Th. Schneider
Bazelaire	Delage	Motobloc	Sidea
Beck	Delaugere Clayette	Mourre	Sigma
Bedelia	Doriot-Flandrin &	Paquis	Slim
Bellanger	Parrant	Paulet	Soriano-Pedroso
Benjamin	Farman	Peugeot	Turcat Mery
Bignan	Gobron	Philos	Vermorel
Brasier	Gregoire	Rauch Lang	Vinot-Deguingand
Bugatti	Hotchkiss	(Taxi Cab)	Voisin
Charron	Irat	Rochet Schneider	Zebre
Colda	La Buire	Rolland Pilain	Zedel
Corre-la Licorne			

British Cars Zenith Equipped

A. B. C.	B. S. A.	Guy	Phoenix
Angus Sanderson	Calcott	Hampton	Ruston Hornsby
Argyll	Calthorpe	H. E.	Standard
Arol Johnston	Charron Laycock	Hillman	Star
Austin	Cluley	Jowett	Swift
Beardmore	Enfield Allday	Lagonda	Talbot
Belsize	Ensign	Orpington	Vauxhall
Blackburn	Galloway	Palladium	Vulcan
Briton			Waverly

German Cars Zenith Equipped

Adler	Dux	N. A. G.	Steiger
Audi	Elite	N. S. U.	Stoewer
Beclowen	Horch	Protos	Szawe
Benz	Joswin	Richard & Hering	Wanderer
Benz-Sochne	Ley	Simson	

Belgian Cars Zenith Equipped

Abadal	Dasse	Minerva	Pipe
Belga	F. N.	Niesse	Somea
d'Acoust	Metalurgique	Nagant	

Italian Cars Zenith Equipped

Alfa Romeo	Chiribiri	Itala	S. C. A. T.
Ansaldo	Diatto	Lancia	Spa
Bianchi	Isotta Fraschini	Nazzaro	

ZENITH CARBURETOR CO., DETROIT, MICHIGAN

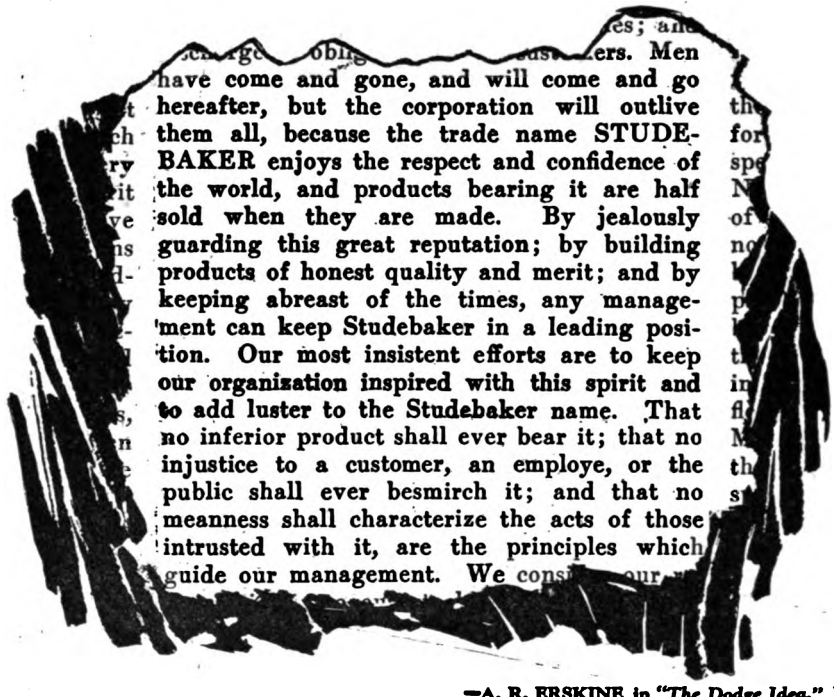
Factories at: DETROIT LYONS LONDON TURIN BERLIN

ZENITH

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Studebaker

Why Every Year Will Be A Studebaker Year



...ers. Men have come and gone, and will come and go hereafter, but the corporation will outlive them all, because the trade name STUDEBAKER enjoys the respect and confidence of the world, and products bearing it are half sold when they are made. By jealously guarding this great reputation; by building products of honest quality and merit; and by keeping abreast of the times, any management can keep Studebaker in a leading position. Our most insistent efforts are to keep our organization inspired with this spirit and to add luster to the Studebaker name. That no inferior product shall ever bear it; that no injustice to a customer, an employe, or the public shall ever besmirch it; and that no meanness shall characterize the acts of those intrusted with it, are the principles which guide our management. We cons... our ...

—A. R. ERSKINE in "*The Dodge Idea*," Published by The Dodge Publishing Company, Mishawaka, Ind.

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*	BIG-SIX *7-Pass., 126" W. B., 60 H. P.*
Touring ..... $ 975	Touring $1275	Touring $1650
Roadster (3-pass.).... 975	Roadster (2-pass.).... 1250	Speedster (4-pass.).. 1785
Coupe-Roadster (2-pass.) 1225	Roadster (4-pass.).... 1275	Coupe (4-pass.)..... 2275
Sedan 1550	Coupe (4-pass.)..... 1875	Sedan 2475
	Sedan 2050	Sedan (Special) 2650

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
SOUTH BEND, INDIANA

THIS IS A STUDEBAKER YEAR

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OFFICIAL TEST

51 6/10 miles on a gallon of gasoline



A standard Ford car carrying three passengers—total weight of car and passengers 2370 pounds—was recently driven 51 6/10 miles on one gallon of 57 test gasoline. This world's record mileage test was made under observance of American Automobile Association. Minimum speed was 6 miles per hour—maximum speed 45 miles per hour.

The Ford was equipped with new 1922 Stromberg Carburetor and Hot Spot—that's what turned the trick.

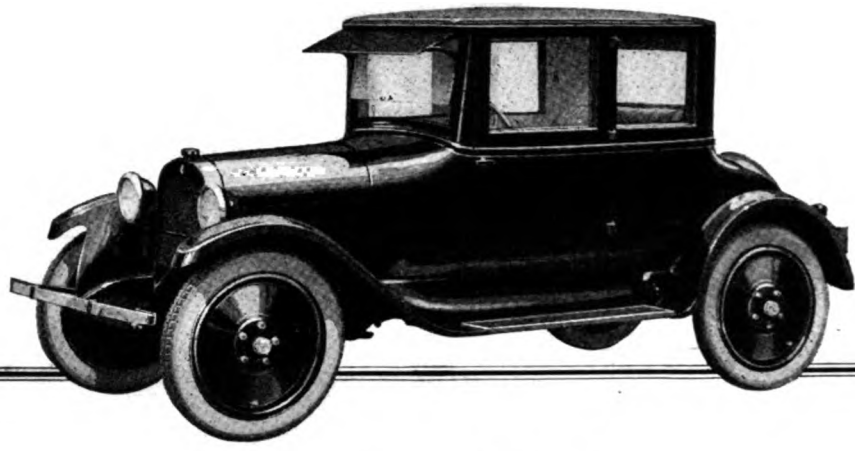
Easily installed. Low price—$15.75 for Carburetor and Hot Spot complete.

Attractive proposition for good live dealers—write for details.

Stromberg Motor Devices Co. Dept. 919 64 East 25th Street, Chicago, Ill.

Stromberg Carburetor with the Stromberg HOT SPOT for Ford Cars"

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De Luxe Bodies for DODGE BROTHERS *Chassis*

Recent inquiry among Dodge Brothers dealers who have been particularly successful in the sale of Lang 4-passenger coupe bodies, reveals a steadily growing market.

It also reveals a singular uniformity of opinion as to the causes of the growth.

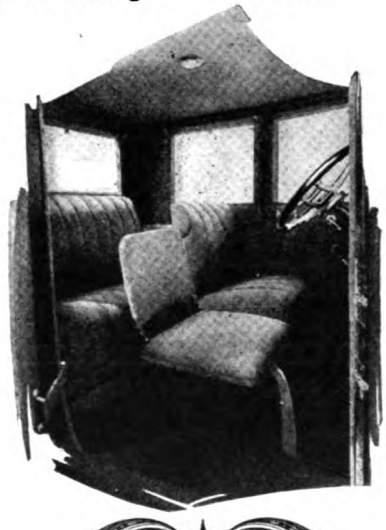
One of the causes on which all agree is the public's profound respect for the Dodge Brothers chassis. Everyone instantly concedes its worthiness of the honor implied by a fine type of special body.

Another cause is the beauty and quality of Lang bodies, which have been sought for years by owners of such aristocratic cars as the Stutz, Lincoln, Lafayette and Peerless.

These fundamental causes are of a general nature. They apply to your territory as well as to the many others in which they have already enabled Dodge Brothers dealers to add to their prestige and profit.

Our manufacturing program is now being readjusted to meet the growing requirements of fall and winter. We earnestly suggest that you write or wire us at once for complete information regarding our special contract for Dodge Brothers Dealers.

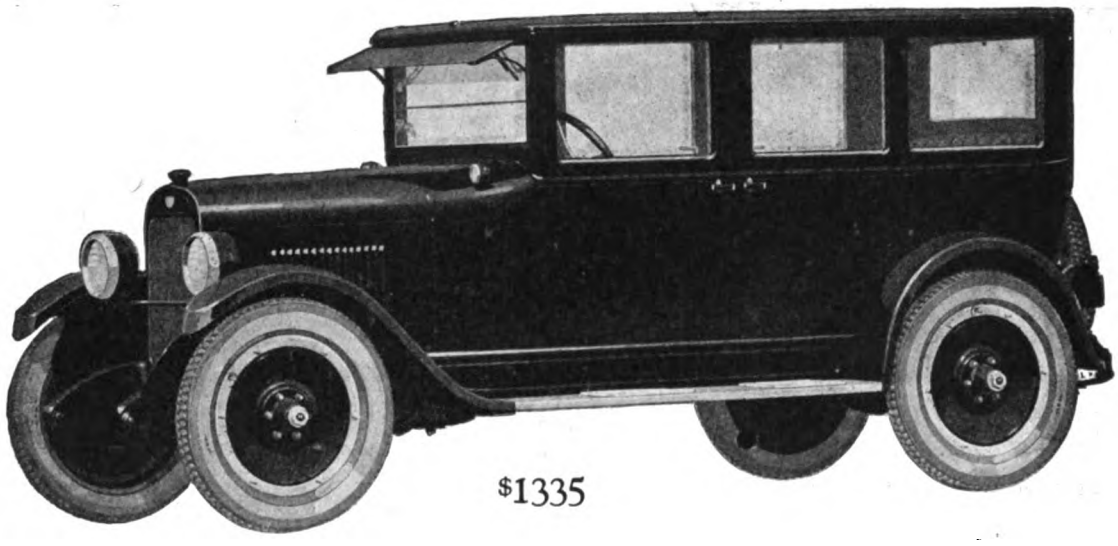
"This semi-custom built job, having the style of bodies usually mounted on much more expensive chassis, has met with a ready reception from Dodge Brothers Dealers."



"It has the higher radiator and cowl, a body of steel and aluminum and the Lang soft-roof construction."—From Autobody for August, 1922

The
LANG BODY CO.
CLEVELAND, OHIO
Automotive Bodies

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The extraordinary beauty and reliable performance of the good Maxwell Sedan are responsible for the high place it holds among owners. The new price makes more apparent than ever its sound worth.

Cord tires, non-skid front and rear; disc steel wheels; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; new type water-tight windshield. Touring Car, $885; Roadster, $885; Coupe, $1235; Sedan, $1335. Prices f. o. b. Detroit. Revenue tax to be added

MAXWELL MOTOR CORPORATION, DETROIT, MICHIGAN
MAXWELL MOTOR CO., OF CANADA, LTD., WINDSOR, ONT.

The Good

MAXWELL

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The One Tire That Gives A Sure Profit

There is no other tire in the country today which can show a dealer so steady a sale and so sure a profit. As direct proof, this letter is offered:

The Fisk Tire Co., Inc.,
816 Main St., Cincinnati, Ohio

Maysville, Ky., July 20, 1922

Gentlemen:—

It is just one year since we eliminated our other lines of tires and adopted the Fisk line exclusively.

In addition to cutting down our tire investment by standardizing on Fisk, we have materially increased our sales and built a permanent and lasting business.

The Fisk Straight Side Cord is outrunning anything in our community on large cars.

As usual, there are more small cars than large ones, and to this class of trade we pushed the Red-Top. The wonderful service delivered by the Red-Top always brings a purchaser *back for more.*

In addition to this, the distinctive color makes it a running advertisement for us—as Fisk dealers.

The Red-Top with its wonderful reputation and distinctive, aristocratic looks, has made it possible to almost completely eliminate the demand for low-priced tires. And last but not least, the large profit provided in the Red-Top stays in the till—no trouble or come-back to cut in on it.

Our slogan is "Once a Red-Top User, Always A Red-Top User."

This fact is the biggest business getter we have ever seen. We offer this testimonial in appreciation of the high quality and prompt, courteous service received from you during the past year.

Yours for more business,

MAYSVILLE BUICK COMPANY,
Per C. E. Peterson.

The Red-Top has a field of its own in every village, town and city in the country. Its position is unchallenged, and in the minds of the vast and growing army of its users, there is no other tire which can take its place.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

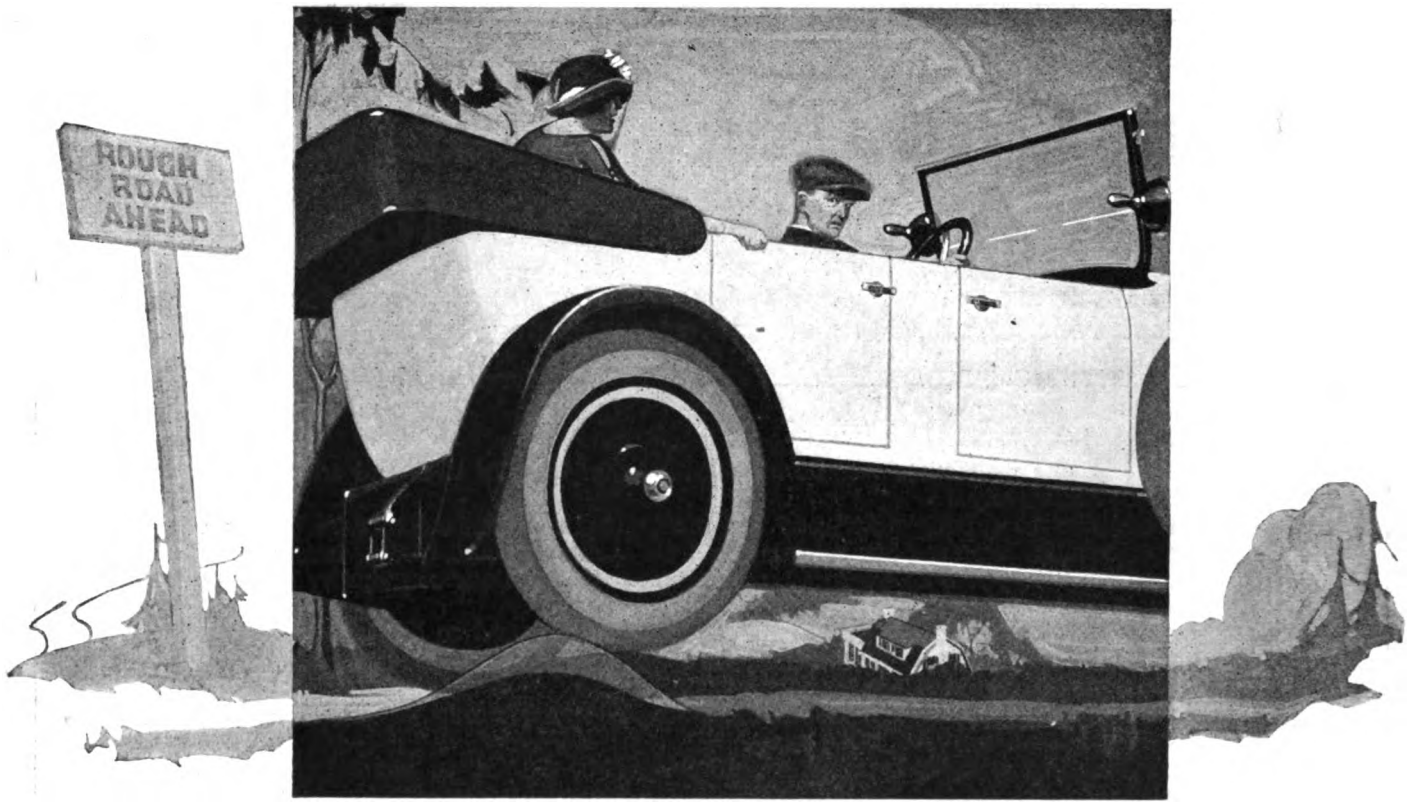
THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



Extra Ply of Fabric—Extra Heavy Tread

FISK
RED-TOP
CLINCHER TIRE

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Why Let Your Car EXAGGERATE *Each Bump?*



FLEXIBLE springs are absolutely necessary for comfort—for when your car hits a bump, the flexibility allows the springs to compress and soften the shock. But when springs compress, they develop force for the rebound—the upward throw—and it's the rebound that exaggerates the size of the bump—lifts you off the seat—bounces the passengers and strains the car.

Gabriel Snubbers *stop* the *rebound*—they control the compressed spring, letting it return to normal slowly and gently. They give you the full comfort of flexible spring action yet eliminate the "throw." Instead of exaggerating the bump, they keep you on the seat and make the bounce of the car negligible compared to the size of the bump. With Snubbers, you drive rough roads with the speed and comfort that you ordinarily drive good roads—the nervous strain of motoring is eliminated.

Ask your dealer about the advantages of Snubbers. Unless he is making $40 to $50 a set on high priced shock absorbers, he will tell you that no matter how much you pay for other makes, Gabriel Snubbers will give the best results.

Sixty-Five Leading Cars Equipped With or Drilled for Snubbers at Factory.

GABRIEL MANUFACTURING COMPANY, 1421 E. 40th St., Cleveland, Ohio

GABRIEL SNUBBERS



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This Forearm of Steel between Control and Disaster









SAFETY of car and passengers depends on the *ball arm* of the steering gear. Failure here would be fatal.

So Lavine engineers, in making the "Pilot" a *new standard of steering gear value,* gave particular attention to the ball arm. Instead of the cheaper *integral forging,* the Lavine ball pin is taper fitted into the arm. This ball pin is pack-hardened, pot-cooled, and brine-quenched to a glass hardness; the arm itself is an alloy steel forging, specially annealed and heat-treated for extreme toughness —a combination impossible in a one-piece job.

This grade of workmanship, maintained throughout the Lavine "Pilot", has virtually re-classified steering gears—setting new standards of safety, durability, smoothness of action, ease of adjustment, and freedom from rattling.

LAVINE GEAR COMPANY
MILWAUKEE WISCONSIN



LAVINE "PILOT" STEERING GEAR

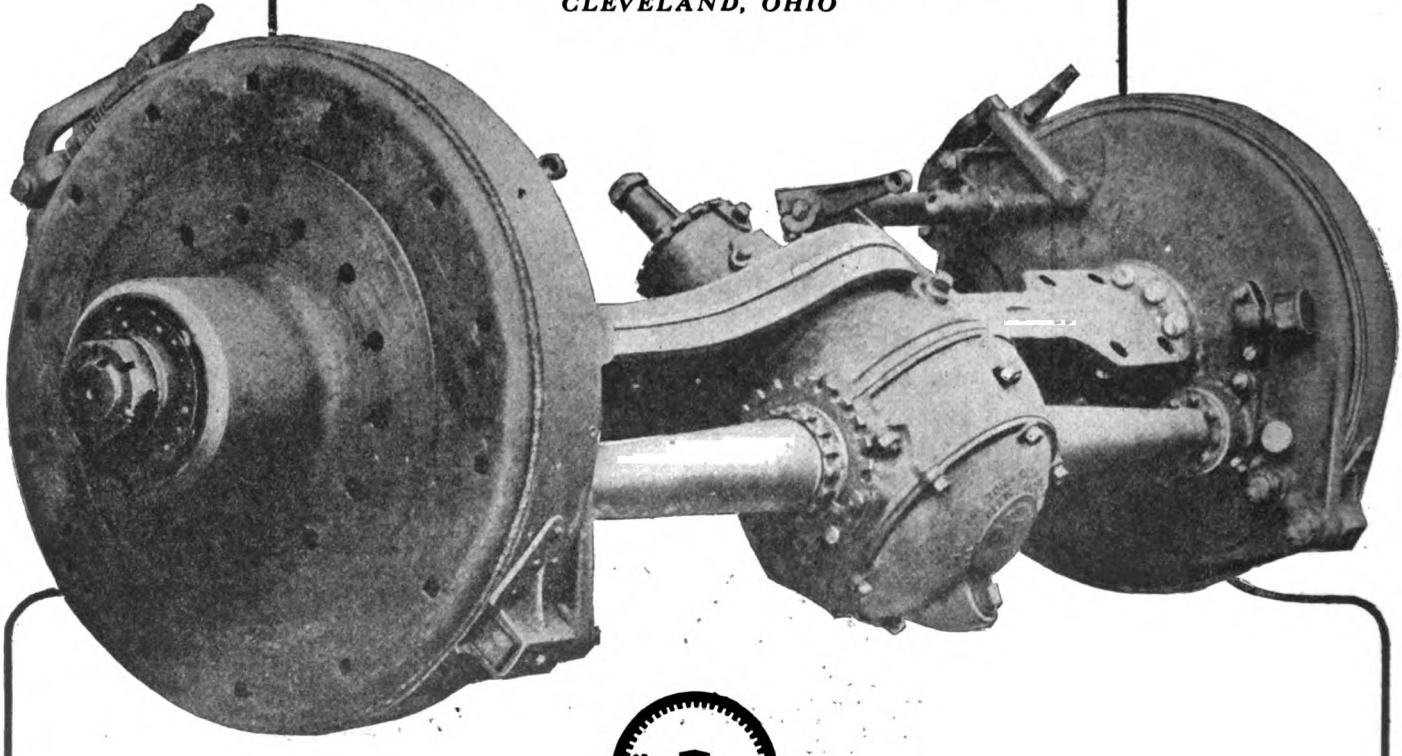
Manufacturers, let us exchange specifications. Send us your blue prints and we will quote on your requirements. "Pilot" prices will surprise you agreeably.

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TORBENSEN AXLES

Tens of thousands of Torbensen Axles are in use on Trucks all over America. Torbensen is indisputed leader in the speed truck field, 40,000 such trucks being Torbensen equipped. The wide use of Torbensen Axles results from advantages which are as clear as daylight. The Torbensen Axle is lighter, yet the strongest axle made for given capacity. It delivers more power to the driving wheels. It saves the truck, and it saves gasoline. It is fully enclosed—protected from grit and dirt.

TORBENSEN AXLE COMPANY
CLEVELAND, OHIO



REG. U.S. PAT. OFF

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ber 15 VOGUE

VALVE-IN-HEAD Buick for 1923



The Standard of Comparison

A New Car of Great Distinction

Buick 4 Passenger Sport-Touring—$1675

EQUIPMENT

Other items of equipment are: One-piece heavy crowned fenders; adjustable sunshade; two-piece full ventilating windshield with wiper and mirroscope; bevel plate glass windshield wings; cowl ventilator; glass-covered ignition and lighting switch with push button dash lamp; instrument board trimmed in leather and equipped with combination gasoline gauge, oil pressure gauge and ammeter, combination clock and speedometer, cigar lighter, ventilator control; handsome heavily nickel-bound luggage trunk mounted on permanent specially-designed base with nickeled guard rails; Buick design drum-type head and cowl lamps; front snubbers; carpets in both front and rear compartments; walnut

Of utmost grace of line, rich in contrasting colors, spirited and eager in performance, the Model 55 Sport Touring is the handsomest Buick open car ever built.

Sparkling with light and beauty it is an outing companion of the finest type. Nickeled hardware enhances the handsome color scheme of the low body and running gear. The deep seats are upholstered in embossed leather and the thick carpets in front and rear compartments are of a harmonious tone.

In keeping with the spirit and purpose of the Sport

Buick Dealers Have No "Dull Seasons"

Every day is a busy day for Buick dealers. The complete line of fourteen models—a car for every season, every business and pleasure—together with the full co-operation of the Buick Motor Company makes selling the Buick line a steady, year round business. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

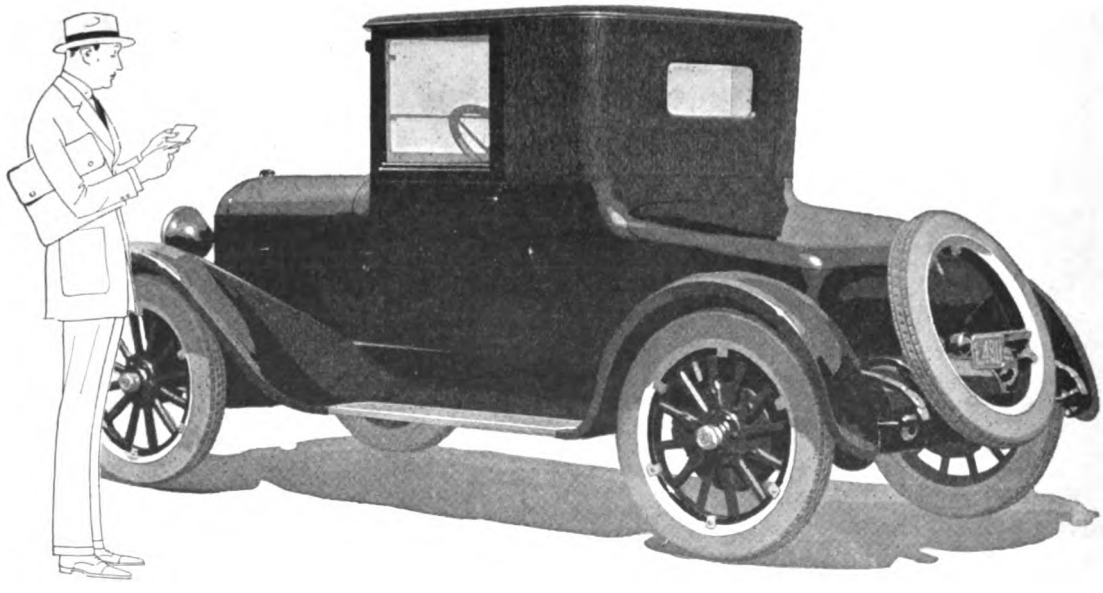
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

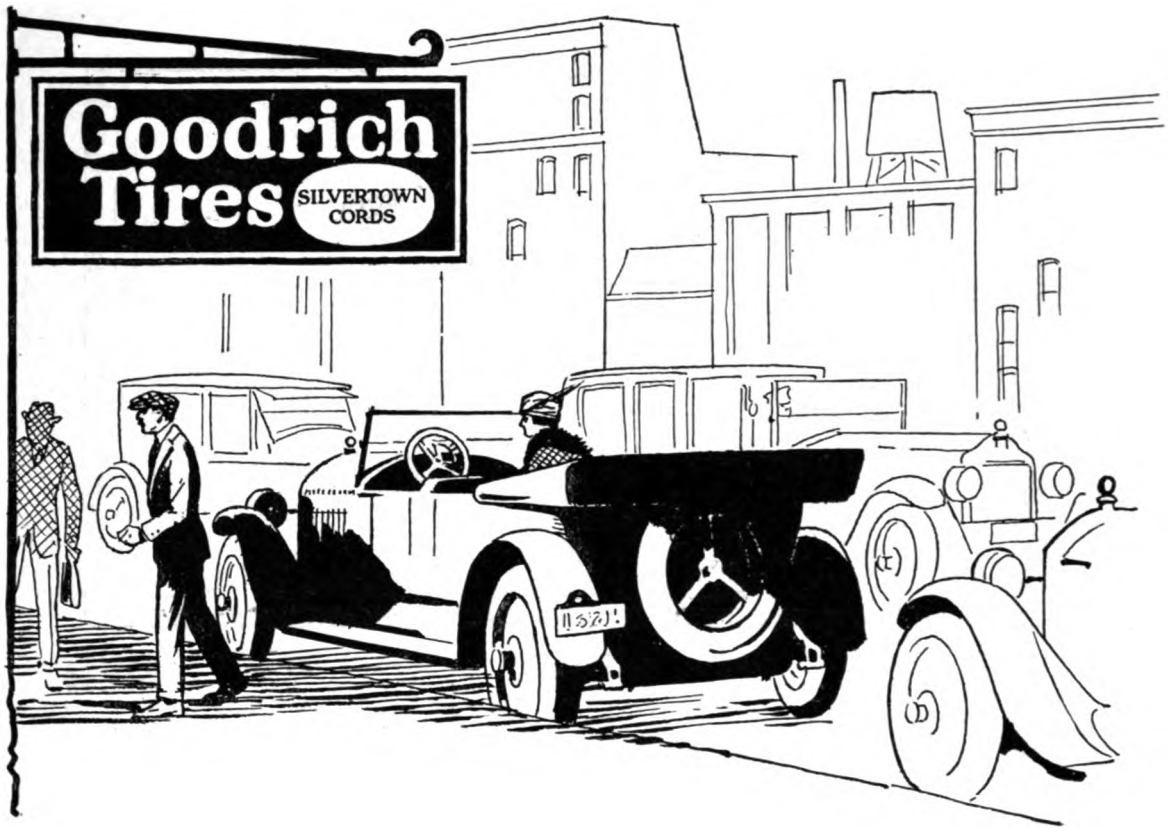
The price is $980 f. o. b., Detroit

DODGE BROTHERS



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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The Goodrich Dealer Has the Inside Track

The tire dealer selling Goodrich Tires has a decided advantage.

He does not start from scratch. The tire he sells is as old as the motor car itself. Its name is established and its quality and serviceability known and respected. With hundreds of thousands of motorists a new tire is just another Goodrich Tire. The dealer does not have to pioneer an unknown. He does not waste his sales energy and money pushing a "Great Unwanted," nor tie up his capital in something that will not move except at a losing discount.

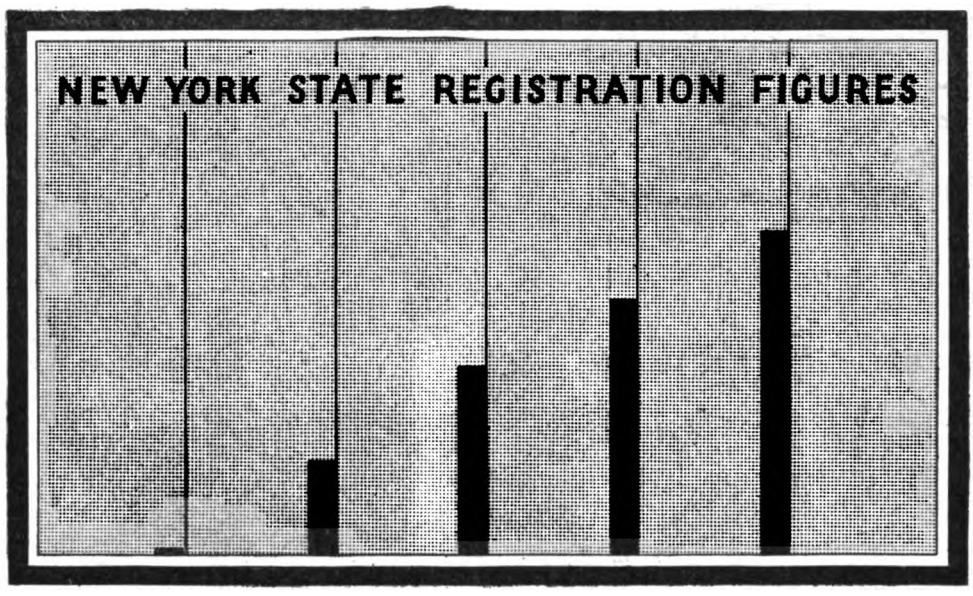
Instead he is selling the fastest-moving tire in the country; he is selling more tires on less capital; he is making a bigger net profit; he is unflaggingly supported the year-round by Goodrich Advertising and a wonderful Goodrich Co-operative Sales Plan that insure profit and success. *He is linked to a winner!*

Are you? Write and let us give you full particulars why it pays to sell Goodrich Tires.

THE B. F. GOODRICH RUBBER COMPANY
Akron, Ohio

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The Nash Rise in Popularity by States



Down in New York State the Nash has duplicated its Michigan success.

On every street and highway you observe a vigorously growing number of Nash cars.

From the introductory year of 1917 the Nash registration figures have risen rapidly.

The 1918 Nash percentage of total state registrations was nine times that of 1917.

1919 recorded double the 1918 percentage of registrations. 1920 ran one-third beyond 1919's total.

1921 exceeded 1920 by approximately 25%.

Though the final figures for 1922 will not be available for some time yet, there is no question but what this year will set a new and higher record.

So, naturally, the Nash franchise is now being eagerly sought by the best dealers in every community.

Fours and Sixes

NASH

THE NASH MOTORS COMPANY, KENOSHA, WISCONSIN

G67B

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII. NEW YORK, SEPTEMBER 9, 1922 No. 4

SWAYNE BRINGS BACK NEWS OF THE WORLD

General Motors Vice-President, Behind Scenes in Europe, Finds Economic Victory Assured—Discloses New and Startling Views on Situation.

Behind the confusing scenes on the stage that is Europe, cool-headed, broad-visioned financiers and statesmen are steadily working out of the muddle left by the Great War, firmly convinced that fundamentally conditions are better and ultimate victory and sane economics a matter only of time and effort. This is the outstanding conclusion that may be drawn from the veritable mine of information brought to America by Alfred H. Swayne, financial vice-president of the General Motors Corp., on his return from abroad on August 31. Swayne admits that whereas he went to Europe a pessimist in regard to its economic recovery, he came back "hopeful."

Many of the views of these European men of destiny, as communicated to Swayne, are actually startling in their sharp variance with generally accepted opinion in this Country. They are no less assuring. For without any intention of becoming overly-optimistic, pessimism, as such, finds little place in the deliberations of those men who will eventually bring Europe back to normalcy and lead on to greater and better things.

Swayne found the financiers of all influential nations in entire unanimity on the matters of which he speaks. Without exception, they believe that the reparation question will be settled very soon, perhaps within so short a period as three months. Added to this heartening news is the belief that Germany will not go into national bankruptcy, as is so freely predicted in America. France, it is thought, must sooner or later be brought "into line" and accept a settlement with the Germans that is possible of ultimate achievement.

An interesting side-light on the devious ways of Old-World diplomacy is thrown by Swayne in discussing the substitute reparations scheme brought forward by Belgium. France, it will be recalled, made promises to her people following the culmination of the struggle against Germany that were designed to satisfy the national thirst for vengeance believed to exist. So stringent and excessive were the terms that Germany could not possibly comply. Diplomats found themselves facing a defiant Germany, and the frowns of just-minded nations, while at their backs clamored an unsatiated people. Belgian "statesmen"

(*Continued on page 316, first column*)

Steel Output Turns Upward

Steel production was reported this week as being on the increase, following the low point touched the last week in August. While the gain is slight, greater activity is foreseen next week. Daily capacity of 144 furnaces in blast on September 1, was 54,645 tons, which compares with 70,605 tons daily for 172 furnaces on August 1. Nine furnaces have reopened since September 1, however, and from 6 to 12 more are expected to follow suit within the next ten days.

$108,000,000 from Motor Tourists

Canadian Department of Customs reports a 600 per cent increase of motor traffic into Canada, 617,285 automobiles entering Canada for touring purposes during the last calendar year as against 93,300 for the previous one. Of the total arrivals, 615,074 cars remained in the Dominion for less than one month and 2,211 for more than one but less than six months. Parks Branch of the Department of the Interior has figured this motor traffic to represent an expenditure in Canada of more than $108,000,000. The same authority estimates that on a basis of five per cent, "improved roads are worth over two billion dollars without taking into account the service they render Canadians themselves."

FLOOD OF MOTOR CARS ENGULFS 1921 OUTPUT

First 8 Months' Production Likely to Equal All of Past Year's—N. A. C. C. Finds August Figures Larger Than July's—Exports Also Increase.

Heavy production continued in the automobile industry during August according to reports received from factories by the National Automobile Chamber of Commerce. While the total production for July reached 244,444, estimates based on shipping reports for the first three weeks of August indicate this figure will be exceeded by more than 20,000 machines.

Last year August production exceeded July by 4,445, the figures being 176,340 in July, and 180,785 in August, 1921. Thus, July, 1922, exceeded the same month a year ago by 38 per cent, while August will probably increase over August, 1921, by something like 50 per cent. Production of cars and trucks for the entire industry during the first seven months of 1922 reached 1,395,066 compared with 1,668,550 for the entire year of 1921.

The export situation continues to show improvement. Passenger car exports in May exceeded April by six per cent, and June exceeded May by 15 per cent. The revival of truck business abroad continues to be affected by the disturbed industrial conditions in Europe; exports in May, however, exceeded April by 36 per cent; June exports of trucks decreased seven per cent when compared with May.

The motor car makers and the N. A. C. C. are carefully watching developments in the railroad strike situation and its effect on rail operations. There has already been some handling of materials overland by truck that would ordinarily travel by rail and the driving of finished cars overland has increased through lack of automobile freight car supply.

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JENNINGS IS PROMOTED BY DODGE BROTHERS

Made Assistant General Sales Manager; Harger Advertising Manager

Charles H. Jennings, who has distinguished himself in developing to higher levels the servicing of Dodge Brothers motor cars, has been rewarded with the broader title of assistant general sales manager. This conveys added responsibilities and additional duties, but particularly reflects the close alliance between sales and service that has always been a feature of Dodge Brothers' business. In fact, the elevation of service to a point where it could be profitably and safely placed on a merchandising basis and actually sold, as commodities are sold, has been an ambition which Jennings, by painstaking effort, has at length achieved.

To this work he brought abundant experience and special qualifications. A West Pointer, and later graduated from Lehigh as a mechanical engineer, he accumulated a wide fund of railroad experience before entering the automobile industry, which he did many years ago. Before becoming Dodge Brothers' service manager, he had been a district representative of the same interests for five years. Coincident with Jennings' promotion, R. N. Harger is announced as having been named advertising manager.

Willys Returns from Europe

John N. Willys sailed from Southampton, September 2 on the *Acquitania*, scheduled to arrive in New York on the 8th. His return follows a nine weeks' foreign interlude, during which he has mingled with the well-known diversions of Europe a careful study and estimate of the business situation abroad.

Coffin Assumes Civic Responsibilities

Howard E. Coffin, vice-president of the Hudson Motor Car Co., has accepted chairmanship of the industrial section in the reorganization and expansion of the Detroit Board of Commerce. Coffin is also a director of the board.

Phelps Made Roamer Sales Manager

William Elliott Phelps has been appointed general sales manager of the Roamer Motor Car Co., Kalamazoo, Mich. Phelps is well known through his association with the Haynes Automobile Co., where he occupied a similar post.

Schweinert Returns Restored

M. Charles Schweinert, completely restored to health, has returned from his extended rest in England, looking vigorous and complacent. As previously indicated, he hopes soon to get back into harness.

Widman Given Welcome Home Dinner

A. U. Widman, manager of manufacturing of the Cadillac Motor Car Co., was the guest of honor at a banquet given him by 40 officials of the organization on his return from a trip to Yellowstone Park and other western points. At the close of the evening's festivities, which took place at Rosemont Hills farm, President H. H. Rice presented the traveler with a set of golf clubs and a case of golf balls.

Day Honored as GMC Truck Head

W. L. Day, president and general manager of the General Motors Truck Co., celebrated the tenth anniversary of his association with the organization on September 1. The occasion was made memorable through the presentation to Day of a golden plaque, suitably inscribed and bearing the signatures of all employes who have been connected with the Company seven years or more. About sixty names appeared on the testimonial.

BUICK EXPANDS PERSONNEL IN MICHIGAN TERRITORY

New Positions Given to J. A. Coy, James Dickson, Jr., and E. N. Steger

Due to the increase in the volume of business in the Michigan territory, E. T. Strong, general sales manager of the Buick Motor Co. has expanded the personnel in that section. J. A. Coy has been made district sales manager for the state; James Dickson, Jr., Detroit branch manager in charge of wholesale distribution of cars outside Detroit, and E. N. Steger sales manager in charge of all sales in Detroit.

Coy has been with the Buick company for the past 11 years. He served four and a half years as branch manager at Buffalo, and five years as branch manager at Detroit. His headquarters will remain in that city. Dickson has been with the International Harvester Co. for 16 years and comes to Detroit from Toledo where he was assistant manager of the I. H. C. branch. His headquarters will be at 460 Canfield avenue, west. Steger has been with the Buick company for two years and his new position comes as a promotion. He will not only have charge of retail sales at the Detroit branch but also be in general command of sales for the six Buick city dealers.

McDarby Leaves on Tour

N. E. McDarby, advertising manager of the Moon Motor Car Co., has begun an extensive tour through Nebraska, Colorado, Texas, Louisiana and Tennessee on behalf of his Company. His purpose is to obtain first-hand information regarding conditions in these sections.

Turner Manages Electric Association

Earl Turner, heretofore acting as assistant secretary of the Automotive Electric Association, has been advanced to the newly created post of manager of the Association. Turner has been identified with the organization practically from its inception and his new designation is a reward of merit.

ENGINEERS HANDED NEW ASSIGNMENTS BY MAXWELL

Factory Staff Given Promotions Under Direction of L. C. Freeman

That the Maxwell Motor Corp., under the guidance of William Robert Wilson, president, had built up an accomplished engineering staff has been known to the industry for months. L. C. Freeman, executive engineer of the Corporation, made some interesting announcements this week regarding a number of promotions in his division. E. A. Nelson has been appointed chief engineer and made responsible for the work of the engineering branches. Claude Sauzedde is named assistant chief engineer in charge of the designing department, having supervision over chassis, body and equipment designing, while H. E. Maynard has been given the post of assistant chief engineer in charge of all technical departments.

Nelson's responsibility with the Hupp Motor Car Corp. over a period of years and Sauzedde's work with General Motors Corp., Studebaker and Dodge Brothers is well known. Maynard has had long connection with the Maxwell organization. In addition to these appointments, Freeman, who states in the announcement that they are in recognition of energy and ability displayed by those promoted, has named John Squires assistant to the chief engineer in charge of administrative work in the department.

American Piston Ring Promotes Three

Joseph S. Jacobs, advertising manager of the American Hammered Piston Ring Co., has been promoted to secretary and assistant treasurer. C. B. Cook, former assistant, succeeds Jacobs as advertising manager, and C. A. Grainger has been appointed assistant general sales manager to succeed Thomas B. Blakiston, who is now general sales manager. For the past year and a half, Grainger has acted as district sales manager for the Company in the Gulf States district.

Oliver Joins Quaker City Rubber

Norman E. Oliver, well known through his long association with both the Diamond Rubber Co., and the B. F. Goodrich Rubber Co., has been elected vice-president of the Quaker City Rubber Co. Together with James M. Dixon, president of the Tobacco Products Corp., he also becomes a director of the organization.

Charles A. Singer

Charles A. Singer, Jr., vice-president of Partridge, Singer & Baldwin, Inc., New York city, died suddenly August 30 at Misericordia Hospital. For many years Singer was identified with the car which bore his name as vice-president and secretary of the Palmer & Singer Manufacturing Co., later becoming associated with the Ordnance Engineering Co. His widow survives him.

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HUPP PLANS TO CUT ITS CAPITALIZATION

Reductions, to Be Voted on by Stockholders, Will Leave $6,100,000 Authorized—Directors Will Be Elected by Meeting on September 13.

If the recommendation of the board of directors of the Hupp Motor Car Corp. is accepted by the stockholders at their annual meeting to be held on September 13, capital stock to the extent of 5,921 shares of preferred and 130,790 common will be retired. The shares are now held in reserve and the reduction will leave the capitalization at $6,100,000 divided into 9,079 shares of preferred and 519,210 common.

All the common stock, it will therefore be apparent, is issued. For some years past the Hupp corporation has carried these on its balance sheets at a valuation of $10 a share. In reducing the amount of authorized capital, the stockholders will also be asked to amend the certificate of incorporation to the desired amount. At present there are, in round numbers, 9,391 shares of preferred issued, the Company's balance sheet reveals.

In addition to the financial changes contemplated, the stockholders will elect directors for the ensuing year. For the past few years the Company has been doing extraordinarily well and the present move is taken to indicate, among other things, the belief of the management in optimistic but duly cautious preparations for the future.

Dodge Brothers Uncovers Steel Sedan

Dodge Brothers, Detroit, this week divulges a new four-door business sedan of steel. The metal body construction permits, among other things, the application of a permanent, lustrous enamel finish. Seats are upholstered in genuine leather. The rear seat cushion, rear side and back cushions are separate units which can be removed in a few seconds, converting the entire rear section into a spacious carrying compartment. Front seat tilts forward, affording perfect clearance through rear doors. This feature, a brand new one, will readily appeal to business men, salesmen, farmers, tourists and campers, and everyone else who has occasion at times to carry bulky articles. Cord tires, window regulators, windshield visor and cleaner, dome light, heater, Yale door locks and other closed-car refinements are included. In size and general appearance, the new body, on which patents are pending, is identical with the regular sedan of the line.

August Proves Moon's Best Month

August was the largest month in the history of the Moon Motor Car Co., St. Louis, exceeding by 25 per cent sales for July, the previous high month. This record coming in what has heretofore been an "off" month, is regarded by the Company as an indication that the automobile industry is rapidly approaching the long-sought-for year-round sales ideal. While the rail situation has tended to slow up West and Southwest business to some extent, little or no effects have been felt in the East, the Company's greatest market. A record farmer business is anticipated in view of crop reports. Fairly prompt deliveries are being made on open models but on closed jobs enough orders are on hand to keep the factory going full blast until December.

Jordan Blue Boy Goes Big

Ten days after the announcement of the new Jordan Blue Boy, dealers of the Jordan Motor Car Co. had taken actual orders from the public for approximately 2,000 of these new machines. This was before the price of the new model had been made public, or its picture revealed.

USE THE LATEST TABLE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 355-357 of this issue. It is revised to Sept. 5.

The industry is now in what has been appropriately termed "the merchandising era." Competition is at its keenest stage. Manufacturers, as a result, are constantly striving to add to the sales value of their cars.

This entails frequent additions to selling points—equipment, new body types, improved chassis specifications. These changes occur over night, as it were. Price adjustments are being made here and there.

All of which means that while last week's Table admirably served its purpose, this week's revised edition will better serve you during the week to come. In other words, to keep pace with the times, be sure to consult the latest Table with its latest information.

Cole Offering a New Series

Eighty-one improvements are offered by the Cole Motor Car Co., Indianapolis, on its new "Eight Ninety" series. Prominent among these are the Ultramite frame, Etruscan body, hydo-cushion spring action and envelope manifold. The new bodies are characterized by a black rounded molding extending from the radiator the full length of the car. Nine body types are included in the new series, these all being furnished with additional equipment such as trunk rack, new headlights, option of wire, disc or wood wheels with spare wheels carried on the sides. In view of the added equipment, open cars of the new series are priced $200 higher with varying revisions on the closed models. The body types with their prices are: roadster, seven-passenger tourster and four-passenger sportster, $2,685; two-passenger coupe, $2,885; four-passenger coupe, $3,385; seven-passenger toursedan, $3,285; five-passenger suburban, $3,685; seven-passenger sedan, $3,685; seven-passenger berline, $3,885.

STAR TO BE MOVED TO ELIZABETH, N. J., SOON

Durant Plans Big Production Following Installation of the New Unit—Murray Mfg. Co. Installs Branch in Huge Plant—Hayes Extends Contract.

Manufacture of the Star automobile will be moved to the Elizabeth, N. J., plant of Durant Motors, Inc., very soon, it was announced this week in New York. Perhaps within thirty days, and in any event as soon as is possible, the lowest-priced line in the string W. C. Durant has gathered to himself, will be in quarters designed to meet its needs for quantity production.

At present, because of factory conditions, the Star is not being turned out in quantities much greater than 25 daily, it is asserted. This is the case solely because it is desired to be entrenched in the newly purchased and huge Elizabeth structures before concentrating on the output schedule which will call for at least 120,000 cars the first year. This figure added to production in California, which has just begun, and at Lansing, Mich., will bring the total for the year 1923 well over the 200,000 mark, it is declared.

While the majority of the cars now being made at Long Island City are being sent only to dealers and distributers, a few are reaching private ownership direct from the factory. National interest has been aroused in the plans which Durant is perfecting for the appearance of his little automobile but these have as yet been kept covered. It is known, however, that an extensive and solidly organized campaign of popularization is about to be launched.

The many ramifications of Durant's master plans led to the installation recently of a branch of the J. W. Murray Mfg. Co. stamping works in a section of the Elizabeth plant. The branch will act in just the capacity the designation implies and will confine its production to stampings for the Star car.

Hayes Wheel Co., it was announced this week, has obtained the contract for its products as a part of the new Flint car which is soon to be in production. The announcement led to rumors that the Hayes company had obtained a new contract. It had in effect, but only in the nature of an extension of its business with Durant interests, it having heretofore furnished wheels, rims and the like for practically the entire Durant line.

W. C. Durant, himself, broke ground this week for the new factory at Flint, Mich., which will turn out the new $1,180 Flint light six. Work on the construction will be pushed. The Flint car will also be made at Long Island City upon the vacating of the property now occupied by the Star company. A showing of Flint models will be had soon, it is indicated, perhaps within a few weeks.

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SWAYNE BRINGS BACK NEWS OF THE WORLD

(*Continued from page 313, second column*)

came to the rescue. It is this compromise that is expected in many quarters abroad to provide a means by which French diplomatists may "save face."

Taking up the question of money among Germans, Swayne points out that the popular idea that Germany has "plenty of cash" is a fallacy. The people as individuals have money, but the government cannot and does not obtain it. It is invested in and sent to other countries by the thrifty Germans. This holds true of many other units of the European world, Swayne explains. But one remedy exists—the confidence of the peoples of Europe in their own governments must be re-established before these governments, and not alone the peoples, really have money.

The situation reminds the financiers of the story of the capitalist who became interested in an apparently deserving young man who seemed pursued by ill-luck. The latter's business ventures reaching a sad and decrepit stage, the capitalist came to the rescue. But even this help did not seem to profit the younger man who gradually seemed to sink deeper and deeper into the mire of financial despond. Eventually he began to show the depression in the state of his garb, his clothing appearing to be mostly skillfully held together by patches, his shoes frayed, his personal cleanliness questionable.

At this stage of affairs the capitalist lost sight of his man for a time. When next he met him a transformation had taken place. The youth wore clothes of expensive and exclusive character. An elegant cravat set off his meticulously clean visage, he carried a cane—in short, he showed all the outward signs of wealth and prosperity.

"Why, what has happened to you, my friend?" the capitalist queried in amazement.

"Haven't you heard the news?" was the retort. "I have 'failed.'"

This well illustrates the condition of the German citizen today, it is said.

In England, basic prosperity is rapidly approaching, Swayne found. An accurate and illuminative gauge exists in the recent history of the pound sterling. Whereas a year ago the pound could be purchased for, roughly, $3.80, today it brings $4.80. Since the value of a nation's securities lies in the potential and actual responsibility of that nation; and since the responsibility of the government rests in its commerce and business activity, the prosperity of its people, the inference in the rise of the pound sterling is truly well drawn. England, it appears, has left her labor troubles behind her and is engaged in a winning race for heightened production in all divisions of her commerce.

English capitalists and governors see goods and service as the great need of the day. By that they mean labor and materials. Money must remain, for the present at least, a necessary but secondary factor.

Turning to Austria, Swayne touches upon one of the few weak spots in the chain by which Europe is to be dragged from the rapidly quieting maelstrom. Austria is almost a hopeless economic case, he found. Beset at every turn by those who would further dismember her, tragically wounded by the amazingly uneconomic, unskillful, hurried partitions of her nationals made by the blind men at Versailles, her industries and natural resources cut off by suicidal divisions of race, her money absolutely worthless, she presents a sad spectacle that can only be lightened by the force of economic gravity.

For Austria has reached the regrettable stage where her finances are on a foreign money basis. Her crown-piece or crown-paper is worthless. Her citizens, their pocketbooks wrecked for a year by the purchase of one item of outer clothing, are despairing. The country is the sore spot of the Continent. Tallyrand pointed to it with prophetic finger at the close of the Franco-Prussian war as the ultimate breeding place of European turmoil, Swayne and those with whom he discussed these matters recalled.

That what is true of Austria applies in some lesser degree to Russia, Swayne found to be the consensus of opinion. The conditions there may be compared, he explains, to the change in viewpoint brought about when the hungry, empty-pocketed Socialist is transformed into the man who has possessions of worth and prospects of accretions. Lenin and Trotsky, having perpetrated the roles of property owners of huge resources, find themselves changed. Yet between them and the peasant, who by animal forces is able to wrest life from the soil if allowed to do so, stands the rapacious band of Communists, ready at the least indication of weakening on the part of the dictators, to turn their bayonets against their late rulers and plunge Russia again into the chaos of revolution.

Referring again to the possibilities of export trade in Russia through the peasant, Swayne was told that the one group of commodities Russians might hope to use as an entering wedge in the field was foodstuffs. This alone she can produce. Mineral and other sources of possible export material are closed because of lack of organization. But the peasant could raise more than enough food to satisfy his own wants and at the same time offer more as the nucleus of a bid for income from the world.

In view of these facts, therefore, Swayne found that the men who seek to rescue Europe have declared a "hands off" policy for Russia. The laws, that have solved the problems of many another nation in the past that is history, will care for Russia, it is believed, if what for lack of a better name is called Nature is allowed to take its course.

Finally, Swayne uncovered a notable and surprising attitude in regard to the United States on the part of the leaders in European affairs. Briefly, they actually fear a boom in America. The cause for concern, they believe, lies in the great gold reserves now lying in Uncle Sam's coffers. Owning as we do by far the bulk of these reserves, and probably destined to continue them on a parity if not increase them, the effect on Europe of a depression sure to succeed a boom, may easily be sketched.

Far-seeing and unquestionably just in their estimates, these men view with alarm the present tendency in this Country towards a rush to a high peak of prosperity. Greater students, perhaps, of economic history than our younger industrial giants, they know a depression must certainly follow any such unexemplified height in industry's march. When this comes, the long, dogged struggle of the world towards stability will again be in danger of being rendered impotent.

The remedy proposed by European financiers and statesmen is as simple as it is effective. Let the Federal Reserve banks increase rates, thus accomplishing the double purpose of reducing the undesirable and dangerous mountain-top of pseudo-prosperity and filling in to a rational degree the valley of depression that is sure to follow.

"If I would venture advice," Swayne offers, "I would speak thus: If we are bound to carry on this rush to peak business, growing more and more precipitate, let us by all means trim sails for the gale of depression to come. Let us prepare financially, productively and in every other manner for the ebb tide. Then, when that time comes, American business will find itself in an enviable and safe position, well designed to ride out the storm without danger of a catastrophe."

Airplane Engine Makes a Record

Two hundred and fifty hours without making a stop is the record achieved by an engine which has been tried out at Washington. This machine, an E-2 Wright, on a test block at the Anacostia naval air station made a record in airplane engine performance. Chief value to the Navy in its use lies in extending the range of scouts.

California Registration Increases

Registration of automobiles in California increased 136,385 during the year ended July 31, 1922, according to a statement issued by the director of the State Motor Vehicle Department. There were 708,097 machines registered for the period from February 1 to July 31, 1922, as compared with 571,712 for the corresponding period in 1921. In the 1922 period, 35,187 trucks were registered.

Star Seen by 32,000 People

During a single day last week 32,000 people from Minneapolis and surrounding parts reported seeing a new star. The occasion was the local state fair, and it is almost needless to add that the event that occasioned remark was the first showing in Minnesota of W. C. Durant's new car.

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PLAN TO DISCONTINUE BEARINGS SERVICE CO.

Timken, Hyatt and New Departure Concerns to Establish Different Service Distribution December 31—Decision by Mutual Agreement.

After six and a half years of existence, the Bearings Service Co. will be dissolved as an active organization on December 31, 1922. The Company since its inception has acted through 32 direct branches and approximately 1,000 distributers as the service department of the Timken Roller Bearing, the Hyatt Roller Bearing, and the New Departure Mfg. companies.

The decision to discontinue the concern was reached by mutual agreement of the companies it served. The attitude of those involved is set forth as follows:

"Although the same mutually friendly attitude exists among the manufacturing principals through whose efforts the Bearings Service Co. was brought into existence, with automotive service activities and policies becoming more and more important in the industry there has been a growing and mutual realization between the Timken company and the General Motors Corp., that the best ultimate goal would be secured by each through a separation of their bearings service program. To this end on and after October 1, 1922, the servicing of Hyatt and New Departure bearings will be handled by the United Motors Service, Inc., and a new company, to be known as the Timken Roller Bearing Sales & Service Co., will care for the servicing of Timken bearings.

"Until January 1, 1923, when the new Timken company will be in operation, the Bearings Service Co. will continue the servicing of Timken bearings as heretofore at all its 32 direct branches. In addition, in any of those cities where the United Motors Service, Inc., does not have branches the Bearings Service company's branches up to January 1, 1923, will sell for service Hyatt and New Departure bearings.

"To indicate the continued mutually friendly attitude in service affairs between the manufacturers of Timken, Hyatt and New Departure bearings, the United Motors Service, Inc., will appoint as service distributers of Hyatt and New Departure bearings, the direct branches of the Timken sales and service company in cities where the former has no direct branches and conversely the Timken company will appoint direct branches of the United as its service distributers for Timken bearings in such cases.

"These arrangements will result in the public obtaining just as good if not better, service than has been available in the past."

General Motors points to the fact that Hyatt and New Departure will not represent an entirely new activity for the United company. R. S. Lane, who is president of the last-named concern, was for seven years chief engineer for the motor bearings division of Hyatt and subsequently for four years president of the Bearings Service Co. United Motors Service was incorporated in October, 1916, and now operates through 21 direct branches and approximately 4,000 distributers and dealers.

Lincoln Receiver Files Report

As receiver for the Lincoln Motor Car Co., the Detroit Trust Co. on September 5 filed in the Federal court a report covering its control from November 8, 1921, until August 1, 1922. Sales of cars and other articles brought gross returns of $634,810 against which were $478,038 disbursements. This was aside from the $8,000,000 bid of Henry Ford against which there were disbursements of $2,921,282. The report covers 28 typewritten sheets, covering the history of the Company to date, and 20 pages of schedules.

R. B. Cole to Become Benedict

R. B. Cole, vice-president of the Hudson Motor Car Co. of New York, is receiving congratulations on his approaching marriage to Miss Florence McCullagh. The ceremony will take place September 9, with Harry S. Houpt, president of the Company, acting as best man and several members of the Company's sales staff officiating as ushers.

VerLinden Named in New Car Project

Michigan reports connect the name of Edward VerLinden with the production of a new car. VerLinden resigned as president of the Durant Motor Co. of Michigan about six weeks ago and was succeeded by Carroll Downes. It is understood the legal difficulties in which he was involved with the General Motors Corp., following his resignation from that institution, have since been composed.

Dodge Brothers Adds Another Building

A new manufacturing building is to be added to the plant of Dodge Brothers, it was widely reported during the week, as a means of raising capacity to the point indicated by the present demands of dealers. The addition will have 500,000 square feet of floor space and will cost in the neighborhood of $1,500,000. The new facilities will permit an increase in output from 650 cars a day to more than 800.

Color Made Trademark

Of interest to automotive parts makers as well as the industry in general is the decision reached by the United States patent office, and announced this week, that a patent on the combination of painting of red handles and black heads of its axes, sledges, hatchets and files had been granted Fayette R. Plumb, Inc., Philadelphia. The evidence included affidavits from jobbers and buyers to the effect that these colors were a recognized means of identifying Plumb tools.

AUGUST BREAKS MORE WILLYS CO. RECORDS

Overland and Knight-Engined Models Shipped During Month Total 14,007—Best Thirty-Day Period Since June, 1920—September Promises Much.

Despite unusual production, Willys-Overland, Inc., reports that its dealers are still oversold and clamoring for deliveries. August, having proved itself the best one in the history of the organization, saw 14,007 cars shipped, the figure, of course, including Overland and Willys-Knight automobiles. Deliveries during the month were greater than in any thirty-day period since June, 1920, when 14,033 were sent out to their new owners.

The largest August business previously recorded was in 1917 when 11,718 cars were shipped. It is interesting to note that of the 14,007 sent out by the factories the past month, 2,800 were shipped via the drive-away route.

And the demand does not lessen. September 1 saw a boatload of 200 Overland and Willys-Knight cars shipped to Buffalo. Of these, 105 were closed models. The demand for sedans, coupes and other like bodies is thus demonstrated and the Company declares that more and more dealers are making a larger part of their demands for this type.

Meanwhile, the production department of the Company announces it is its intention to make all possible provision for meeting the brisk demand. No clouds are seen on the horizon that would indicate any lessening in sales, it is believed, since the normal point of subsidence is now "long passed."

GARDNER PRODUCED 6,300 CARS IN FIRST 7 MONTHS

Company Demonstrates Earning Power in July with $33,000 Net for Month

Gardner Motor Co., St. Louis, produced 6,300 cars in the first seven months of this year. Thus the Company came near doubling the 3,800 turned out during the entire 12 months of 1921, and more than equalled the 5,400 produced in the banner year of 1920. Whereas a year ago there were some 8,000 Gardner cars in owners' hands, today there are more than 16,000.

Net profits of the Company for the month of July were around $33,000. This is at an annual rate of $396,000, which of course, will not be reached this year on account of smaller operations earlier in the year. The earning capacity of the Company when operating at full force is, however, demonstrated. The Company continues in the enviable financial condition that has been one of its outstanding features. For example, cash on hand exceeds $468,000 as against current liabilities, including dealers' deposits and reserves for taxes, of less than $80,000.

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LOCOMOBILE TO KEEP POLICIES UNCHANGED

Durant Contemplates No Variation in Production or Lines—Proposes to Allow Ample Opportunity for Improvements If Needed—Price May Rise.

That no radical change is contemplated either in the policy or design of product of the Locomobile Co. of America is reiterated in a statement issued this week by that concern. The Locomobile, with its 48 horsepower, low-speed, six-cylinder engine and four-speed transmission will continue in production with no further change in body lines except such as may be dictated for "greater elevation of standards."

W. C. Durant, president, assures those who have been instrumental in the development of the car that they will have greater facilities than ever for the continuance of their efforts. "To build an even better, finer car, at an increased cost, if necessary, will be the goal of this group," the statement relates.

That there will be no decrease in price but that an increased figure is not an improbability, is the assertion of the Company. As to marketing, the familiar policy of handling the Locomobile through the Company's own branches will be continued. It is proposed that this system of branch houses will be amplified in the near future by direct dealership in such territory as is not covered at present by the branch house system.

Mitchell Adds De Luxe Equipment

Mitchell cars may now be had with what the Mitchell Motors Co., Inc., Racine, Wis., terms de luxe equipment. This closely follows that of the new five-passenger de luxe phaeton, recently described in these columns, and includes: extra tire and tube, nickeled radiator shell, aluminum step plates, disc wheels, drum-type tire cover, front and rear bumpers, de luxe Moto-Meter, hinged-bar radiator cap, custom headlamps with hand-ground French lens, cowl lamps and ventilator, windshield wings, windshield visor, tail-and-stop-light signal, windshield wiper, built-in tool compartment, mirroscope, clock and Perfection heater. With this de luxe equipment Mitchell "F-50" models are priced: three-passenger roadster, $1,750; five-passenger phaeton, $1,790; four-passenger sport and seven-passenger touring, $1,850; four-passenger coupe, $2,325; and five-passenger sedan, $2,525.

Ford Prepares to Shut Down Plant

Preparations are actually being made to shut down in the Ford plant on September 16, according to latest advices received. Whereas it was rumored during the week that officials of the organization had found a way to bring coal from the Ford-owned mines in Kentucky to Detroit this was denied in an official statement late this week indicating that no solution to the Company's coal problems had been reached. Ford is standing firm in his determination not to pay what he terms "exorbitant" prices for coal, it was emphasized.

1923 Haynes "55" Sport Equipped

Haynes Automobile Co., Kokomo, Ind., has disclosed what it terms the new 1923 Haynes "55" sport models, comprising four body styles—five-passenger sport touring, two-passenger sport roadster, three-passenger sport coupelet, and five-passenger sport sedan. These models will carry the following equipment: six disc wheels, with six tires and tubes, the two extra wheels being mounted on the sides of the body; aluminum bars at rear of body and trunk on rack; nickel-plated radiator with ornamental radiator cap and Moto-Meter; visor; windshield wings on open models; front and rear bumpers. Open cars are trimmed in brown Spanish leather and come with an option between black or rubberized khaki top.

GRAY SENDS SOLID TRAIN OF 40 CARS TO NEW ENGLAND

After Nine Months Company Reaches Production of 20 Car-Loads Daily

With but little less than nine months of history as an active producer back of it, the Gray Motor Corp. has reached a point in its output schedule where on September 4 it shipped a solid, 40-car train-load of automobiles to its New England distributer. The shipment represented two day's output.

To care for the increased production, the management reports, construction of new units is being pushed ahead at the Gray factory. One new building was finished the week of August 28 and the erection of others is being rushed. Loading from the new building is handled by depressed tracks running from Detroit Terminal Railways.

Davis Adds to Equipment Furnished

Additional equipment is now included on the lighter six Davis model "71" phaeton and model "74" sedan, which list at $1,295 and $1,795 respectively. As now shipped by the George W. Davis Motor Car Co., Richmond, Ind., the five-passenger phaeton is finished in either midnight or royal blue, and equipped with either aluminum steps and skirt fenders or with regular running boards. Snubbers front and rear, polished aluminum luggage rods on the rear body panel, front bumper, and brown Spanish leather upholstery are now standard also. The sedan equipment has been enlarged by the addition of snubbers front and rear and front bumper. Individual steps, skirt fenders and luggage rods always have been standard on this body.

STEARNS SIX SPEEDS BUSINESS DECIDEDLY

Plant Now at Capacity—Reception of New Offering Justifies 50-Percent Increase in Output—Car Selling on Merits—Four to Be Continued.

Its new six-cylinder Knight-engined car has given a decided impetus to the business of the F. B. Stearns Co., Cleveland. Production is now at capacity of the plant, and from the way in which the quality of the response to the offering has been tested, the Stearns company feels entirely safe in proceeding with plans that will permit a 50 per cent increase in output. The larger business is discovered to be coming both from established distributing channels and from new territories which have been opened in parts of the Country where representation of proper caliber has been found available.

In view of the time and manner of the introduction of the new Stearns product, the Company has not only a gratifying but an accurate estimate of the car's drawing powers. First published disclosure of the six was made at what is traditionally the end of the brisk Spring selling season. It therefore came into the market at a time when it would sell purely on its own merits, and on those implied in anything bearing the Stearns nameplate. The immediate flood of orders, and of inquiries from prospective dealers, was the answer.

The Stearns plant is working on a 14-car daily schedule. At present this is all devoted to production of sixes. The four, for which Stearns has been known in the trade so long, however, is to be continued, as was promised at the time of the newer car's presentation, and a sufficient portion of the schedule is to be devoted to this to keep suitable pace with the market. As manufacturing arrangements can be made it is planned to jump the total output to 20 cars daily.

Cadillac Building Railroad Dock

As an improvement to its plant the Cadillac Motor Car Co. is building a railroad loading dock along the inner belt line of the Michigan Central which will be one of the longest in the city. It is made of steel and concrete, is 702 feet long and 22 feet wide and will have a capacity of 30 railroad cars at a time. Ninety automobiles can be loaded at each "spotting" of railroad cars.

Oakland Tells Dealers of Flat Rate

To institute a flat rate system of charges throughout the whole Oakland service organization, the Oakland Motor Car Co. has sent to all its branches, distributers and dealers in the United States a copy of a booklet entitled "The Oakland Flat Rate System." This book represents the culmination of years of intensive experimental work in the standardization of service operations.

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NEW PEERLESS GETS ROUSING RECEPTION

Praise and Congratulations Pour Into Collins' Office from All Over the Country—Other Makers and Dealers Join In with Distributing Force.

Praise for the new Peerless is flowing into the office of R. H. Collins, president of the Peerless Motor Car Co., Cleveland, from all over the Country. Congratulations are being received from other car manufacturers and their distributers and dealers as well. Needless to say, the Peerless distributing organization, in view of taking the entire scheduled output on the car's first showing as recorded in these columns, is particularly enthusiastic about the new offering.

"I have just had a ride in the new Peerless four-passenger touring-phaeton," wired one well-known automobile builder, "and I want to congratulate you and your engineers on this wonderful product. Your organization, with its record of remarkable success in the past, has excelled itself in the creation of this new line of cars."

"It looks and rides exactly what you might be expected to develop, and, therefore, it does you credit," wrote a nationally-known figure who merchandises another make of car.

A prominent bank official writes: "You and your associates have produced a car which suggests great strength and endurance without the least appearance of clumsiness to mar its beauty. The appointments and the accommodation plans show careful study of the owner's comfort and requirements. The body lines are so conservative and sensible that the design should last for years without becoming old-fashioned. With its excellent power plant, I feel perfectly sure that you have something which—managed under the same good sense you have shown up to this time—will make the Peerless Company a great institution, and this product is something you certainly have a right to be proud of."

The field organization was also quick to report enthusiasm. "Entire organization congratulates you on the new Peerless," wired Chicago. "We have had over 1,200 visitors. Every motor car dealer has been in and words cannot express their praise, but all of them said the new car will be a winner. Those who have had demonstration marvel at its performance and running qualities. We have yet to hear one suggestion or criticism. Old Peerless owners are much pleased with the changes you have made. Our orders so far indicate that our year's allotment must be increased."

From Boston: "Every dealer in New England joins in expressing complete satisfaction with the new car and congratulating you on its quality, style and finish."

"The new Peerless has taken Buffalo off its feet" reads another telegram. "It is the biggest sensation of many years. Showroom crowded until 11:30 at night. All dealers and salesmen in town offered congratulations."

"Have already had two thousand people in salesroom. Public giving car very enthusiastic greeting," wired Los Angeles. New York, Philadelphia, Kansas City, St. Louis and San Francisco sent similar telegrams.

One distributer, who drove a new car over the road, wired: "You have worked wonders in the matter of riding and driving qualities. My drive home gave me an excellent opportunity to try it on all kinds of roads and under all conditions and it performed one hundred per cent plus."

Particularly gratifying to those concerned was the reception accorded the new car by the public of Cleveland, where Peerless has long been a home-town favorite. The retail sales force there reports that the old car owners were most emphatic in their expressions of approval. The new line was first displayed there Wednesday, August 23, and before night, without public announcement by printed word of any nature, crowds began to collect in the showrooms. Some expressed the opinion that it was the biggest day by far that the line has ever had in Cleveland.

Factory reports from other large cities indicate a similar occurrence. In Detroit, for one, where a new branch has been opened, a new model was sold on the day the first advertising appeared and before a single car had reached the city.

MACK TRUCK SALES SMASH SUMMER TRADE PRECEDENT

Deliveries in July and August 80 Per Cent Greater Than a Year Ago

Contrary to the precedent of a mid-Summer recession in sales, deliveries of Mack Trucks, Inc., in July and August of this year were 80 per cent greater than in the same months a year ago. In the same two months in 1921, when the truck industry was in process of readjustment, the Company showed a loss of about $100,000, whereas this year profits for the two months, after depreciation and other adjustments, are expected to exceed $700,000.

In the first six months of the current year, net earnings of the Company were $1,570,632. Earnings for the first eight months, it is estimated, will increase this by about 50 per cent. Outlook for the balance of the year is reported as favorable.

Sees Chicago Trade Normal

Dashiell Motor Co., Dodge Brothers at Chicago, reports rate of current sales as almost identical with that of last year at this time. Business conditions in the automobile market in the territory are about normal, C. R. Dashiell, president, reports.

FORD FILES ANOTHER RECORD OF FINANCES

June 30 Statement, Entered at Lansing, Shows Gains Made in Resources Since April 30—Latest Cash Figure Given as in Excess of $145,900,000.

Closely following filing of a statement of financial condition as of April 30 at Boston last week, the Ford Motor Co. entered a balance sheet of June 30 at Lansing, Mich., on September 2. A comparison of the two tabulations reveals a growth in assets of approximately $9,000,000 in the interim.

Differing slightly in method of presenting the data it is not possible to accurately compare the cash and debts receivable items. It may be recorded, however, that whereas on April 30 this totaled $148,615,334, on June 30 cash on hand and in banks is given at $145,985,669. Too much significance should not be attached to this huge sum in eminently liquid form for, as has been pointed out, the sum is practically necessary that the business may be carried on in its present plane. On February 28, the Company possessed $109,000,000 in cash and since the total of cash and debts receivable is carried at the total of $148,615,334 as it is in the statement dated April 30, it is permissible to estimate that cash grew something like $30,000,000 in the two months elapsing to June 30.

Discussion of the Ford statements has brought forth the prediction that gross business for 1922 will exceed $700,000,000 if the threatened closure of the factory is not carried out. Net, it is said, should be at least $75,000,000. The deductions are arrived at by comparison of February 28 position and that of the year 1921. It is thereby discovered that for the ten months ended in February profits were $58,000,000. For the ten months ended April 30, 1921, this item was only $17,000,000, assuming that depreciation allowances were equitable and no dividends distributed.

Ford's Suppliers Shut Down Too

Medina Mfg. Co. and Henry Foundry Co., Medina, Ohio, have received cancellation orders on all Fordson tractor flywheels as a result of the contemplated closing of Ford plants September 16. Daily production of 500 flywheels is involved and about 100 men are affected. Simplex Mfg. Co., Kansas City, which makes floor boards for the local Ford assembling plant, has laid off 50 men, following Henry Ford's declaration, and 20 more will follow when orders on hand are filled.

Rhue Sees Good Fall and Winter

John A. Rhue, treasurer of the Indiana Truck Corp., has just returned from a trip through Missouri, Kansas, Oklahoma and Texas. Conditions were such as to cause Rhue to predict a good Fall and Winter business.

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PRIVATE QUOTATIONS

Quotations of some of the inactive securities of concerns allied with the automobile industry are printed below. These are shares seldom if ever quoted in the more central stock exchanges. The prices in some instances represent "last known sales," and in others are merely nominal as the amount of trading in them is insufficient to constitute a recognized market. Publication of the figures, therefore, merely constitutes a record of the existence and appraisal of the issues.

	Quotations
Acme Motor Truck Co., pfd.	$10
Acme Motor Truck Co., com.	14
Acme Rubber Mfg.	180
Akron Rubber Mold & Machine Co., com.	160
American Bronze Co., pfd.	100
American Bronze Co., com.	100
American Hardware Corp.	175
Anderson Motor Co., pfd.	10
Anderson Motor, com.	10
O. Armleder Co., com.	10.64
O. Armleder Co., pfd.	100
Auburn Automobile Co., com.	34-45
Auburn Automobile Co., pfd.	92-95
Automobile Screw Products, com.	115
Avery Co., ccm.	110
Avery Co., pfd.	100
Baker, R. & L., Co., pfd.	100
Baker, R. & L., Co., com.	110
Bessemer Motor Truck Co., pfd.	100
Bessemer Motor Truck Co., com.	15
C. L. Best Tractor Co., com.	350
C. L. Best Tractor Co., pfd.	93.50
Becker Brothers, Inc., pfd.	100
Bijur Motor Appliance Co., 1st pfd.	100
Bijur Motor Appliance Co., 2d pfd.	100
Black & Decker Mfg. Co., com.	25
Black & Decker, pfd.	25
Bock Bearing Co., com.	125
Bock Bearing Co., pfd.	100
Bower Roller Bearing Co., com.	13
Brieze Mfg., com.	7.50
Brewster & Co., Inc.	100
Champion Motors Corp., pfd.	10
Champion Motors Corp., com.	5
Collier Motor Truck, pfd.	10
Collier Motor Truck, com.	10
Continental Guaranty, com.	90-100
Continental Rubber Works	100
Clark Equipment, pfd.	100
Clark Equipment, com.	100
Corbitt Motor Truck, pfd.	95
Corbitt Motor Truck, com.	50
Dissinger, C. H. A., & Bro., com.	100
Double Fabric Tire Co., com.	75
Double Fabric Tire Co., pfd.	100
Duplex Truck Co., com.	11
Durston Gear Corp., com.	100
Eclat Rubber Co., pfd.	100
Eclat Rubber Co., com.	15
Corcoran-Victor Co., com.	15
Corcoran-Victor Co., pfd.	90
Corning Glass Works pfd.	100
Covert Gear Co., Inc., com.	100
Covert Gear Co., Inc., pfd.	100
Cowles & Co., com.	25
James Cunningham, Son & Co.	125
Cupples Co., 2d pfd.	100
Cupples Co., com.	100
Cupples Co., 1st pfd.	100
Edmunds & Jones, pfd.	120
Edmunds & Jones, com.	30
Electric Storage Battery Co.	100
Elkhart Carriage & Motor Car, "A" pfd.	100
English & Mersick, com.	100
Fageol Motors, pfd.	10
Fageol Motors, com.	10
Falls Rubber Co., com.	200
Federal Motor Truck, com.	28
Frick Co., 20,000 com.	76
G. & O. Mfg. Co.	179
Gates Rubber Co., pfd.	100
Grand Rapids Tire & Rubber Corp., com.	50
General Tire & Rubber, 7% pfd.	95
General Tire & Rubber, com.	210
Guaranteed Liquid Measure Co.	10
Hanson Motor Co., com.	100
Hanson Motor Co., pfd.	100
Harris Oil Co., com.	100
Hayes Wheel Co., com.	19-20
Hayes Motor Truck Wheel Co., com.	100
Haynes Automobile, pfd.	100
Haynes Automobile, com.	100
Hawkeye Tire & Rubber Co., pfd.	24
Hawkeye Tire & Rubber Co., com.	20
H. C. S. Motor Car Co., pfd.	100
H. C. S., Motor Car Co., com.	100
Hanes Rubber Co., pfd.	98
Hanes Rubber Co., com.	8
Hicks-Parrett Tractor Co., com.	10
Hicks-Parrett Tractor Co., pfd.	10
Holly Carburetor Co.	138
Hood Rubber Co., pfd.	97-98
Hood Rubber Co., com.	50

FISHER BODY MAKES REPORT FOR QUARTER

Surplus for Three Months Ended July 31, Exclusive of Ohio Company, Is $1,733,433—$521,197 Ahead of 1921 Period—Ohio's Surplus $588,789.

Fisher Body Corp. and subsidiaries, exclusive of the Fisher Body Ohio Co., reports for the three months ended July 31, 1922, surplus of $1,733,433 after charges and Federal taxes. This showing compares with a surplus of $1,212,236 returned in the corresponding three-month period of 1921.

Consolidated statement of the Fisher company and subsidiaries for the three months ended July 31 compares with statements for the same periods in 1921 and 1920 as follows:

	1922	1921	1920
*Net earnings,.	$2,137,036	$1,720,643	$3,673,642
Interest	166,994	227,587	283,299
Fed. taxes, etc.	236,609	280,820	1,168,790
Surplus	1,733,433	1,212,236	2,221,553

*After repairs, maintenance and depreciation.

Net earnings of the Fisher Body Ohio Co. for the quarter ended July 31, 1922, are reported as $588,789. Provision of $21,375 for interest and $72,138 for Federal taxes, left a surplus of $495,276.

Jefferson Forge Products, com.	10
Kalamazoo Motors Corp., com.	10
Kline Car Corp.	100
Lexington Motor, 1st pfd.	100
Lexington Motor, 2d pfd.	100
Lexington Motor, com.	5
McFarlan Motors, pfd.	10
McFarlan Motors, ccm.	10
McLean Tire & Rubber Co., pfd.	100
McLean Tire & Rubber Co., com.	100
Majestic Tire & Rubber Co., com.	35
Master Primer Co., com.	150
Master Trucks, pfd.	100
Menominee Motor Truck Co., com.	100-110
Milburn Wagon Co., com.	100
Milburn Wagon Co., pfd.	100
Moreland Motor Truck Co.	104
Nebraska Tire & Rubber Co., pfd.	50
Nebraska Tire & Rubber Co., com.	50
New York Transportation Co., com.	19
Norma Co. of America	100
Odell Rubber Co., com., voting	45
Odell Rubber Co., non-voting	45
Parker Axle Products Corp., pfd.	10
Parker Axle Products Corp., com.	12.50
Parker Tire & Rubber Co., com.	10
Parker Tire & Rubber Co., pfd.	10
Penberthy Injector Co., com.	25
Penberthy Injector Co., pfd.	92-95
Philbrin Corp., pfd.	175
Philbrin Corp., com.	100
Pennsylvania Rubber Co., com.	250
Pilot Motor Car Co., pfd.	100
Pilot Motor Car Co., com.	305
Powertown Tire Corp., pfd.	50
Powertown Tire Corp., com.	50
R & V Motor, "A," pfd.	95
R & V Motor, "B," pfd.	100
R & V Motor, com.	10
Reynolds Spring, "A," pfd.	100
Reynolds Spring, "B," pfd.	100
Salisbury Axle, pfd.	400
G. A. Schacht Motor Truck Co., pfd.	100
G. A. Schacht Motor Truck Co., com.	100
Signal Truck Co.	10
Sewell Cushion Wheel Co., pfd.	100
Sewell Cushion Wheel Co., com.	10-20
Sioux City Tire & Mfg. Co., pfd.	20
Sioux City Tire & Mfg. Co., com.	5
Surety Tire & Rubber Co., com.	1.50
Stanley Motor Carriage Co., 1st pfd.	100
Stanley Motor Carriage Co., 2d pfd.	100
Staybestos Mfg. Co., pfd.	50
Staybestos Mfg. Co., com.	50
Troy Foundry & Machine Co., pfd.	100
Traveler Rubber Co., com.	27.50
Union Switch & Signal, pfd.	75
Union Switch & Signal, com.	75
U. S. Motor Truck, pfd.	100
U. S. Motor Truck, com.	100
Velie Motors Corp., com.	15
Velie Motors Corp., 1st pfd.	60
Waltham Watch Co., pfd.	43
Waltham Watch Co., com.	9½-10

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended September 6. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	21	20¼
*Advance Rumely, preferred	58	58
Ajax Rubber	12⅜	11¼
Allis-Chalmers	59¾	57½
Allis-Chalmers, preferred	100¾	100
American Bosch Magneto	39	38½
Case (J. I.) Plow	6¾	6¼
Chandler Motor	63½	60⅜
Chicago Pneumatic Tool	86	73¼
Cleveland Motors	29¾	26¾
Continental Motors, common	9¾	8¾
Daniels Motor	11½	11
Durant Motors	46½	39¾
Durant Motors of Indiana	15⅛	14½
Fisher Body	113½	112½
Fisher Ohio Body, preferred	94¾	91½
Fisk Rubber, common	12⅜	11⅞
General Motors, common	14½	13¼
General Motors, preferred	86	83½
General Motors, 6% deb.	86	84¾
General Motors, 7% deb.	100	97
B. F. Goodrich, common	35¾	34⅝
B. F. Goodrich, preferred	86	85½
Goodyear, common	9⅞	9¾
Goodyear, pr. pf.	63⅛	63⅛
Grant Motors	50c	50c
Gray & Davis	14⅞	14
Hayes Wheel, w. i.	34½	30½
Hupp Motor Car, common	19¼	18½
International Harvester, new	112	109½
*Kelly-Springfield Tire, common	43½	42¼
Kelly-Springfield, preferred	102½	102
Kelsey Wheel	96	95
Keystone Tire	8⅞	8⅛
Lee Rubber	26½	25½
Lincoln Motors	2½	2⅓
Mack Trucks, Inc.	59¼	55⅛
Martin-Parry	31½	29¾
Maxwell Motors, Class A	59	56¾
Maxwell Motors, Class B	19½	18½
Mercer Motors	2¾	2⅜
Moon Motors	14⅞	13½
Pierce-Arrow, common	12	11½
Pierce-Arrow, preferred	31	29
Reo Motors	13¾	13⅜
Republic Motor Truck	3¼	3
Saxon Motors	3¾	3¾
Stewart-Warner Speedometer	48	46⅜
Stromberg Carburetor	55½	52¾
Studebaker, common	133¾	127½
Studebaker, preferred	114½	114¼
U. S. Light & Heat	1¾	1⅝
U. S. Rubber, common	57½	56½
U. S. Rubber, 1st preferred	105⅜	103⅝
Westinghouse Air Brake	100	99
Westinghouse Electric & Mfg.	64¼	62⅞
White Motors	49	48½
Willys-Overland, common	8	6¼
Willys-Overland, preferred	43¾	38¼

*Par $50.

Prices for automobile securities quoted in Detroit during the week ended September 3 are as follows:

	High	Low
Auto Body	5	5
Charcoal Iron, common	1½	1½
Charcoal Iron, preferred	2½	2
Columbia Motors	3½	3⅛
Continental Motor	9⅛	8⅛
Edmund & Jones, common	24	19½
Ford of Canada	410	378
Motor Products	80	78
Motor Wheel, common	13¾	13
Packard Motor, common	14⅜	14¼
Packard Motor, preferred	89¼	86½
Paige-Detroit Motor Car, common	21	18
Reo Motor (new)	14⅛	13½
Timken Axle, common	29	27
Timken Axle, preferred	89½	86½
Truscon Steel, common	16	16
Truscon Steel, preferred	10	10

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OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended September 6 are as follows:

	High	Low
Firestone	75	70½
Fisher, Ohio	45	40
Goodyear	10¼	9
Grant	⅜	⅛
Grant, preferred	5⅞	5⅞
Jordan, common	175	175
Jordan, preferred	80	80
Peerless	61	59
Standard Parts	4	3½
Standard Parts, preferred	25	16¼
F. B. Stearns	23½	21
Torbensen Axle	26	25
W-S-M, common	40	34
W-S-M, preferred	72	72
Winton, preferred	40	40

Prices for rubber securities quoted in Akron during the week ended September 2 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	75	70½
Firestone, 6% preferred	91	89½
Firestone, 7% preferred	86	81½
General Tire, common	300	250
General Tire, preferred	100	92
B. F. Goodrich, common	36½	34½
B. F. Goodrich, preferred	88	86
Goodyear, common	10	9
Goodyear, preferred	30	28
India, common	75	75
Marathon, common	3	2¼
Mason, common	11½	10
Mason, preferred	56	53
Miller Rubber, common	72	67
Miller Rubber, preferred	98½	97½
Mohawk Rubber	20	10
Mohawk Rubber, preferred	100	75

Fisher of Ohio Declares Dividend

Regular quarterly dividend of $2 a share on the preferred stock has been declared by the Fisher Body Ohio Co. This is payable October 1, to record September 21, and represents the first payment since the expiration of the parent company's guarantee.

Autocar Issues New Shares

One million dollars of its new issue of eight per cent cumulative preferred stock is being offered by the Autocar Co., Ardmore, Pa. This is placed on the market for subscription at $102 per share. Certificates will be issued September 15. Temporary receipts will be issued bearing interest at the rate of six per cent yearly until September 15, 1922.

Muncie Auto Body in Bankruptcy

Bankruptcy proceedings have been started against the Muncie Auto Body & Painting Co., Inc., New York city. The concern manufactures automobile bodies and is located at 512 West 53rd street.

Shafer Bearing to Expand

To provide for expansion of its business, the Shafer Bearing Corp. paid $200,000 subject to $145,000 for the 8.44 acres of land at Grand and 66th avenues, Chicago. The plant is now located at 4500 Ravenswood avenue.

Warner Buys New Process Gear

Considerable speculation was aroused last week and confirmed to an extent this week by the widespread rumor connecting W. C. Durant's name with the delaying of the sale at auction of the New Process Gear Co., last remaining property of the Willys Corp. However, on September 6, T. W. Warner, vice-president of Durant Motors, Inc., and president of the Toledo corporation bearing his name, purchased the Willys unit for $1,904,000, this being $4,000 in excess of the court's upset price. It is understood on unquestionable authority that the New Process company will be made a subsidiary of the Warner Corp. It is not denied that some form of refinancing is contemplated.

Steel Merger Progresses

Financing of the proposed merger of the Electric Alloy Steel Co. of Youngstown and the Atlas Crucible Steel Co. of Dunkirk, N. Y., has been completed, according to those in close touch with developments. It is expected that a call for a stockholders' meeting to ratify the action will be made shortly.

DIVIDENDS DECLARED

Advance Rumely Co.—Regular, quarterly dividend of ¾ per cent on the preferred stock; payable November 2, 1922, to stockholders of record September 15, 1922.

J. I. Case Threshing Machine Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable October 1, 1922, to stockholders of record September 11, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly dividend of 1½ per cent on the debenstock; payable September 15, 1922, to stockholders of record September 5, 1922.

E. I. du Pont de Nemours & Co.—Regular, quarterly divirend of 1½ per cent on the debenture stock; payable October 25, to stockholders of record October 1, 1922.

General Electric Co.—Dividend of $2 on the common stock; payable October 14, 1922, to stockholders of record September 7, 1922.

General Electric Co.—Dividend of 5 per cent on the common stock; payable in special stock of the company on October 14, 1922, to stockholders of record September 7, 1922.

B. F. Goodrich Co.—Regular, quarterly dividends of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Hayes Wheel Co.—Regular, quarterly dividend of 50 cents; payable September 15, 1922, to stockholders of record August 31, 1922.

International Harvester Co.—Regular, quarterly dividend of $1.25 on the common stock; payable October 16, 1922, to stockholders of record September 25, 1922.

Kelly-Springfield Tire Co.—Quarterly dividend of $1.50 on the 6 per cent preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Mack Trucks, Inc.—Regular, quarterly dividends of 1¾ per cent on the first and second preferred stocks; payable October 1, 1922, to stockholders of record September 20, 1922.

Miller Rubber Co.—Regular, quarterly dividend of $2 on the preferred stock; payable September 15, 1922.

Miller Rubber Co.—Dividend of $1 a share on account of accumulated dividends; payable September 15, 1922.

Motor Wheel Corp.—Regular, quarterly dividend of 2 per cent on the common stock; payable September 20, 1922, to stockholders of record September 11, 1922.

Packard Motor Car Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 15, 1922.

Paige Detroit Motor Car Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable October 1, 1922, to stockholders of record September 20, 1922.

Reo Motor Car Co.—Quarterly dividend of 1½ per cent, and an extra dividend of 1 per cent; payable October 2, 1922, to stockholders of record September 15, 1922.

Reynolds Spring Co.—Dividend of 1¾ per cent on the preferred "A" and "B" stocks; payable September 30, 1922, to stockholders of record September 18, 1922.

Timken Roller Bearing Co.—Initial dividend of 75 cents; payable September 20, 1922, to stockholders of record September 11, 1922.

STROMBERG'S SECOND QUARTER SHOWS GAIN

Net Profits of $192,328 Compare with $30,266 for Preceding Three-Month Period—$222,594 Net in First Six Months—Resumes Dividends.

Stromberg Carburetor Corp. of America, Inc., reports for the quarter ended June 30, 1922, net profits of $192,328 after charges and Federal taxes. This is a substantial increase over the preceding quarter when net profits were $30,266. Net profits for the first half of this year total, therefore, $222,594 after charges and tax reserves. According to a statement issued by the directors in connection with the disclosure of resumption of dividend payments, the third quarter is expected to be one of the most successful in the Company's history.

STROMBERG CARBURETOR CO.

Condensed Quarterly Balance Sheets, 1922

Assets	
Cash	$386,316
Liberty bonds	79,685
Notes and accounts receivable	474,101
Inventories	472,389
Investments	7,960
Other assets	13,661
Property and plant	1,931,411
Patents	173,516
Deferred charges	85,779
Total	$3,624,818
Liabilities	
Accounts payable and accrued accts.	$109,606
Federal tax reserve	34,584
Reserve for depreciation	448,079
Capital stock, 75,000 no-par shares, valued at $5 a share	375,000
Surplus	2,657,549
Total	$3,624,818

Income account for the quarter ended June 30, 1922, with figures for the preceding quarter in parentheses, shows: earnings, $327,675 ($134,411); expenses, $86,211 ($92,466); deductions, less other income, $23,136 ($7,679); Federal taxes, $26,000 ($4,000); net profits, $192,328 ($30,266); profit and loss surplus at end of quarter, $2,657,549 ($2,465,221).

Balance sheet as of June 30, 1922, is given in the table herewith. This shows the following comparisons with the March 31, 1922, statement, the latter figures being in parentheses: cash $386,316 ($299,431); notes and accounts receivable, $474,101 ($326,701); inventories, $472,389 ($543,435); accounts payable, $109,606 ($78,981); reserve for depreciation, $448,079 ($442,948); total assets and liabilities, $3,624,818 ($3,373,018).

Directors have declared a quarterly dividend of $1 a share, payable October 2 to stock of record September 18. This action resumes dividend rates in effect from July 1, 1919, to October 1, 1920. In January, 1921, 50 cents a share was paid, and at succeeding quarterly meeting dividend payments were suspended.

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NOTED MEN TO JUDGE "GOOD ROADS" ESSAYS

Secretary Wallace, George Horace Lorimer and Princeton President Named—54 Compositions Reach Final Readings After 250,000 Are Submitted.

Secretary of Agriculture Wallace, George Horace Lorimer, editor of the *Saturday Evening Post,* and Dr. John G. Hibben, president of Princeton University, are to pass final judgment in the national good roads essay contest. This was announced this week by the Highway Educational Board, which coincidentally predicted that the awarding of the four years' university scholarship offered by H. S. Firestone in connection with the contest will be made in time to permit the winner to enter college this Autumn.

From the 250,000 essays which were sent in during the contest, 54 have been selected as the cream and copies of them are now in the hands of the judges. In these 54 are some from as widely scattered points as the Canal Zone, the Philippines, Porto Rico, Hawaii and Alaska. They are all on the subject of "How Good Roads Are Developing My Community."

The Firestone scholarship is intended to defray tuition and reasonable expenses of the student and is valued at not less than $4,000. The successful candidate may attend any college he chooses. State winners of the various sub-prizes were also announced.

PALM TO HEAD DIVISION FOR BISHOP & BABCOCK

Engineer to Be Assisted by Kerruish in Developing Automotive Line

J. V. O. Palm has been made manager of the automotive appliances division of the Bishop & Babcock Co., Cleveland. In this post he will have general charge of research, designing, development and installation of a line of products that is expected to be offered by the concern. His first task will have to do with the thermostat control of water circulation which was disclosed through these columns for June 24, 1922. Palm comes to his new duties from the General Motors Research Corp., where for the past three years he has taken an influential, though necessarily unidentified part in the program of that institution. His engineering training has taken him over a broad field since his early education in technical colleges abroad.

With Palm will be associated Edward P. Kerruish, who has been thoroughly trained in all phases of engineering relations and work. For the past fifteen years he has been identified with Cleveland's automotive industry, much of the time with Peerless, and later as assistant chief engineer with Winton.

McLUNEY BUILDS STRONG ORGANIZATION ON COAST

Head of Peerless in San Francisco Has Completed Pioneer Reorganization

A. K. McLuney, who last March was put in charge of the Pioneer Motor Co., San Francisco, by R. H. Collins, president of the Peerless Motor Car Co., has completed the reorganization of that Company. Collins, as a matter of fact, acquired all the Pioneer stock when he purchased the Peerless plant. With the completion of his personnel, it is seen that McLuney, as president and general manager, has built up around him a capable force. He himself has an established reputation in the trade, having been with Buick, later Studebaker Detroit branch manager and then for seven years Studebaker distributer in central New York State.

The personnel includes E. J. Gilbert, formerly assistant Studebaker Detroit branch manager and assistant to McLuney at Utica, N. Y., as secretary and treasurer. The retail sales manager, W. B. Doan, was formerly manager of the Oldsmobile branch in Detroit, and Paige and Saxon distributer at Portland, Ore. F. L. Kimball, wholesale manager, was connected with Apperson and Cole lines for 14 years. H. R. Schmidlapp, service manager, has had 15 years' experience with Buick, Nash, Kissel and Wills Sainte Claire cars.

The Traffic Problem

IT is an undisputed fact that most automobile accidents—those in which two or more cars are involved—occur at street intersections. Realizing this, some designers of traffic regulations have concentrated to an extent on the problems involved in cities, where buildings and shrubbery obscure the view of the motorist. But the truth of the first statement is not as fully considered as a thoughtful person would be led to believe.

Whatever may be said of New York and Chicago regarding great abuse of public privilege, it is certain that much energy and some thought have been expended in those cities on regulation of traffic. In the matter of intersections, Chicago has forged ahead of the eastern metropolis. A study of accidents made there revealed that the great majority occurred at certain intersections. It was further found that most of these intersections involved a boulevard. Promptly all traffic was ordered to come to a full stop before crossing or entering into a boulevard. This was one of the few excellent regulations ever adopted in the Windy City.

Traffic officers in "plain clothes" make the rounds of these boulevards nightly as well as during the day. The average motorist is never certain that the pedestrian who waits for him to pass is not a policeman. The result has been practically the elimination of accidents at the "corners" formerly the scene of the greatest number of these crashes which frequently cost many lives.

New York has tried similar plans but effectually warded off any good results by apparent oversights. Columbus Circle, at the entrance to Central Park has eight streets giving into it. By judicious regulation the traffic was caused to move all one way around the circle. But the value of that largely was lost through disregard of the fact that three lines of street cars run through the Circle in lines seemingly designed, though not actually, of course, to frustrate and endanger the lives of motorists willing to abide by the regulations. Other examples are numerous.

San Francisco presents a sad spectacle in traffic regulation. Safety islands were adopted as reputed solvents. These, together with lax enforcement of speed laws have made the pedestrian's life and that of the law-abiding automobile driver a matter for speculation. Wandering streets and hilly avenues add to the perils.

Example after example might be adduced without altering the basic idea that in all cities all traffic should stop before entering or crossing main arteries. Only by taking care of these multitudinous small items will the huge bill presented by traffic ever be paid. Only by nipping off, one by one, the abuses that have engrafted themselves on the highways will the traffic problem ever be solved. Only through the solving of the problem will the future of automobile manufacture be assured. And it is a task the manufacturer himself must aid in performing.

You Made It—Help Solve It

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PEOPLE GIVEN PARKS BY DODGE BROTHERS

Eleven Sites Bought and Turned Over to State for Motorists' Playgrounds—Bloomer Calls Traffic Relief Problem for Manufacturers to Solve.

As a memorial to the late John F. and Horace E. Dodge and as a means of affording car owners relief from overcrowded roads, Dodge Brothers has purchased and turned over to the State of Michigan 11 of the finest park sites in the lake district just north of Detroit. Announcing the consummation of the project on September 2, Dodge Brothers explains the latter part of its purpose as an intention to "give motorists places where they may have their picnics, games and bathing without being constantly driven from pillar to post by indignant owners of private property."

Negotiations for the 627 acres of land involved in the 11 sites have been in progress several months. The divisions will be known as Dodge Brothers Parks No. 1, No. 2, and so forth. They are located, respectively, at Island Lake, Walled Lake, Crescent Lake, Cass Lake, Reed Lake, on Hunt road 15 miles from Detroit; near Rochester; on the Huron river drive; on Elizabeth road near Highland and at Horseshoe Lake.

That the problem of affording this relief to motorists is one for all manufacturers to solve, is the opinion of Dodge Brothers. In the letter of offering addressed to Governor Groesbeck, Howard B. Bloomer, chairman of the board of directors, sets the purpose forth in the following language:

"Dodge Brothers, Inc., the manufacturer of the Dodge Brothers motor car, believes that it is the duty of a large industry to not only make and sell an honest product but to strive to demonstrate in some tangible way its appreciation of the public's confidence.

"For that reason its Board of Directors has for a long period studied the peculiar problem brought about by the widespread ownership of motor cars in the so-called 'average family.' This study has convinced it that the very product made and sold by Dodge Brothers and by the automobile industry as a whole has developed an urgent need of places and means of recreation unthought of before the advent of the motor car.

"As the motor car has enlarged the range of pleasure travel for the public it has also put the public in the position of having almost no place to go where it is really welcome. Automobile picnic parties have invaded farms, fields and orchards only to be driven out by indignant owners. They have camped on highways along the lakes of Oakland County in such numbers that Oakland County in its own defense has been compelled to pass an ordinance to prohibit such camping, with the result that thousands of men, women and children from the city of Detroit and surrounding cities and towns who seek health and pleasure each week in automobile trips to the country have found themselves driven from 'pillar to post' and classified as unwelcome guests not only by residents but by county authorities as well.

"Dodge Brothers, Inc., has realized that the motoring public is now seriously handicapped in its quest for the health and happiness that comes from sunshine and open air, and desiring to be a pioneer in a movement to relieve this unfortunate lack of outdoor recreation centers, has tried to provide for the needs of its home city and state by purchasing eleven parcels.

"These parcels giving access to seven lakes and three river sites and which in a few years it would have been impossible to secure, are hereby tendered to the State of Michigan by Dodge Brothers, Inc., for use as public parks in memory of John F. Dodge and Horace E. Dodge, the founders of the business of Dodge Brothers.

"Both John F. Dodge and Horace E. Dodge were lovers of the great outdoors. Had they lived to see the growing need of outdoor accommodations for the motorists who have no summer homes to which they can drive with their families for the week-end, they would have personally provided for such accommodations, without doubt. Therefore the Board of Directors feels that it can establish no finer memorial for these two men than to provide a system of parks which will give health and happiness for all time to thousands of workmen from Detroit and vicinity in whom John F. Dodge and Horace E. Dodge were so intensely interested and to whose welfare they always devoted so much of their time and resources."

CLAIRE BARNES JOINS FORCES WITH RANKIN

Becomes Director of Merchandising with Chicago Headquarters

Progressive enough to secure for the broadening of its activities a man of varied merchandising experience, the William H. Rankin Advertising Agency has made selection of the man in its judgment best suited to the purpose, in the person of Claire L. Barnes. Barnes, accordingly has joined forces with the agency under the title director of merchandising. The move will bring into wider contact with his many friends and former associates one who has served in practically every phase of the industry's productive side.

Barnes was secretary and sales manager of the Detroit Steel Products Co. years ago and subsequently sales manager of the Billings & Spencer Co. Afterward, he had his own company, operating as a manufacturer's agent. He was assistant to the president of the Willys-Overland Co., organized the Barnes Foundry and Manufacturing Co., in Detroit, and more recently has been president of the Merchants Underwriting Corp.

COURIER PLANS BIG THINGS FOR NEW CAR

Figures on 3,000 to 4,000 Output for Next Year—Building Up Distributing Organization — Details of Corporate Structure and Personnel Given.

Plans of the Courier Motors Co., Sandusky, Ohio, call for the building of 750 cars during the remainder of this year. For next year's production, the Company has set for itself a schedule of from 3,000 to 4,000.

To take care of this output, an aggressive dealer campaign is now being started. Forming the nucleus of the distributing organization, the Company has retained most of the old distributers of the Maibohm Motors Co., to whose assets it succeeds. A number of new ones have already been lined up. Production has begun on the custom-built and painted six-cylinder models told of in these columns, under date of August 26, and it is stated on good authority that enough orders are on hand to keep the plants at capacity for several months.

The Courier car itself, while retaining the basic Maibohm body lines, has practically new "inners." Nearly all the principal units have been changed and new features added. Prominent among these are a central tank chassis oiling system operated by a plunger on the dash, and a dry-sump full-pressure engine lubricating system.

The Courier company, according to details now available, is an Ohio corporation with a capitalization of 6,000 shares of preferred stock, and 5,000 shares no-par common. There are two preferred issues—3,500 shares class "A," issued to Maibohm creditors pro rata according to their claims against the Maibohm company as allowed by the courts, and 2,500 shares class "B," of which approximately 700 shares have been sold at par and the balance put in the treasury for future sale. The common shares have been sold to officers and directors of the Courier company and buyers of the class "B" preferred.

Officers of the new company are: A. C. Burch, president, former director of sales and vice-president of the Clydesdale Motor Truck Co.; O. O. Brace, vice-president, president Sandusky Nut Co.; E. E. Ernst, treasurer; and J. G. Pyle, secretary and general counsel. These and the following are directors: E. G. Kirby, vice-president Commerce-Guardian Trust & Savings Bank, Toledo; R. E. Hayslett, treasurer Hydraulic Steel Co.; and N. T. Brotherton, president the Brotherton Co. The Courier company, as related previously, is the successor of the Arrow Motors Co.

The Table is kept up-to-date for you by weekly revises. Are you keeping pace? See pages 355-7.

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TROUBLE'S ANTIDOTE IS FIGHT, WILMER SAYS

Don't Side-Step, He Advises Business Men—It's Bound to Come and Should Not Create Panic, He Believes—Urges Careful and Patient Handling.

Trouble is part of the American business man's life and he must make up his mind not to try to side-step it nor become panicky. This was the burden of an address made by Edward G. Wilmer, president of the Goodyear Tire & Rubber Co., before a group of Akron business men this week.

"We might as well face the fact that we are going to have periods of prosperity and periods of adversity in this Country," Wilmer declared. "Knowing that, we must learn to make these periods less abrupt and less hurtful. We must not be dismayed when trouble comes but accept it as one of the necessary concomitants of business.

"We must face trouble without fear and without side-stepping, and patiently, courageously work our way out of it. We must not let ourselves be stampeded or carried away. Fundamentally America is sound, and there is always a way out that resourceful and unafraid business men will find.

"Another thing we have learned is the extent of the industrial self-sufficiency of the United States. I would not deprecate the importance of export business in the least, nor say to you that if foreign countries are in difficulties we may remain unaffected by it.

"But the past two years have demonstrated that it is possible to build up quite a substantial measure of business and prosperity in America even when conditions abroad are unfavorable. We have a market of 100,000,000 people here at home. We must continue, however, to develop our foreign trade.

"But if business conditions abroad are not auspicious, we needn't throw up our hands and cry 'Quit.' We needn't think that it's no use to go ahead. A great, rich domestic market is at hand and American resources and ingenuity and industry will produce goods to supply that market."

Michigan Show Conference Called

To consider dates and plans for the 1923 automobile show circuit, M. L. Garlock, president of the Michigan Automotive Trade Assn., has arranged a conference of the representatives of dealer organizations in 21 cities. The show meeting will be held in the offices of the M. A. T. A. in the Hotel Addison on September 20.

Rickenbacker Six Makes a Record

Traveling 246 miles on 7.01 gallons of gasoline or an average of 35.08 miles per gallon is the record made by a Rickenbacker six which won the class "G" trophy in the El Centro economy run staged from San Diego, California, to El Centro and return. The car, which weighed 3,120 pounds, consumed one pint of oil on the trip.

Equipment Association Plans Campaign

Preliminary plans for carrying on an educational campaign were definitely arranged by the Eastern Automotive Equipment Association at a meeting held September 5 at the Ambassador, Atlantic City. In so doing the organization is conforming to the wishes of the national Automotive Equipment Association which went on record last Spring as approving such a measure. Motion pictures, it is understood, will be a factor in educating the retailer. Ray Sherman, merchandising director of the Automotive Equipment Association, and Robert S. Stranahan of Toledo, chairman of the merchandising committee, were among the speakers.

Railroad Tests Gasoline Rail Car

Experiments with a new type of gasoline railroad car are being made by the Philadelphia & Reading railway. The car, which is manufactured by a western company, contains a compartment for baggage as well as seats for passengers. If the experiments are successful, gasoline cars may supersede steam trains for local passenger traffic to nearby suburban points out of the Reading terminal.

LIMITED OUTPUT RETARDS BRITISH MOTOR INDUSTRY

Increasing Popularity of American Cars Seen in Larger Sales

Difficulties are still being experienced by the British automotive industry in overcoming troubles caused by the engineering lockout during the first part of this year. Export trade continues to decrease, according to reports received by the Department of Commerce, while imports of foreign cars have steadily increased since the first of the year, despite the 33 1/3 per cent import duty.

United States and Canada remain well in the lead in British imports of passenger cars, which are dutiable, while France and Italy are ahead with respect to complete motor trucks, which enter the Country free. Sales of American cars have improved steadily, the report discloses, and will continue to hold a good market so long as they can give a better value for less money as is true in many instances at present. Recent price reductions are held responsible for satisfactory increases in business.

Truck Carries House Carved from Tree

Mounted on a light motor truck, a one-room house carved from a tree eight feet in diameter has started on a publicity campaign from the State of Washington. This unique display will be exhibited in all sections of the Country.

ANTI-TRUCK ATTACK OVERREACHES ITSELF

Mott, of General Motors, Points to Exaggerated Statements That Hurt Case of Those Who Fight Motors—Highway Damage Not So Great as Painted.

Increasing evidences of a "well-defined movement" to attempt to discredit the motor truck on the ground that it damages the highways has become apparent to C. S. Mott, vice-president of the General Motors Corp., he announces this week. Happily, such propaganda is defeating its own purposes, Mott points out, through exaggeration of facts and mishandling of statistics.

As an instance he calls attention to a Wayne county traction line that placards its cars with information to the effect that a heavy truck damages roads to the extent of one dollar a mile, setting up the inference that shippers should use the traction line rather than trucks since the taxpayer would thereby save the $1-per-mile alleged damage. If this were true, Mott continues, Wayne county roads would have been damaged to the extent of $450,000,000 a year by only 5,000 trucks operating 300 days a year over 300 miles of highway—an obviously ridiculous figure.

"It is perhaps only natural that electric interurban lines, which feel so keenly the freight competition of motor trucks, should feel justified in making a fight for freight business, but they will not get very far by basing their campaign on statements which are not borne out by the facts," Mott declares. "Modern practice in road-making keeps well abreast of the demands made on the roads by increasing volume and tonnage of vehicular traffic. Marked advances in highway construction have been made in the last five years, which have also seen distinct advances in the automobile truck. The modern roadway is well planned and constructed to resist the effects of traffic. Moreover, the cost of maintenance, taken the Country over, is gratifyingly small.

"If all of the anti-truck propaganda is as inaccurate as its estimates of highway damage by trucks, it will not get very far. It should be said, moreover, that the shipper and the truck owner are not the only ones to benefit by highway transportation; the ultimate consumer, who in the aggregate makes up the general public, benefits, too. And, incidentally, the truck owner, shipper and consumer are all taxpayers and bearing a share of the investment in good roads.

"Rapid vehicular traffic is admittedly hard on road surfaces, and heavy loads are hard on any but the very best highways. There is an economic limit to the advisability of spending money on highways of the best type, based upon volume of traffic and other conditions, but not all the roads of the Country have yet been brought to such a state that this economic limit is a very imminent factor."

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PARITY IN PRICES SHOWN BY NEW LISTS

Tires Brought Down to Bed Rock by Competition—Irresponsible Producers, Under Pressure, Face Double Alternatives—Comparison Illuminating.

Competition in the tire business has developed new intensities within the past year or two. The result is a flattening out of such price distinctions as formerly existed with consequent deprivations of the in-between manufacturers of some of the peculiar advantages which they formerly enjoyed, and of which they made the best possible use. Examination of current price lists, therefore, reveals a remarkable similiarity within the range of greatest merchandising activity.

In former years the rapid growth of what are now the leading concerns enabled them to reap comfortable margins of profit through their extensive operations and the manufacturing economies which they were able to introduce. These margins, moreover, instead of being converted wholly into dividends, were turned back into the business and put to work in achieving wider investments in materials and further expansions of production facilities.

While these great concerns were entrenching themselves more firmly, however, the stability which their price lists afforded the market was utilized as a protection under which smaller concerns, operating only for the sake of the immediate return, might lead comfortable and sheltered lives. Many of these, with no thought for the morrow, made no effort whatever to safeguard themselves against the inevitable turn of the market, contributed little or nothing to the improvement of the art, but, instead, squeezed every possible dollar out of current operations, and thus helped to cultivate the impression that tire manufacture was an enormously profitable undertaking, to say the least.

From this impression, arose the great rush of smaller manufacturers into the business. From the same source also sprang a great number of unprofitable promotions, many of which never reached the manufacturing stage, or if they did get that far, at least never became serious contenders in the market.

But in the meantime, the fruits of much research and carefully worked-out plans, projected far ahead, began to take effect. The cord tire entered the arena, consumption immediately fell, since the superior endurance of the cord caused fewer of them to be required to satisfy the needs of the average consumer. Overproduction ensued, and there followed the disorganization of the market which is of familiar and still very recent history.

Another phase of that development was the late adjustment of prices. This was a direct response to economic pressure, since former price lists had pretty generally lost their significance, and retailers were selling their stocks for what they would bring. To restore the business to an orderly condition stabilization of the lists in accordance with actual costs became absolutely essential.

It is significant that when the process was complete and prices had been brought down to bed rock they should fall within an exceedingly narrow range. As matters now stand, profits are obtainable principally through the exercise of manufacturing economies, applied to very large outputs. The roof has fallen on the small but irresponsible concern, and it remains for it to extricate itself as best it can.

Its case is by no means hopeless, of course. There is always the open avenue of making the best possible product, marking on it the best possible price and then going after the quality buyer with an exclusive sales appeal of some kind.

The method is perfectly sound, appeals to a class of customers that is larger than many may imagine, but unfortunately, for themselves, does not appeal to many of those who are affected by the price stabilization of the established brands. Some of the latter, preferring to continue with loose selling methods, careless of reputation, and lacking the strength that lies in a well-organized distributer and dealer system, may find their last resort in producing the cheapest possible product at the lowest possible price, and then discover, to their amazement that their lowest price, by comparison with the general average, is not so very low after all.

TIRE MAKERS RECORD LESS OUTPUT IN JULY

Rubber Association Statistics Reveal Seasonal Slump—Follow Automobile Experience, It Is Pointed Out—Casing Production About 100,000 Behind.

Inventories, production and shipments of tires during the month of July recorded a sympathetic decrease in total figures to be expected in view of the concurrent experience of automobile makers. This is at once apparent on comparing the July statistics issued by the Rubber Association of America this week and those of June, which appeared in AUTOMOBILE TOPICS under date of August 12.

Production of casings ran up to the total of 2,476,636, which may be compared with June's figure of 2,838,890. Shipments were recorded in the two months at 2,695,095 and 3,133,260, respectively. At the same time inventories were cut close to 300,000.

Comparison of the month's experience this year and in 1921, and of June and July last year, it is apparent that the slight falling-off is no more than seasonal. Indeed many items this July show a decrease under similar figures of the same month in 1921. Thus production of casings is practically 100,000 less this year than last and shipments only about 50,000 more. Figures for tubes, however, do not show decreases this year when compared with last. Solid tire statistics about correspond with the ratios maintained last year though the actual amounts are not quite twice those of this year.

THE TIRE BUSINESS IN JULY

	July 1922	July 1921
PNEUMATIC CASINGS		
Number reporting	63	63
Inventory	4,834,106	3,892,037
Production	2,476,636	2,570,524
Shipments	2,695,095	2,757,581
INNER TUBES		
Number reporting	63	61
Inventory	5,675,839	3,122,815
Production	3,068,199	3,020,981
Shipments	3,630,744	3,603,248
SOLID TIRES		
Number reporting	11	11
Inventory	176,375	220,003
Production	71,505	35,123
Shipments	60,425	55,678

HOW LEADING TIRE PRICE LISTS COMPARE TODAY

Sizes	Straight-Side Cords 31x4	32x4	32x4½	33x4½	33x5	35x5	Cord Regular 30x3½	Cord Oversize 30x3½	Fabric 30x3½
Goodyear	26.45	29.15	37.70	38.55	46.95	49.30	....	14.65	12.50
Firestone	26.45	29.15	37.70	38.55	46.95	49.30	12.45	14.65	10.65
Pennsylvania	26.55	29.25	37.70	38.55	47.00	49.30	13.65	15.75*	11.95
Kelly-Springfield	29.80	32.75	42.40	44.00	52.30	54.40	18.95	....	14.90
Fisk	26.45	29.15	37.70	....	46.95	49.30	....	15.85§	12.85
United States	26.45	29.15	37.70	38.55	46.95	49.30	....	14.65	15.60†
Goodrich	26.45	29.15	37.70	38.55	46.95	49.30	....	....	13.00‡
Miller	26.45	29.15	37.70	....	46.95	49.30	13.95	15.95	10.90
Ajax	....	29.15	37.70	....	46.95	49.30	....	14.65	12.50

*6-ply, $21.40. §6-ply. †Chain, $13; Usco, $10.65. ‡"55," $10.65.

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HAS MARKING SCHEME TO FOIL CAR THIEVES

Another Ingenious Chassis Frame and Engine "Sealing" Method Revealed—Non-Changeable Font of Numbers Fundamental Part of Plan.

To the numerous ingenious methods devised for theft-preventing engine and chassis frame markings now under consideration by interested organizations, there has been added one conceived by an engineer whose name is withheld for the present, which has several interesting features. This method, known for the time being as the "Invincible" seal, consists of numerals and code letters, corresponding to the numerals, embedded in the frame and engine base, over which is placed a seal giving the same markings, and on top of the seal is a semi-cylindrical member also bearing the numerals. That this seal cannot be changed without detection and even if it should be changed, that the code letters still remain as a trap for the thief, are fundamentals of the scheme.

Perhaps one of the most valuable features of the plan, for which patents are applied, is a unique font of numerals. These numerals are so shaped to foil attempts at defacing or changing that no one stroke or part of any one number can be used for or changed into any stroke or part of any of the other numerals.

It is of trade interest that samples of various methods for marking frames and engines, including this one, are now being prepared by the Society of Automotive Engineers for submission to the Underwriters Laboratories for testing. It will be recalled that the insurance heads have agreed to make a 20 per cent reduction in theft rates for any method of both frame and engine marking approved by January 1, next, and 7½ per cent for a frame marking itself, or an engine marking itself.

The Invincible seal is here briefly described from a summary presented by the inventor. At a convenient time in the course of manufacture the part to be sealed is temporarily held so that the seal surface is absolutely level. The seal consists of molten white metal which is run onto a machined surface, previously marked, and immediately quenched with a dash of water. On the engine the seal surface is a vertical and forward facing plane of the main engine base or other permanent part, and on the frame the seal surface is a vertical side elevation on the outside of the main side member.

Both the sealed surfaces shall be normally vertical when the finished vehicle is resting on its wheelbase. The molten sealing metal is very sensitive to the law of gravitation and while a seal can be melted off in a few seconds by application of heat, a new seal cannot be run on, it is claimed, unless the seal surface is held rigidly level during the operation, since otherwise the metal will trickle and will not set to look like the genuine one.

The seal surface of the frame is a cleanly machined circular face of about two-inch diameter. On this is punched the factory number of the frame. Say it is "5555." Adjacent, preferably under, a letter is punched for each number. The letters may be selected at random from an alphabet of letter punches, giving millions of possible combinations of letters. Say "S D S D" is selected to stand for "5555." Then both the number and the code letters are registered on a certificate card which is put in an envelope, sealed and the number, but not the letters, put on the outside. The sealer also puts on the envelope the number of the engine that is to go with the particular frame just marked.

The sealer then melts onto the seal surface a stamped-out disc of the white sealing metal, which flows over and adheres to the prepared surface, hiding the number and code letters. Into the molten metal is sunk a half-round hollow piece of copper so that the round surface projects from the seal but its edges are imbedded into the seal. A dash of water hardens the seal, making the frame-surface, seal metal and copper piece as one.

The copper piece has the same number, "5555," on its exposed face. The copper is plated with a white metal so that any attempt to alter the number it bears will expose the red copper. Moreover, the round surface makes any alteration doubly difficult; being hollow no punching can be done against it without distortion. A new number-piece cannot be applied without leaving a trace unless the seal is melted off and the car turned up and held rigidly on its side, or else the car dismantled, to get a level surface to run the molten new seal on.

The engine is sealed in the same manner. Engine and frame certificate cards are filed away in a sealed envelope. The numbers are also stamped in the face of the seal above and below the copper piece.

Should a thief, desiring to change numbers, melt off the seal, and with it the copper piece, the code letters and the numbers are exposed, punched in the seal surface. Should he be able to perform the difficult feat of first standing the car up on its rear end and then turning it over on its side to run new seals on the engine and frame, putting on new number pieces, there are still the code letters left.

Should he change the hidden numbers and code letters on the frame and engine, his new numbers and letters will not agree with the factory records.

ELECTRIC UNIT MEN MEET AT OLD ORCHARD

A. E. A. Members Gather at Maine Resort for Summer Meeting—Realign Association Work—Discuss Standards and Enjoy Themselves.

Strengthening of the organization and further development of its work marked the course of the Summer meeting of the Automotive Electric Association at Old Orchard Beach, Me., August 20 to September 1. The entire active membership of the Association was represented by delegates including executives, patent attorneys, engineers and service managers. All of the more important concerns in the starting, lighting and ignition field are active in the organization, which is recognized as exercising a strong influence for the good of the industry as a whole.

A new development, decided upon at this time, was the partial separation of the storage battery division, which hereafter will act independently upon matters of interest only to members of that particular group. In matters pertaining to the automotive electrical industry as a whole, and directly concerning the application of batteries in automobile starting and lighting, it will, naturally, continue to function with the parent body.

With the growth and accumulated experience of the Electrical Equipment association it has been found that the interdependence of the various electrical units on the automobile constitutes the strongest possible bond of interest between the producers of the several related components. Engineering, service and commercial problems of the several divisions, however, have developed features more or less independent and peculiar to themselves. Thus the work of the Association is held very closely to educational and promotional lines, since it is seldom found possible to establish practices and policies applicable uniformly to the membership as a whole.

An exception is the work of the starting and lighting division engineers. This group has made considerable progress toward the standardization of generator outputs and motor performances, working in conjunction with the Standards Committee of the Society of Automotive Engineers. It is thought that possibly six ranges of performance may be sufficient to cover the entire requirements of the field. Owing to the effects of engine design upon the mechanical features of electrical units, on the other hand, it is thought practically impossible at this stage of development to approach standardization from the standpoint of physical dimensions.

A long-cherished ambition on the part of President A. D. T. Libby, of the Association, was realized when the members gathered at the Maine resort, which was his boyhood home.

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RETAIL SALES FORGE UPWARD IN AUGUST

Dealers Report Business Improved After Slight Slump in July—Rail Strike Must Be Settled Soon to Make Farm Markets Fully Assured.

Gratifying reports indicating a resumption of the upward trend in automobile sales at retail reached AUTOMOBILE TOPICS this week from dealers and distributers in the States of Minnesota, Iowa, Missouri and Nebraska. Without exception it is recorded that an increase in sales during the latter half of August followed the slight dropping off in July and the hesitancy revealed early last month.

Particularly is Iowa experiencing sales indications that point to a comfortable Fall business, somewhat above normal, it would appear, and entirely satisfactory. In this regard the Kruidenier Cadillac Co., of Des Moines, perhaps most concretely expresses the general opinion.

"Talking to a number of bankers from smaller towns," J. E. Stewart, assistant general sales manager, explains, "during the past sixty days, all agree that very satisfactory progress has been made in the liquidation of farmers' obligations. There is splendid business in sight for automobile merchants in central Iowa during the coming Autumn and Winter, but its consummation will depend on the immediate solution of the coal and transportation problems.

"For the first seven months of the present year there were sold and delivered in this county, 3,220 new passenger cars. Sales for June were 494, for July, 587, and for the first 23 days of August, 410. This indicates that August business will exceed that of June and will be only slightly less than July turnover.

"The sales of our Company for the first 28 days of August are in excess of those for the entire month of July and 38 per cent better than our sales for August, 1921. The 'dollars and cents' increase for the first seven months of 1922 as compared with the entire year of 1921 is $32,000. Our present stock of used cars is below normal."

At Minneapolis, the Harrington Motor Co., distributer of the Hupmobile, also sees very good prospects for the balance of the year. Sales so far this year, both retail and in distribution for the entire State save St. Louis county, have been 740 automobiles. This may be compared with a total of 265 for the entire year of 1921.

"We anticipate that in the balance of the year we will sell 75 cars at retail and an equal number at wholesale," W. V. Harrington, president of the Company, declares. "It must be remembered, however, that automobile business in this locality falls off from September 1 to the first of the new year. We have practically no new cars on hand unsold, having been behind from 50 to 150 orders since April until just recently when we caught up. Used car stocks are very low."

Likewise C. W. & W. H. Eckman, Dodge Brothers dealer at Mankato, Minn., experienced a decided trend towards better sales late in August when viewed in comparison with turnover in July. While present rate of sales is considerably ahead of last year at this time, the Company is still behind in deliveries, it is asserted.

"As far as our business generally is concerned, it is at least 300 per cent ahead of 1921," W. H. Eckman finds. "We believe that by next year conditions in this part of the Country will be fairly well adjusted and that we will again enjoy a normal year's business without the fluctuations we have experienced during the past two years. In reference to our used car stock we may say that it is at the lowest point in the history of the business."

The Tate Motor Co., Inc., Dodge Brothers dealer at St. Louis, Mo., finds that, both in relation to its own business and that of other automobile merchants in the city, trade is exceptionally good and that there is no signs of a letdown in the near future. Rate of sales is far in advance of 1921. A little business is being lost through a large number of back orders as yet unfilled because of non-delivery from the factory. A waiting list of bona fide orders of from 500 to 600 is on its books. No used cars are on hand.

Again, in Omaha, H. Pelton, Marmon dealer, finds a marked improvement in August. Indications point to business in the future on a pre-war basis. Both used and new car stocks are reported normal.

Big Durant Shipment to Hathaway

A train-load of 40 steel freight cars transporting 200 automobiles went forward from the Durant plant at Lansing recently to the Hathaway Motor Co., distributer at Kansas City. Other huge train shipments to western distribution interests are planned.

Tells of Closed Car Popularity

Emphasizing the big demand for closed cars, the Overland Waterloo Co., Waterloo, Ia., handling the Willys-Overland and Willys-Knight, reports that its sales so far this year of the latter have been greater on the closed car than on any other. "Our new car sales for the month of August were 300 per cent better than the corresponding month of last year and our used car, 50 per cent better. Our total sales on new cars is 86 per cent better than at this time last year," it is stated on the company's behalf.

SCHEDULE 59 MAKES IN CLOSED CAR SHOW

New York Association Plans for Larger Exhibition This Year—Week to Consist of Special Nights—To Be Held from September 23 to 30.

Fifty-nine makes of closed cars will be on exhibition when the second annual show of that type of automobile opens in New York city on September 23 at the Grand Central Palace under the auspices of the Automobile Merchants' Assn., according to the announcement of that organization. Profiting by last year's experience, the show committee has arranged a more extensive program for the forthcoming affair.

"Civic Night" is planned for the opening. Mayor Hylan and other politicians will be present. On Monday, September 25, the second evening, families consisting of more than eight persons will be admitted free with the "congratulations" of the management. Tuesday will be "Safety Night" with invitations extended to the Gary committee to be present and to speak.

The following four evenings have been dedicated to artists, actors, "society" and physicians, respectively. The Show Committee consists of the following members of New York's "row": Charles H. Larson, chairman, Oldsmobile; Harry W. Gaston, Lexington; William C. Poertner, National, Durant and Star; Hugh Porter, LaFayette and Nash; Lee J. Eastman, Packard; Eugene P. Herrman, Stewart; Harry S. Haupt, Hudson-Essex, and Tom Moore of the Association.

Nash Selling Fast in Boston

Every month this year has shown a great increase in Nash retail sales over the corresponding period a year ago, according to C. P. Rockwell, Nash distributer in Boston. "We never had such a demand," he states. "We never faced such a shortage. During August we have sold at retail more than five times as many new Nash cars as we did in August of last year."

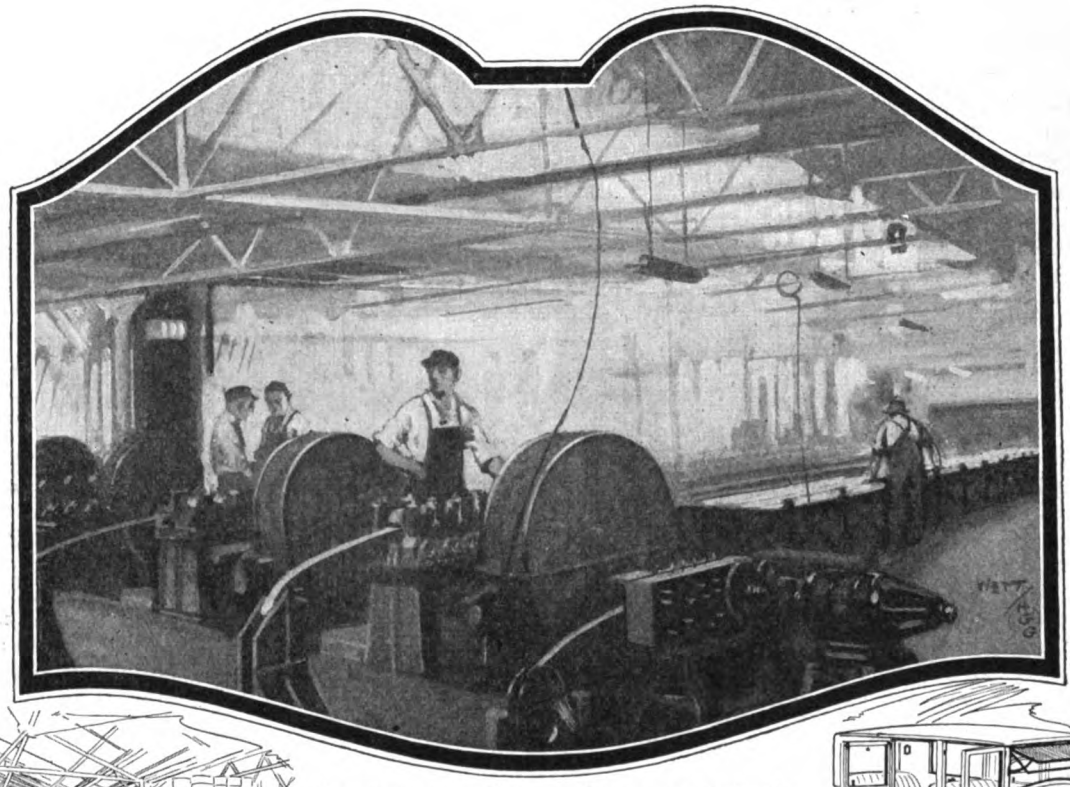
Foley Motor Takes Over Chevrolet

Arrangements have been completed whereby the branch of the Chevrolet Motor Co., in Newark, N. J., becomes the property of the Foley Motor Car Co., of that city. Adequate facilities for expanding Chevrolet interests in that section are assured through the culmination of this sale.

Overland Cleveland Branch Sold

Willys-Overland plant and the land leasehold at 6604 Euclid avenue, Cleveland, has been sold by Goakes & Dettelbach for Willys-Overland Branches, Inc., to Frank N. Riley. Possession is to be given as soon as the concern closes negotiations for a lease on new quarters.

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These immense rolling machines were designed, assembled and are operated solely by Ternstedt men. In no other plant will their duplicates be found.

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A Further Evidence of Ternstedt Cooperation

As in the designing and testing, accuracy rules each step in the actual making of Ternstedt Automobile Body Hardware.

Assembled in the large group of Ternstedt plants is machinery and equipment of ultra-modern type, much of which has been originated and erected by Ternstedt men to fit some particular phase of manufacture.

Guarding the operation of these machines are skilled craftsmen, supervised by men of long experience in the building of *better* body hardware and, in many instances, the building of automobile bodies as well.

It is this combination of seasoned judgment and superior facilities that carries through to consummation the advanced ideas of Ternstedt engineers.

The sincere desire of Ternstedt to co-operate in every possible way with the builder of better bodies is also clearly evidenced by this precision in the production of Ternstedt proved-in-service products.

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London, Eng.

TOM WILLIAMS, Esq.
Moreno 625, Buenos Aires, Argentine Republic, S. A.

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THE TRADE AUTHORITY

Established 1900

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Doubly Efficient

That automobiles are worth just twice as much as they were a few years ago, regardless of what they cost, then and now, is the interesting thought developed from publicity sources. A few years ago, it is pointed out, the automobile was looked upon as a summer season proposition, useful for perhaps six months of the year, and in many sections occasionally usable during portions of another three months. From four to six months of every year it was laid up. Now, however, it is unusual, save in northern parts, for a car to be laid up at all, unless the owner is away from home for a considerable period. They are not only better cars, now, but the user never hesitates to ask them to do whatever he wants, nor question their ability to do it.

Tide Rising

If the present influence and possible effect of the railroad and coal strikes be overlooked, as indeed many business men seem to be overlooking them, there can be no question that the business tide is rising. The influences working that way are numerous, the strongest being the agricultural situation, followed, perhaps, by the gradual, if not marked improvement in European affairs. There may be no other industry as active, comparatively speaking, as the automobile industry is today, but many others are active, nevertheless, though few are anywhere near the peak of activity recorded in 1920.

In addition there are the circumstances that prices for the leading wholesale commodities are rising; the general index number of the United States Labor Bureau for July was about three per cent higher for July than for June. Wages, another important factor, have been increased in the steel industry, while in many other lines they are practically stationary, save that new help is being employed at lower rates than prevail for experienced employes.

All this has provoked more than one inquiry whether another period of inflation is in prospect for this Country. On the periodic theory of business causation, the pendulum should swing backward in 1924 and 1925, following the period of contraction in 1920 and 1921. Perhaps it will.

But there is this to be considered, that the more cautious business leaders are wiser than some of their predecessors in matters pertaining to system and administration; they are constantly studying charts and poring over the reports of professional economists. It is their belief that just as misguided handling of the currency often has led to financial disaster, so failure to anticipate the effects of the business cycle has frequently been the cause of industrial and commercial misadventures. Consequently they are looking ahead and their influence should be weighed in the scale against the possibilities of a secondary inflation approaching boom proportions.

Nevertheless the tide is rising. Nor can any man tell how high it will rise.

As to Margins

A good many automobile dealers are still distressed over the fact that their own profit margins from sales have not kept pace with increasing costs of doing business; at a time when they are expected to spend more in maintaining their businesses than ever before, they find their incomes decreasing, save where they are able to sell many more cars than ever before. With some of them the complaint has become chronic, while with others it is based on logical reasoning.

The manufacturer's point of view is that his dealers must go on selling more cars, as otherwise his own business cannot go on growing, and if it fail to grow then it is virtually on the decline. Hence, any policy that, while giving the customer more for his money, also requires greater activity on the retailer's part is a good policy to pursue.

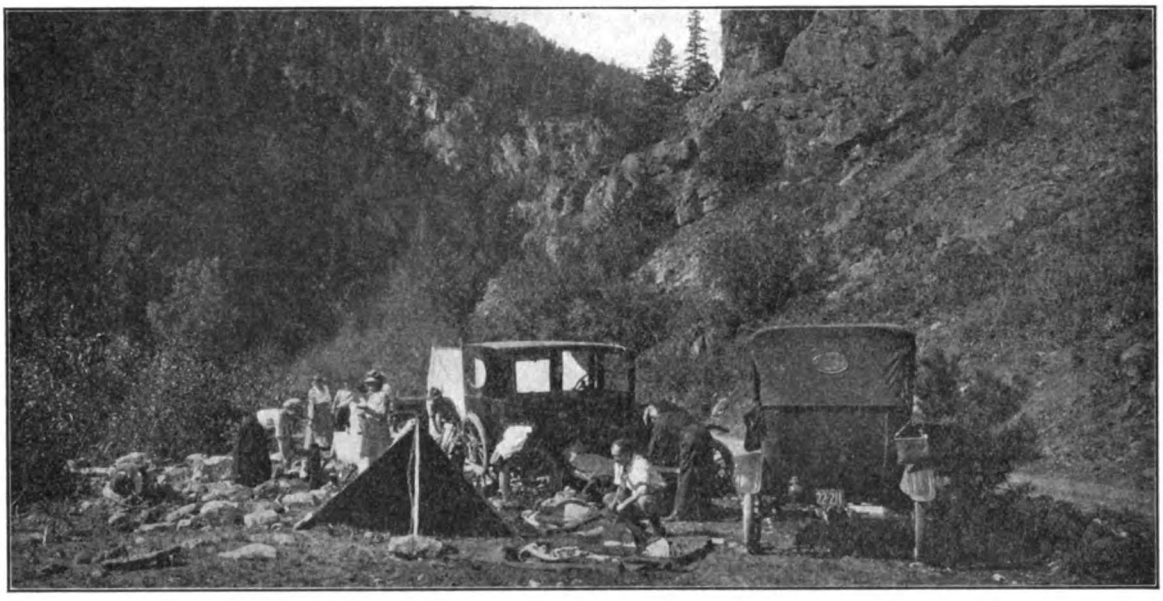
But this may be overdone. The tendency, already noticeable, is for the enhancement of a limited number of already great and successful dealers, and the multiplication of minor associate dealers, who owe no allegiance to the Factory, but only to the distributer. Looking ahead four or five years, when conditions will be even more strained, as far as competition goes, than they are today, may it not be that a condition will be found wherein the big dealer may be possessed of more power than is good for him?

No one can tell. At present, the urge is for dealers who can be depended upon; who will run their businesses with a minimum of reliance on the manufacturer; who will work the market for all it is worth and above all else hold the line against competition. An industry distributing its products through a limited list of large and powerful wholesalers might be better off than an industry having its outlets in thousands of direct dealers. There are many advantages to be counted on both sides. But are the advantages being counted, or is the industry rushing blindly onward?

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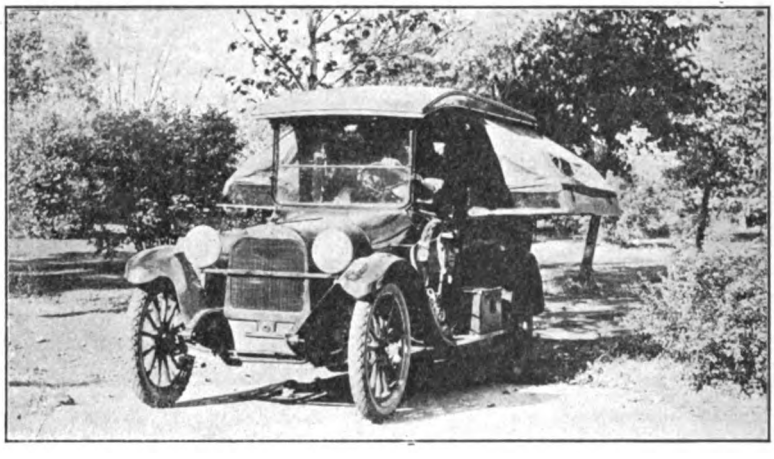
Nature's Beauties Alluring to Cosmopolites

Both East and West Extend Deviations From Daily Grind



That the automobile owner is constantly seeking to get closer to nature is substantiated by the statement issued by the Denver Tourist & Publicity Bureau that 10,830 more people, from both city and rural communities, camped at the Overland Park grounds at Denver, Colo., than were registered in 1920

FOR him who believes in hunting with all modern conveniences, a Dodge Brothers panel business coupe may be equipped with many comforts. Ammunition and provisions may be stored in long, metal-lined boxes which hang underneath the body. The furnishings, with complete cooking accessories, make this car valuable in either hunting or camping





NEW ENGLAND is fast becoming more and more inviting to the tourist. On the return of Leonard and Henry Rothschild, Santa Barbara, Cal., from a double transcontinental trip, they reported that the best roads were encountered in Massachusetts. Perhaps that is reason enough for its popularity with motorists

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Fitting "Made in U. S." to the World

Automotive Needs of Foreign Lands a Subject for Better Thought—Haphazard Days Gone Forever

AMERICAN manufacturers have heard it so many times that it has almost become metamorphosed into a cant. Trade associations time and again have called their members to listen to speeches of which it formed the burden. The subject has been the germ around which extensive growths of classes for business men have sprung. Moving pictures have been made with it as the scenario plot. Rotary Clubs, Kiwanis organizations, the Lions, even women's clubs, have listened to dissertations on it. Yet all this and much more has seemingly had little effect.

What is "It"? Simply this: American exporters must learn to deal rightly with business men of foreign lands.

Happily, American business men in the great majority of cases have realized that honesty and good faith are prime requisites of any trade done with foreign consumers. There was a time when woolen blankets went to Africa, defective machinery landed in South American ports and other equally reprehensible things happened. That day is past. It is no longer profitable, being dishonest.

No, the day of trade abuses has about ended. But—and this is just as important—it is just as ridiculous to send a foreign house something it cannot possibly sell because of racial barriers or geographic differences, as it is to send it materials unsalable because of quality.

It is easy to tell American manufacturers what to do. It is equally easy to tell them what not to do. It is the work of but a moment's thought to discover that American manufacturers are not doing even partially as well as they might with foreign trade because they do not seem to apply much common sense to selling abroad. It is a different matter to conceive a remedy that would apply easily and practically to all export houses. The most practicable of plans is to point out what might be done and urge manufacturers to increase their profits and help establish a friendly cooperative spirit throughout the commercial world by following it.

To repeat the usual accusations against American manufacturers—accusations, by the way, which are pretty well borne out by fact—it is found that they make no attempt to find out whether an article suitable for American consumption will prove acceptable to citizens of other climes. They are accused of sending salesmen who do not possess suitable qualifications for dealing with more ceremonious and older people. It is also charged that they are careless shippers.

These are but few of the qualifications for consistently losing business that are said to be possessed by our producers. They apply—all but the shipping point—especially well to automobile manufacturers.

The Foreign Trade department of the National Automobile Chamber of Commerce has been rightly and highly commended for the exhaustive and valuable work it is doing in its field. Its investigations should be accorded the serious and active consideration of the industry. For the consumption of foreign markets is the differential between over-production and under-production, lost surplus and comfortable bank balances, good-will of the world and ill repute.

The Department of Commerce at Washington persists in its almost thankless task of trying to educate manufacturers in the fundamentals of exporting. Its work is no less valuable than that of the N. A. C. C.

To get down to cases, the American automobile manufacturer crates and ships an automobile from stock. He puts it aboard a vessel and it vanishes from his thoughts. It is nothing to him that a machine costing $1,000 f. o. b., Manufacturersville, U. S., lands in Tokio with a cost tag of $2,000 attached and must be sold at $2,500 to make a profit for the local dealer. It does not occur to him that his automobile will probably not be sold because there are few roads in Japan suitable for more than one car to traverse at a time—in other words, because the car he sent is too wide for rapid disposal in Nippon.

But this is the sort of thing that makes or breaks the American automobile manufacturer as a factor in export. Eventually the racial and topographical characteristics of a nation of prospective motor car users must be taken into consideration when the export man begins operation. The study of what the Italians, the Greeks, the Hindoos, the Persians, the Australians, the Hawaiians, the South Americans want in the way of modifications and amplifications of the American automobile is just as important as the study of how to deal with them on the intensely personal

LITTLE IN MUCH

BY thus turning the age-old saw, multum in parvo, around, a fair idea of what has been and is the result of much talking on the topic of export practices is conveyed.

Much has been said but little has grown from discussion into action. But this is true of any forward-looking propaganda that seeks to improve American business practice.

One thing is certain. There is never any need of despairing. The youth bearing the banner "Excelsior," after giving the populace food for thought on his genial imbecility, disappeared into the great beyond from whence came but a feeble wail of his once vigorous but cryptic remark, because he failed to furnish a blue-print of what he had in mind. AUTOMOBILE TOPICS believes concrete examples, illustrating a thought, are always of value. In the accompanying article some remarks, believed to be pertinent, are given that should be generally illuminative.

Export business as a whole is said to represent about 20 per cent of interstate commerce. That is negligible when totals are in many billions. But that percentage does constitute the variant between prosperity and "hard times." Declining foreign business ruins concerns in that trade. Their bankruptcy affects thousands. The thousands affect the automobile industry. Of this there can be little doubt

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basis that is the outstanding feature of selling anything made in the United States to "foreigners."

Considering first the matter of selection of representatives in foreign countries, it is found that conditions vary widely. And upon proper selection of dealers success or failure depend.

Dr. Julius Klein, director of the Department of Foreign and Domestic Commerce, as related elsewhere in this issue, points to the danger inherent in improper choice of traveling salesmen, sent from this Country. But, of perhaps greater importance is the maintenance of a capable force once it has been gathered.

An important criticism that may be offered with respect to the position of the traveling agent is the lack of continuity of employment. It seems difficult for some American concerns to retain the services of a first-class export man. Better offers from other firms constitute a great temptation, and the result is that many do not have the advantage of employing the same salesman in the same territory for a number of years. It is of the utmost importance that the connections of an export house established by foreign representatives be maintained, and this can best be done by sending out the same agent year after year. It is, quite evidently, a waste of effort to change personnel too often. The first trip must necessarily be one of education more than of definite results in the way of orders. In this connection most American firms have made serious mistakes and, because of their change of personnel, have found that their competitors have taken away a great deal of their trade.

Many firms have been disposed to change their salesman if on the first trip he has not made a great success. This has injured them greatly in the eyes of their customers, who are inclined, for this reason, to withhold absolute confidence from such a house. Even though a first trip does not result in a deluge of orders, manufacturers should be just as careful before dispensing with a salesman's services as they are in employing him. They should ascertain whether his success was less than could reasonably be expected.

Good Salary a Requisite

Furthermore, to obtain the best results, the traveling representative should be paid a good salary, so that he may be contented and comfortable. Cutting down expenses by reducing the income of the man abroad is false economy. First cost as regards salary has been the chief consideration of many firms, with the frequent result that in the end they have paid dearly for their experiment. There should be generous travel allowances, since entertaining is essential in many regions of the world.

It is necessary to supply each traveling agent with a power of attorney clearly defining the scope of his activities—a little more limited as to authority in the case of a new and untried man, a little broader in the case of a man with experience and enjoying the thorough confidence of his principals, if he proceeds to a country where he may have to render quick decisions and to settle disputes.

In a great many countries the power to give a receipt for moneys is not included in the general power of attorney and will not be implied. It must be specifically named. The power of attorney must also contain indications as to how and under what circumstances it may be revoked. Unscrupulous agents have occasionally bound their principals because of an improperly worded power of attorney. The "power" should be prepared by a lawyer.

The Department of Commerce is giving considerable attention to measures to facilitate the work of American salesmen abroad, particularly in the Latin American countries. A bill is now before Congress to give effect to the uniform commercial-travelers treaty, which has already been ratified with seven of the Latin American Republics, by the terms of which commercial travelers of one country will be able to operate in the territory of another simply upon the payment of a single fee and the obtaining of a license which is valid throughout the whole country. The customs formalities on the entrance of travelers' samples are to be simplified, samples without value to be admitted free of all duty.

Certificates of Identification Issued

The Department of Commerce will issue to American travelers the certificates of identification called for by the convention, and it realizes the implied responsibility of promoting the selection of proper American salesmen to represent American business in foreign countries.

Equally perplexing to the American exporter of insufficient experience is the securing of a reputable firm to represent it when traveling salesmen are not used. The situation varies widely in different lands.

To record a few examples:

In Argentina, all depends on the representatives. Importation is a distinct business from distribution and dealership as the latter are not equipped, because of the laws for one thing, to care for official details of clearance. The better plan is vesting of representation for the entire State in a branch or dealer in Buenos Aires and giving him full authority to establish sub-dealers. To introduce a car, the best method lies in obtaining a good dealer in the Capital and leave the matter in his control.

In Bolivia, which, by the way, is a little exploited field, energetic direct dealership is most effective, being much preferred to general importing concerns with agencies in only two or three cities. La Paz distribution is preferable. In some instances garage owners have been found acceptable agents. All supplies should be sent direct from the United States.

In Chile, Valparaiso is the best port for shipment, because it is near Santiago where most American goods are consumed. Storage space is practically adequate. It is vitally important that a financially sound concern be selected as importer-distributer. This because all business is done on 60 to 90 days' credit basis. American firms which refuse to do business in this way can better save time and let the Chilean market go, for even the largest of Chilean firms will quickly transfer their accounts if this evidence of confidence should be refused.

Turning to the Far East, the chauffeur evil is present in its most virulent form in Japan. Selling cars on their merit is almost impossible. Cars are regarded as a stamp of wealth in Nippon, so that few owners care to drive their own machines. To quote N. A. C. C. findings:

"Automobiles are sold on a different basis in Japan than in the United States. Appreciation of difference necessary before introduction of modern selling methods. When a Japanese forms idea to purchase a car he inquires of his friends, but more often of his friend's chauffeur. He does not personally study various cars or catalogs. Motor car salesmen, on the other hand, devote greater portion of their time to cultivation of friendship of chauffeur (the owners of garages act as name getters). Closing of sale is in most cases done on basis

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of friendship. Salesman passes name of prospect on to chief salesman or head of firm. Latter makes acquaintance of prospect, has friendly talk, demonstrates and negotiates and deal is closed.

"Dealers occupy expensive sites in cities on which they have garages and stock rooms. A few small service stations are on these sites. Some dealers opened costly branches in cities where trade doesn't warrant. At present there is but one showroom in heart of business section of Tokyo, which room is partly devoted to machine tools. Dealers hope to open showrooms when business conditions justify.

Few Independent Dealers

"There are few strictly independent dealers in Japan. Either business is handled as a separate department by large import and export houses, or it is incorporated as a separate company controlled by parent company. Latter arrangement very satisfactory from financial aspect as encounter little or no difficulty in financing shipments; larger companies having branches or correspondents in New York. Erroneous impression as to completeness of representation is in some cases given when business controlled through separate department rather than by incorporated company. Large import and export houses maintain branches in principal cities of country and impression is given that motor is well represented at these places. Checking of these branches revealed, as rule, no separate motor organizations were maintained, local representatives being mere order takers. American manufacturers should choose firms operating independently for these have men who concentrate on motor business in case they have branches. There is one American-controlled agency and one European dealer. Balance are Japanese houses, so no choice between native and American firms is offered."

There is much more in this interesting report that could not help but prove highly profitable to exporters considering the Land of the Rising Sun. The foregoing exemplifications of differing practices serve only to give an idea of the great amount of preparation that should be made before attempting exploitation of a foreign country for American goods.

The question of climatic needs in motor cars is equally broad. It is not to be intimated here that manufacturers should make drastic changes in design to care for small orders from abroad. It will be found, however, that minor changes may prove practical when prospective markets are good enough to warrant the differentiation. Also changes suitable to, say, Palestine will also be appreciated in India; lowered gear ratio, needed in Peru, are just as necessary in other mountainous lands.

Here are more examples:

In Egypt, brakes must lock wheels. All license plates must be illuminated at night; when the car is parked, this illumination must be other than electric. White lights in front, red lights at the rear—both of reflector type—must be carried. Use of open exhaust is prohibited. Use of taximeters not approved by the Government is forbidden. There must be nothing in the design of the car to affect the driver's view of the road. All gauges and instruments must be placed so the driver can see them instantly and must be illuminated at night. Cars must be able to turn in a short radius.

In Japan there are no restrictions that necessitate changes in prevalent American designs, although the rules are very strict. In some parts of the Island width between wheels is limited to 40 inches.

In Palestine: Engine, four to six cylinders; ignition, magneto or electric system with storage battery; cooling system, large radiator with pump-driven circulation; lubrication, pump and splash system; transmission and drive, sliding gear and left-hand drive; wheels and tires, wire wheels and cord tires, as wooden wheels loosen up in long dry seasons; control, large internal and external expanding brakes for hilly country. Open touring bodies are most popular. Light canvas tops are frequently preferred, as black shows heavy limestone dust prevailing during seven months of the year.

Terms of payment for shipments form another group of perplexing problems for the automotive exporter. It can only be touched upon here for while certain large areas support peoples having practically the same idea about the time allowed for bills, incidentals vary too greatly. There is, however, no question but that the best of markets built up through years of conscientious work on the part of an American house can be wrecked overnight through injudicious pressure on credits.

In Chile, for instance, Americans must give easier terms than are given in the United States. Conditions requiring the dealer to take so many cars a year is deeply resented. Sixty to ninety days is the usual scheme. In Argentina, sales since the war are usually made on a cash basis, cars being paid for before leaving New York and before shipment to interior points in the republic.

The matter of who shall pay the duties is also brought up from time to time. Conditions of the roads in the various countries is another subject having a direct bearing on the question of what type of car to send abroad. Indeed, in many countries high speed machines are practically useless. In others trucks cannot compete with cheap animal and human labor. As an idea, "by the way," a manufacturer might create a good market by encouraging the use of and cooperating with the manufacturers of road-making machines. Building good roads means building good markets.

Suiting the Machine to the Market

Thus the business varies. To be sure, all markets are not worth the cost of fitting cars for sale therein. But it is advanced that unless these requirements are met, American makers are not only wasting their own energy in seeking to sell cars, but are damaging American prestige abroad. Continental European makers are enabled to more easily fit their products for consumption in other lands, for their output is largely custom work. The few that entertain ideas of American style production have not bothered with foreign markets as yet to any appreciable extent.

The question of the need for cultivation of foreign markets is productive of endless discussion. In the final analysis it is one that must be settled by the individual maker to his own satisfaction.

But it is urged that if an attempt is made to capture markets lying fallow for the American manufacturers' "plow," the attempt should be made intelligently. It cannot so be done until more care is expended in finding out what the other fellow—in this case the "foreigner"—wants when he brings his money to the dealer to look over and possibly buy an automobile "made in America."

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Presents a Radically Different Spring

Laycock Type Eliminates Shackles, Bolts and Bushings—No Lubrication Required—Applicable to Four Types

ONE of the most interesting developments yet made in spring construction is that now being put on the market by the Sheldon Axle & Spring Co., Wilkes-Barre, Pa. Not only is the new method a radical departure from conventional design, but it affords several valuable advantages, principally the elimination of spring shackles and bolts with the consequent elimination of lubrication problems.

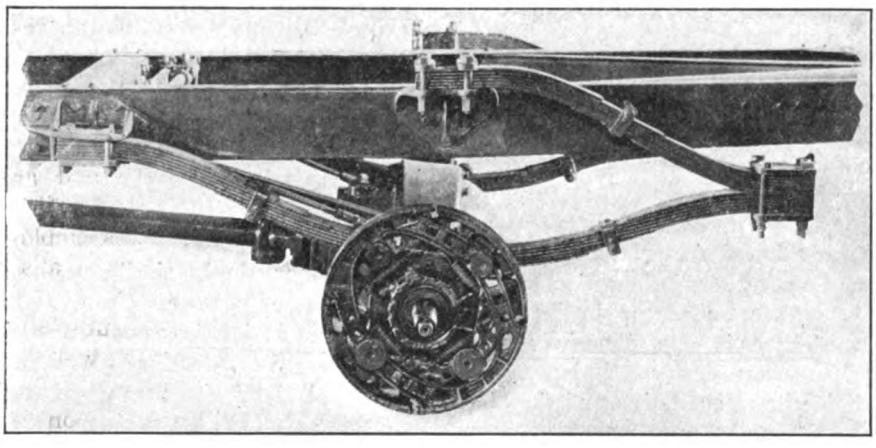
The new spring construction is styled the Laycock spring, so named after the designer, Arthur M. Laycock, chief engineer of the Sheldon company. The design is applicable to four types of springs, namely, full-, three-quarter, and semi-elliptic types, and transverse springs.

Fifteen advantages are claimed for the new springs. These are set forth by Laycock as follows: absence of spring shackles; elimination of hardened ground bolts; no phosphor bronze bushings; absence of lubrication necessity; elimination of squeaks and rattles; progressive loading; simpler assembly and lower cost; driving through six, seven or a multiple of main plates rather than one as in the Hotchkiss drive and two points on the frame as against one in the drive just mentioned; better shock absorbing qualities; more equal distribution of stress; lower level of frame height obtainable; parts are inexpensive and weights easily held within limits of existing design; no oil and grease cups to buy, give trouble or break off; absence of lubrication a distinct asset from user's standpoint and gives a strong selling argument for the dealer; no spring eyes used.

The three-quarter elliptic and semi-elliptic types will take the Hotchkiss drive. The full-elliptic type, however, is said to be better used with torsional tube construction. The latter type can be mounted rigid to the frame and axle as well without any swivel spring seat.

The Laycock principle is clearly shown in the illustration of the three-quarter elliptic type. The full-elliptic spring is similar to this, only in the full-elliptic spring both ends are free of the chassis as is the rear end of the three-quarter elliptic type. In both of these types, elongation is automatically taken care of, as can be readily seen.

The semi-elliptic type is also illustrated. In this type both ends of the spring are connected to the chassis frame, and the method of taking care of elongation is unique. It will be noted that the main plate at "B" is stopped short. This has a few thousandths clearance to allow the proper telescopic motion. The plate "C" is nipped substantially with bolts "DD." This applies also to the transverse spring, the same principles being involved as in the case of the semi-elliptic spring.



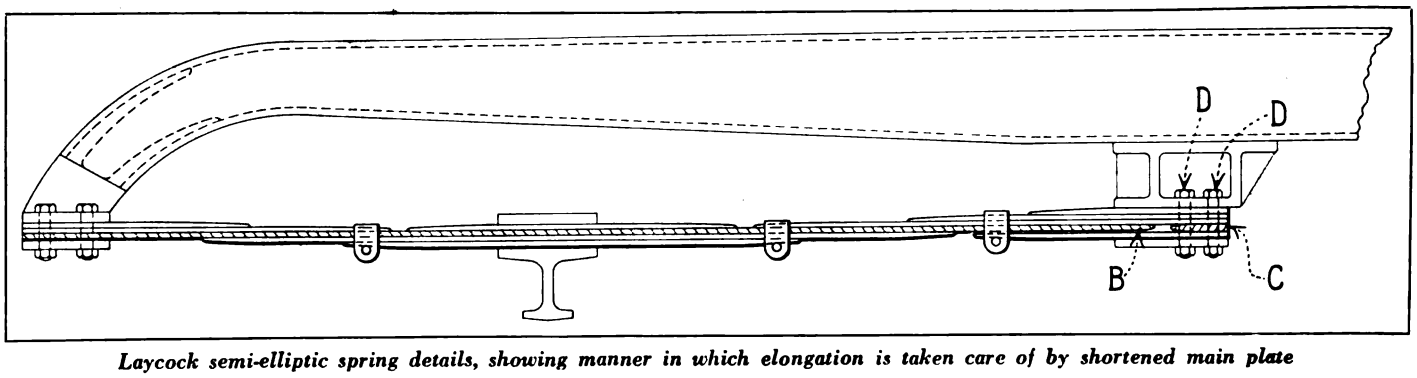
Laycock three-quarter elliptic spring as it is applied on new Indiana truck

In each type the fundamental idea is to put a compound or double sweep in the spring instead of the single bend as in conventional spring practice. This enables utilization of every portion of the steel between the center and outer ends of the spring and gives a more even balance of stress than can be obtained in conventional practice.

It is an admitted fact that longer life can be had with rolled tapered leaves rather than full, thick trap points. The aim, naturally, in spring design is therefore to get as long a taper as possible. But being limited in length by the rolling process, conventional springs are usually compromised in this respect, as the length of the taper is only a small percentage of the length of the spring.

With the new design, on the other hand, ordinary

(*Continued on page 340, first column*)



Laycock semi-elliptic spring details, showing manner in which elongation is taken care of by shortened main plate

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SELLING GOODS AT RETAIL

LABOR DAY has passed—and the Fall season is a reality. The sales tide has ceased any ebb it might have had of late. In its stead there promises a profitable flowing of Fall business.

The next few weeks will be busy ones for the dealer who has made the necessary preparations to get his full quota of closed car sales. In the measure that he has sown and continues to sow in the next few weeks so shall he reap before the snow begins to fall.

* * *

SEASONAL window exhibits are playing a steadily growing part in the activities of the automobile merchandiser. They have been found of real value in putting the public in a buying frame of mind, to say nothing of selling the benefits and pleasures to be obtained through use of an automobile.

Just what rôle the manufacturer can assume in promoting such exhibits is revealed in the proposed plan of the Chevrolet Motor Co.

Each month a seasonal display will appear in the Detroit branch, similar to that portrayed in the following pages. Photographs and descriptions of each display will be distributed to the Company's representatives to aid them in dressing their windows.

"To put the dressing of automobile show windows on a higher plane" is the way the Chevrolet company describes its purpose. Surely a laudable one which should accomplish much in creating a selling atmosphere!

AS "SID" SNYDER SAYS

CARRYIN' out instructions pays. But it pays, too, to know somethin' about 'em. For you never know when you'll be called on to show your intelligence.

* * *

A woman drove up to the Town Square Garage the other day. Wanted to blow up her tires. When she put in 110 pounds someone warned her. But 'twasn't no use. "My husband told me to put in 60 pounds a week," she explained, "and we're going away for three!"

SUBSTITUTION of some other color for the customary red used in tail lamps, has been the subject of considerable discussion of late. That red, by very reason of its popularity in spelling danger has outlived its usefulness, is the point raised by those who have declared themselves for a more distinctive signal.

Whereas nothing definite in the way of a final decision has been produced by such discussion, its effect is becoming manifest. In one of the following pages appears the description of a tail light which features a "green running light" to indicate clear road ahead, a design which follows railroad practice. A red light is employed to warn the traffic behind of a slow-down, a stop, or a turn.

Unquestionably it is a step which will be welcomed by those who have expressed their dissatisfaction in the too common use of red.

Just what such a departure will do in the way of hastening action in the adoption of a standard policy remains to be seen.

Then and Now Is Pictured in an Effective Display



Torbert-McGregor, Inc., Durant distributer in Minneapolis, Minn., tells in its windows the story of Durant's progress from "Just a real good buggy" to "Just a real good car"

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Served with a Dash of Atmosphere

Sales Message Becomes More Palatable to Public Taste, Trade Finds, When Offered in Attractive Guise

A LITTLE dash of atmosphere served with the sales message adds considerably to its palatability. To the automobile dealer who is loathe to admit the truth of this statement, the following experiment is recommended. It may entail a little time and trouble but the lesson learned will more than offset any inconvenience suffered.

Let him take his show window in its natural state, and place in it two or three cars. Then let him station himself in a post where he can study the crowds that pass. Let him spend a few days in close study of the reaction upon passers-by.

He might even go so far as to spend his time making out a chart on which he notes the degree of interest shown. This would tell him how many individuals actually stopped to look in his window—how many simply glanced at it in going past—how many never so much as noticed it.

Just as soon as he has convinced himself that he has given this exhibit every opportunity to "get across," he will get busy and substitute for it another. This second display will involve considerably more time in producing, but as emphasized at the start, the experiment cannot be carried on without entailing a certain amount of work.

His first step is to clear the window of everything. Provided he is conducting this test in the Fall, he sends a couple of his men into the outlying districts with orders to bring in all the dead leaves the car will hold, together with branches and limbs.

Next he gets in touch with a taxidermist and explains to him that he wants some sort of stuffed wild animal—a fox is preferable. He would like the loan of this for a few weeks, in return for which he will be glad to put a printed card in his window acknowledging the loan.

This much accomplished, he stops in at the largest sporting goods house in town with the request that they loan him the figure of a man attired in suitable hunting apparel and equipped with a rifle. He explains what the figure is wanted for, and makes the same offer—that in return for its use he will have a printed sign placed near the figure to the effect that it is supplied by them.

These two matters fixed up satisfactorily, he returns to his store and supervises the arrangement of the window. On the floor he throws the leaves, making a thick carpet. The branches he places about in such a manner as to create the effect of a stretch of woodland. At one side, almost hidden by a pile of twigs and branches, he stands the fox.

At the opposite end of the window is placed the figure of the sportsman, rifle raised in air and aimed at the animal, which to all appearances, is in readiness to make a dive through the thicket. In the rear of the hunter stands an automobile, a few dead leaves lying on the hood. The tonneau has been filled with various items of camping equipment, also furnished by the sporting goods house.

The task of arranging all these details over, the dealer again stations himself where he can watch the reaction of his display on the crowds that pass to and fro. Let him again take his chart in hand and on it record the number of those who actually stop and look—those who merely glance at it in passing, and those who never so much as notice it.

Then, after a few days comes the checking up and the final comparison. Does he find that it pays to inject a little touch of atmosphere into his sales message, or does he come to the conclusion that it is time and effort expended uselessly?



Opening of the camping season was featured by the Howard Automobile Co., Buick distributer in San Francisco

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Actual experience has proven that the former is true. This is attested by the growing number of automobile merchandisers who are paying more and more attention to the matter of seasonal window displays.



Seasonal displays are staged by the Chevrolet Motor Co., Detroit

They have found that the passer-by is always interested in something out of the ordinary. They have found that it pays to sell the great out-of-doors in their efforts to popularize the automotive vehicle.

In this connection it is particularly interesting to note the proposed plan of the Chevrolet Motor Co. to stimulate the idea of more attractive window displays throughout its vast dealer organization. This embraces an elaborate scheme whereby its representatives will not only be given ideas as to the treatment of their windows but will be furnished with instructions as to how to go about it.

The windows of the Company's retail branch store in the General Motors Building, Detroit, have been taken as the basis for this work. Each month in these windows a seasonal display will make its appearance similar to that shown in these pages, which marks the first of the series.

Professional talent has been secured to the end of making these just as effective and novel as possible, the concern thus employed having complete charge of design and execution. Following the showing of these displays, photographs and detailed descriptions will be distributed.

This is the constructive plan whereby the Chevrolet company has seen fit to step in and help its representatives make the most of that space for which they are paying out good money in rent and from which they should receive a maximum return. Whereas its influence cannot be felt for some time to come, there can be little doubt that it will ultimately be instrumental in bringing about a considerably larger percentage of window displays filled with atmosphere.

But the Chevrolet organization is not alone in its attempts to inject atmosphere into the serving of the sales message. Many distributers and dealers have pronounced themselves enthusiastic advocates of such efforts to attract public attention.

Woodland scenes have been employed to stimulate the longing to enjoy the open spaces that lies inherent in almost everyone. A spot by the sea has been produced with sufficient realism to make the passer-by almost imagine he was breathing in the fresh salt air.

When the icy winds of Winter have banished all desire to enjoy the gifts bestowed by Nature, the dealer has changed his displays to meet the seasonal demand. Traveling homeward of a cold Winter's evening, the passer-by has stopped to gaze with interest at a picture that has made him appreciate more than ever before the advantages of being a car owner.

Before a little cottage stands a sedan. In contrast to its cozy interior, snow is piled about in great drifts. It is evening.

At the wheel a man is seated in the act of lighting a cigar. His wife sits by his side, a cloak thrown over her shoulders revealing a light dress. She wears no hat, and it is evident they are ready for an evening's pleasure.

What could be a better sales argument for the man who is homeward bound on a cold night? What better picture could the dealer offer to instil in him the desire—even the need, of owning an automobile?

Then there are the many holidays that are being used to advantage by those merchandisers who have been quick to utilize in their sales appeals all the romance that lies behind the operation of the automotive vehicle. Thanksgiving Day, Christmas, Washington's Birthday, Easter, Memorial Day and Fourth of July all offer many possibilities in the way of special exhibits.

There is atmosphere a-plenty that may be used to make the sales message more palatable. All that is required is the necessary care and attention. And, as stated before, to anyone who experiences the slightest shade of doubt as to the wisdom in adding this "touch" the test described in detail is most heartily recommended.



Joys of camp life in window of R. D. Roper Motor Co., Phoenix, Ariz.

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LATEST OFFERINGS OF THE CAR MAKERS

Oakland Offers Innovations on 1923 Series

Headlight Dimming Control and New Throttle Arrangement Mounted on Steering Column—Body Improvements Give Deeper Lines

FOR 1923, the Oakland will be an even better looking car, and what is more, will be an easier and a more convenient car to drive. In the matter of controls, the Oakland Motor Car Co., Pontiac, Mich., has perhaps set a pace in the low-priced field.

The 1923 Oakland series is deeper in body lines and, as a result, larger in appearance. The streamline body, which is retained, is improved by new sweeping full-crown fenders which are wider, heavier and extend over the wheels in a deeper arc. Lowering the running board 1½ inches has also bettered appearance.

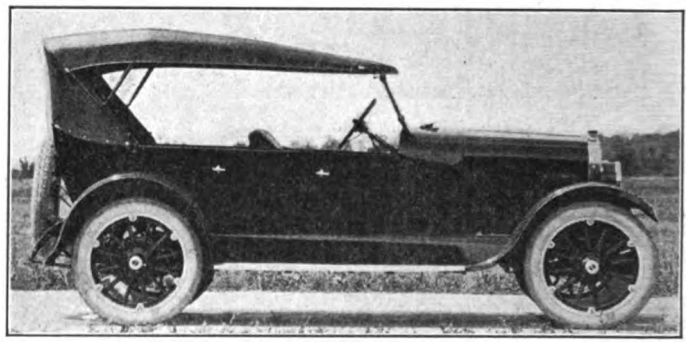
The comfort and convenience of the owner has come in for particular attention and on this score interest centers on the steering column. For instance, there is a lever for dimming lights mounted on the top of the column. As far as is known, Oakland is the first to so mount such a headlight dimming control. This lever may be operated by the thumb and without moving the hands from the steering wheel. Considering the amount of night driving now being done, this innovation is especially noteworthy.

Another innovation in the low-priced field is the new hand control for spark and throttle, mounted on the steering wheel. This does away with the familiar quadrant. The steering wheel is dished more than before, permitting easy reach of the greater number of controls now on the steering column. Gearshifting lever has been lengthened considerably for ease in shifting.

An improved Marvel carbureter, combined with the Oakland manifold, provides quick starting Winter and Summer. The new carburetion system has a heat control working automatically with the throttle, which the manufacturer claims, insures uniform mixture the year round under all conditions. A new Remy distributor with a semi-automatic advance and retard feature cares for all spark adjustment inside the breaker box in place of the entire distributor head moving.

Drum-type headlights add a smart touch and nickel plating is used on the radiator and other parts of the car where it will add most to appearance.

LOWERED lines give the 1923 Oakland a larger appearance, as do the new full-crown fenders which extend over the wheels in a deeper arc



Rear windows and windshield are of plate glass and in the closed models there is plate glass throughout. Heater, rear-view mirror, windshield wiper and snubbers are furnished with the coupe and sedan.

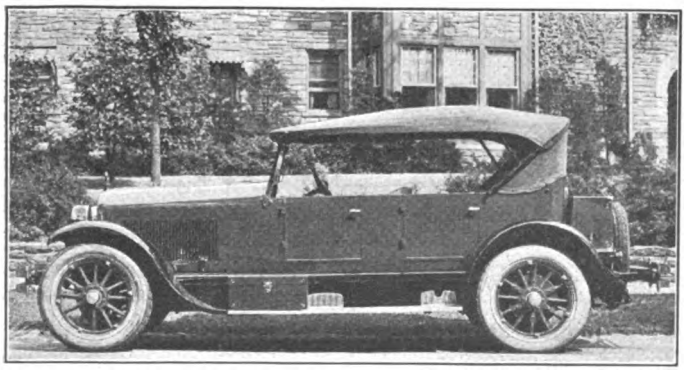
Additional equipment is to be found on the 1923 sport car. The body is painted light maroon and upholstered in brown Spanish leather, the whole job being set off by a leather-bound khaki top and khaki-covered windshield visor. Other equipment includes new style drum-type headlights nickel-plated, with cowl and tail lights to match; nickeled radiator with special cross-bar cap and Moto-Meter; trunk bars in rear; plate glass windshield wings; mirror; windshield cleaner; running-board shield protectors; running-board step mats; disc wheels with demountable rims, and walnut instrument board with glass-covered silver-faced instruments.

Prices on the 1923 series range from $975 to $1,545, the same as the former series. The chassis remains substantially the same.

Jordan Blue Boy a Distinctive Sport Model

New Four-Passenger Phaeton Larger Car Than Other Types—Carries Full Equipment and Special Finish—Gasoline Gauge Unique

JORDAN dealers are now displaying a new four-passenger specially-finished sport phaeton which the Jordan Motor Car Co., Cleveland, styles the Blue Boy. It is a larger car than any of the present Jordan models, being mounted on a wheelbase lengthened to 124½ inches. Fully-equipped it is listed at $2,150.



FOR its new Blue Boy four-passenger phaeton, Jordan uses a 124½-inch wheelbase chassis. Special equipment and finish give this model a distinctive touch

Lines of the new body are somewhat different than other body types of the line. General shape of the body is the same as the Playboy as far back as the front seat. A slight curve has been given the back of the front seat. At the rear, the body is low and does not have the sweeping curve on the back panel that is found on the touring model. Furthermore the sides of the body are ¾ inches lower, and because of the added 4½ inches to the wheelbase, a wider door-opening is provided.

Upholstery is in dark blue morocco leather, put on without plaits. A roll incorporated at the front edge of the cushions, furnishes a support for the knees. Seat cushions are set right on

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the floor with enough pitch to make them comfortable. Long curled hair and Marshall cushion and back springs add to riding comfort. A heavy strap of tan leather with distinctive nickel-plated brass buckle, and heavy polished aluminum end brackets, serves as a robe rail. Tonneau floor is covered with wool carpet and foot rest rail is all-brass nickel-plated.

Top is a Golde type with polished rust-proof frame and natural wood finished bows. Top material is imported Burbank with side curtains and slip cover of the same material. Curtains and curtain rods are stored in the right front and rear doors, leaving left rear door free for carrying odds and ends. Top, incidentally, is 2½ inches lower at the sides and 4 inches lower at the rear than touring car top. Windshield is a one-piece type, similar to that used on the Playboy, and is fitted with nickel-plated windshield cleaner.

Running boards are covered with black ribbed rubber instead of linoleum. Aluminum kick plates protect the running board filler. Steering wheel is a new walnut spoke type with small spark and throttle control mounted at the center of the wheel without the conventional sector. Headlights are brass, nickel-plated, of barrel-type design. Bumpers, front and rear, are regularly furnished.

At the rear is a trunk rack with rubber-covered platform and polished cast aluminum bars with blackened grooves. Additional aluminum bars to match are fastened on the back panel of the body. The trunk furnished is covered with black Fabrikoid with nickel-plated brass locks and corner tips. It contains two good-sized suit cases with an additional space at the end to carry golf shoes, packages, and the like. On the side of the trunk carrier bracket, near the filler, is a gasoline gauge unique in that it shows the exact number of gallons of gasoline in the tank.

For larger tools, a special box is mounted on the left running board, this being covered with the same material as the trunk and having nickel-plated brass locks and corner tips, too. Small tools, as on all Jordan models, are carried in the left front door.

This new model is finished in Blue Devil blue. It is equipped with 32 x 4½ cords, these being oversize for this model.

Columbia Elite Series Has a Larger Engine

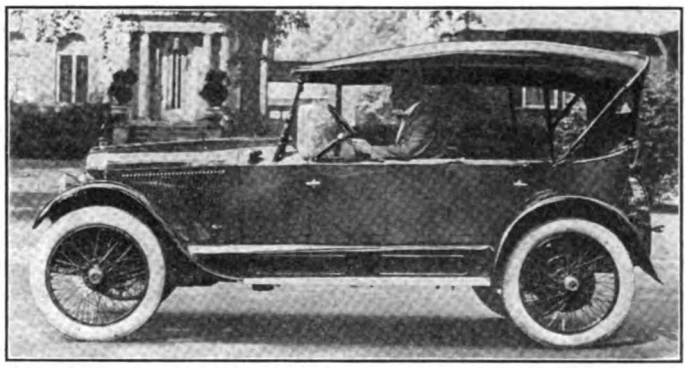
Continental "8R" Adopted for Models Which Replace Old De Luxe Series—Better Finish Applied—Prices Remain the Same

STYLED the Elite models, a new series has been brought out by Columbia Motors Co., Detroit, which sells for the same prices as the former de luxe series which it replaces. Most important of the refinements to be found in the latest series is the adoption of the Continental "8R" engine, 3⅜ x 4½, a larger and more powerful engine than the "7R" type used in the de luxe models.

Five body types are included in the new series. These are: five-passenger touring, four-passenger sport, and two-passenger roadster, all $1,475; four-passenger coupe, $2,295; and five-passenger sedan, $2,350.

Paint is of a superior quality. The touring and sport models are finished in suburban blue, the roadster in Murphy red, and the closed types in Columbia blue. Use of improved springs in the seat backs and cushions make possible a greater degree of riding comfort.

BETTER finish is applied to the new Columbia Elite series. This new line uses the Continental "8R" engine. Wire wheels are now optional with wood



Wood or wire wheels are optional on all models but the roadster and sport types on which wire wheels are regularly furnished. All open and closed types are fitted with a cowl ventilator and also carry a Moto-Meter.

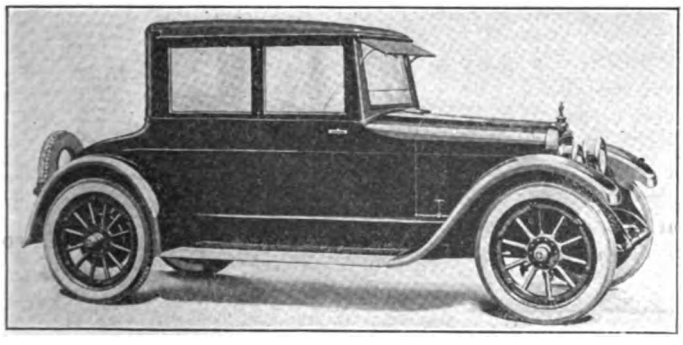
The 115-inch wheelbase chassis remains substantially the same, except for the new engine. This means that such units are continued as Timken axles, Durston transmission, Harrison radiator with thermostatically-controlled shutters, Atwater-Kent ignition and Auto-Lite starting and lighting.

Templar Starts Production on a New Coupe

Four-Passenger Design Is Priced at $2,650—Appointments Add to Car's Beauty—Upholstery Either in Leather or Cloth

PRODUCTION has just been started on a new four-passenger coupe by the Templar Motors Co., Cleveland. It has a staggered seat arrangement, with a folding seat for the fourth passenger. Its price has been set at $2,650.

Upholstery of the first models to come through will be in blue Spanish leather. The majority that are to be produced later, however, will be finished in gray cloth. Appointments add materially to the coupe, these including satin-finish hardware, silk roller curtains, handle-operated window regulators, dome light and so on.



TEMPLAR'S new four-passenger coupe is a staggered seat design. A novel effect is obtained by the low belt line. The coupe is priced at $2,650

Windshield is a two-piece slanted design with the upper glass overlapping the lower. A rubber strip on the bottom glass makes an air- and rain-tight joint. There is a visor over the shield and a ventilator in the cowl.

There is a large luggage space in the rear and also storage facilities back of the driver's seat. The standard 118-inch wheelbase chassis with magneto ignition, engine-driven tire pump, five cord tires and tubes is used. Finish is Brewster green or coach painter's

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blue with full-crown fenders in black. With the completion of a new sedan just prior to the coupe, the Templar closed-car line is now in full production. On the new sedan the radiator is two inches higher and the body has straighter lines.

Liberty Commander Coupe an Attractive Job

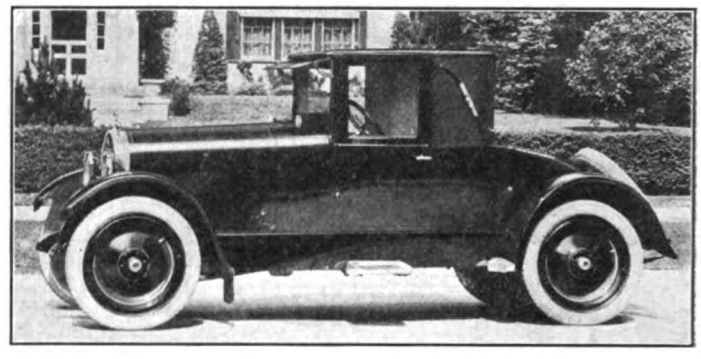
Two-Passenger Closed Model Priced at $1,695—Upper Part of Body Steel Covered—Fittings Furnished with Car Are Complete

SOME interesting details are to be found in the new two-passenger Commander coupe which the Liberty Motor Car Co., Detroit, recently put on the market. Not the least of these is the price, $1,695.

The upper part of the body is a substantially constructed steel covered unit. The top is an improved soft type over wood framing. Lending a distinctive tone to this body is a nickel-trimmed top joint, such as is used on landaulets, which has been mounted on the rear quarter on either side. This is purely ornamental.

There are two 22-inch-wide doors. Door pillars are of wood, covered with steel. The glass rear light is 13 inches high and 22 inches wide. This window is provided with a silk roller curtain. Windshield is a one-piece design. A cowl ventilator aids interior ventilation.

Upholstery is in a smooth leather, while cloth is used for headlining. Steel disc wheels are standard equipment as are such items as cowl lights of the same distinctive shape as the headlamps, water indicator, special radiator filler cap, vizor, clock, cigar lighter, windshield wiper, and Eagle locks, an inside lock on the left door and outside lock on right door.



ATTRACTIVE appearance of the new Liberty Commander coupe for two passengers is one of its strongest appeals, not to overlook the equipment furnished with it

PRESENTS A RADICALLY DIFFERENT SPRING

(*Continued from page 334*)

lengths of tapers are quite a large percentage of the total length of the spring. This gives a nicer balance of stress than in conventional practice. While this is theoretically true, conclusive proof of this has been borne out by actual tests conducted by the Sheldon company.

It can be noted that when the load is applied on the spring seat with corresponding deflections, the effective length of the spring is naturally decreased. Since deflection is as the cube of this length, a very slight shortening adds materially to the stiffening of the spring. Thus it is possible to get any reasonable desired pounds per inch out of the same spring, enabling a designer to make any selection of spring characteristic he may choose, with the result that it is comparatively easy to make a car ride as well light as loaded. This follows even though the range of loading may be quite pronounced, as in the rear springs of a heavy truck, but more particularly does this apply to heavier passenger vehicles.

This feature also has the added advantage of preventing frame from hitting axle under extreme over-loads. The progressive action is more pronounced, it is pointed out, in the full-elliptic type than any other.

Spring breakage should be less, it is also claimed, since the stiffness of the spring is taken care of automatically when excessive overloads are applied. Shortening of the spring under these loads materially reduces the maximum stress in the spring itself. The critical point of deflection, or maximum stress, moves from the grips toward the neutral zone of the main plate so that there is no localized stress at any one point of the spring. This means, of course, increased life.

Another peculiar feature of this spring, particularly when two or three main plates are used, is that it is very sensitive to vertical loads, but immediately upon imposition of brake and torque reactionary loads the spring is intensely stiff to any deformation in a longitudinal direction. This is due to the fact that the very imposition of these loads puts a decided shear in the holding-down bolts and adds considerable pressure between the main plates themselves.

Of course, one of the biggest features of the new design is that there is no part requiring lubrication, expensive ground and hardened bolts, phosphor bronze bushings and spring shackles that sooner or later will rattle, together with, as the designer puts it, "the total absence of lubricators which break off and are lost, after which time the shackles are very rarely attended to." The trade readily appreciates the rapid deterioration of these parts where they are used without proper lubrication, as well as the difficulties heretofore encountered in lubricating them effectively.

In emphasizing the value of the elimination of lubrication necessity, Laycock quotes an interesting portion of a paper by Cornelius T. Myers, read before the Society of Automotive Engineers, as follows: "Considering 10,000,000 registered vehicles to be equipped with the devices now furnished by manufacturers for lubricating chassis parts, it would take a minimum of about two hours per week per vehicle to give the chassis thorough lubrication. The minimum repair charge for those vehicles would be $65,000,000 per year; the maximum about $300,000,000; and a safe average probably somewhere between $100,000,000 and $150,000,000 per year. At 50 cents per hour for two hours per week per vehicle, $500,000,000 worth of someone's time is required. Hence, the public is absolutely justified in disregarding the lubrication of its chassis, many of which fail merely on account of the small chassis parts that are essential to the operation of the car. It is possible to lubricate those chassis. Their maintenance depends to a great extent upon lubrication at a minimum of 15 to 30 minutes once in two months; that is, six times per year."

It is further pointed out that in quite a few lubrication charts issued by various car and truck manufacturers, the spring shackles are listed in the daily oilings. How well and faithfully this is done is too well known to require further comment. As Laycock expresses it, "it is infinitely better to eliminate as many of these parts as possible."

After travelling about 12,000 miles on a car equipped with these springs, it is said one cannot help but notice and appreciate the total absence of squeaks and rattles, which would be due in large measure to the spring shackle and bolts themselves. In this connection, Laycock makes the prediction that before long chassis designers will be compelled to pay more attention to the elimination of lubricated parts when in the hands of owners who have to lubricate these parts themselves.

The first application of these new springs is to be found on the new Indiana Highway Express. They are equally as adaptable to passenger cars and in this field even those taking transverse springs are accommodated.

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IDEAS THAT LEAD TO GREATER SALES

Customers' Index "Hits the Bull's-Eye"

"YOU can't know too much about your customers," an accessory dealer pointed out the other day. "You can't go too far in getting an accurate line on their history as car owners — what kind of machines they're running, the model, type—every detail possible. It makes it possible to hit the bull's-eye straight when you're aiming for business."

This dealer has gone about the task of gathering such information scientifically. His accomplishment is revealed in a card index of customers.

As many cards are devoted to recording the history of one customer as may be necessary. In some instances one card is sufficient to give the necessary facts, while in others two or three are required.

Space is provided on these cards for the customer's name, address, name of the car he is operating, how long he has been running it, the model, and so on. On one side of the card is a column in which is recorded the standard equipment of the machine, together with the various accessories the owner may have added from time to time, which were not sold him by the dealer. On the other side is a column in which the dealer lists the sales he has made to the owner. Space is also provided for the listing of miscellaneous information.

The dealer's first step is to list the standard equipment of the machine. (This information now is easily available to him through reference to AUTOMOBILE TOPICS' Table of Passenger Car Selling Points, copyrighted.) To this he adds whatever information he can procure on those items of equipment the owner may have added.

Just how complete this last record may be made depends upon the opportunities afforded the dealer of going over the customer's car, and making the necessary notes. It may take considerable time to gather these details but when finally listed they enable him to find out exactly where he stands.

Each item he sells the car owner he lists carefully on the other side of the card in the column already described. Thus he has before him at a glance a complete line-up on the status of each customer—what equipment was bought with the machine and what has been purchased since. A comparison shows him what the owner needs.

This dealer specializes, as a result of this preliminary work, in individual sales treatment. Instead of sending a man a general letter or circular, he builds up his sales appeals about one or two particular devices in which an inspection of the cards reveals that customer should be interested.

He finds, for example, that the owner has been driving without a windshield cleaner. His records likewise disclose the fact that the owner intends using his machine all Winter.

So he drops the gentleman in question a line calling his attention to the fact that bad weather will soon be at hand and that a windshield cleaner will add much to his comfort and safety. His appeal is thus based on individual needs.

"May sound like a lot of red-tape," he states, "but I'm convinced that it pays. There's nothing like knowing where you're going to shoot before you take your aim. It's selling by the most direct method."

An Accessory Corner That Attracts the Eye



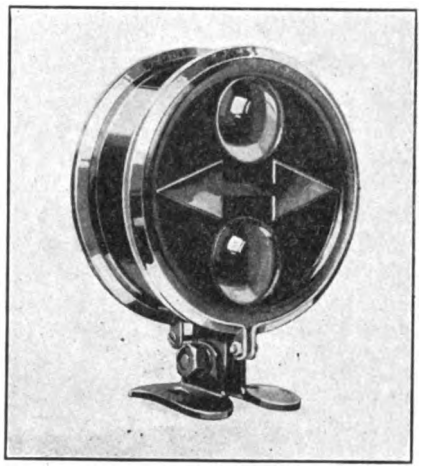
On entering the salesroom of the L. F. Wentzel Garage, Aurora, Ill., the visitor sees glass showcases well filled with parts and accessories attractively arranged for inspection. The effect is decidedly pleasing

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IN THE FIELD OF ACCESSORIES

STOVER SIGNAL HAS GREEN RUNNING LIGHT

A feature of the Stover tail light signal which has been placed on the market by the Stover Signal Engineering Co., Racine, Wis., lies in the fact that it follows out certain recent suggestions that have been made for the elimination of red in tail lights. A red light used as a danger signal has become so common as to have its significance considerably impaired, is the opinion held by some, this feeling having resulted in considerable controversy, as to what color might better be substituted.



Stover tail light signal

The Stover signal combines such features as a green running light to indicate "clear road ahead"—used by railroads the world over—with a red light which is automatically flashed on in place of the green light when the brake is applied or the clutch released, thus warning the traffic behind of "danger ahead." It also indicates right and left turns in red. When the car is brought to a standstill it serves as a parking light.

The green running light is such as to make its significance unmistakable. Emphasis is laid upon the fact that it cannot possibly be confused with lights on railroad crossing gates, highway construction obstructions and other places where red is employed to signify danger.

SURLOK IS A NEW LOCKING STEERING WHEEL

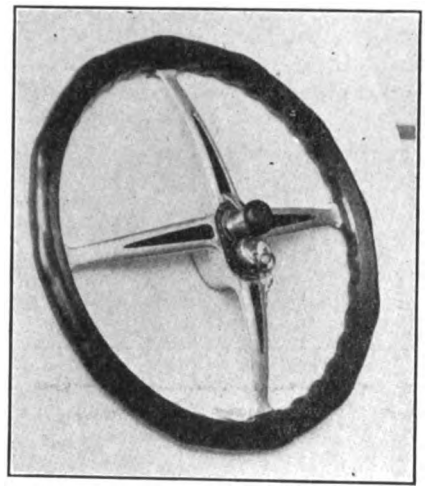
In placing on the market the Surlok, a new locking steering wheel for cars, emphasis is laid by the Detroit Motor Casting Co., Detroit, Mich., upon the fact that this device in no way affects the steering mechanism. Moreover, it is installed without modifying or replacing any of the standard parts.

The lock is mounted in the steering wheel's case-hardened steel head and is proof against chiseling or sawing. It has two positive locking positions and when in one or the other the car cannot be driven or towed except in a circle.

Rim of the wheel is constructed of jet black composition material extremely hard in its texture. Furthermore, it is knobbed both inside and out, offering an unusually fine gripping surface. The spider is made of best aluminum alloy and takes a high polish.

Of special convenience is the fact that keyhole of the lock is on top and easily accessible at night. For Ford owners, still another interesting feature is the horn button which has a hardened base and is fitted with electric connections of approved type. This is mounted in the center of the wheel on top of the steering post.

The Surlok has been approved by the Underwriters' Laboratories and entitles the car owner to 15 per cent insurance discount.



Surlok

Valley Buffer in Post Office Garages

Seventeen Valley buffers have been sold by the Valley Electric Co., St. Louis, Mo., to the Post Office department of the Federal Government. These machines have been shipped to the tire service stations of the Post Office garages in Atlanta, Detroit, Kansas City, Los Angeles, Memphis, Omaha, Cincinnati, Newark, Denver, Dallas, Norfolk, Grand Rapids, Jacksonville, and Chattanooga. The Valley buffer is a standard ball-bearing Valley motor of 2 h.p. with the rotor shaft extended sufficiently on each side to carry an emery stone and a compound brush. It is mounted on a heavy cast iron base, carefully proportioned to give rigidity to the whole machine. End plates of the motor are enclosed keeping the windings free from dust. The buffer is 46 inches high and occupies four square feet of floor space.

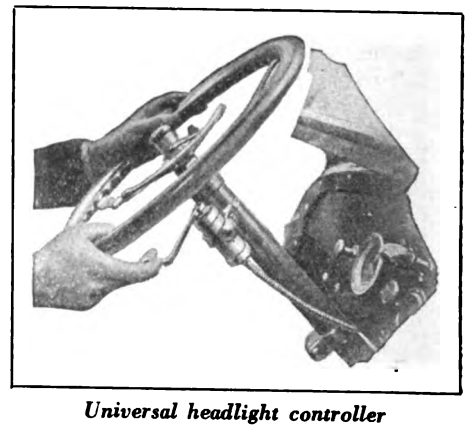
Reports Big Demand for Disteel Wheels

Reporting a fast growing popularity for its Ford-size disteel wheels, shipments of three solid carloads has been ordered by the Detroit Pressed Steel Company's distributing connection on the Pacific Coast. This is declared to be due both to the severe conditions imposed on wood wheels by the long, dry Summer, and to the general preference for full five-wheel equipment.

UNIVERSAL CONTROLLER DIMS LAMPS GRADUALLY

A headlight controller that dims the lamps gradually is being offered the motorist by the Universal Headlight Controller Co., Fisk building, New York city. This device, known as the Universal headlight controller, has been designed to take much of the peril from night driving through making the lights adjusted easily and gradually.

It can be installed on any steering-post in a few minutes and is so located that the controlling lever is operated by a gentle pressure of the finger without removing the hand from the steering wheel. To dim the lights the driver simply pushes the lever forward. The further he pushes, the dimmer the lights become. There is no sudden change from brilliant to dull, for the lights simply melt down to whatever degree of intensity the driver desires.



Universal headlight controller

Wiring attachment is simple. One control wire is attached to the switch, the other to the bright headlight wire, which has previously been disconnected.

The Controller and wire conduit are nickel plated and polished. Price, complete, ready for installation is $7.50.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

MASSACHUSETTS—HOLYOKE.—Hudson and Essex distribution for this district has been taken over by J. S. Harrington, Inc. W. R. Parsons has been named manager of the new branch.

TURNERS FALLS.—Henry E. Beaumier has been made Ford and Lincoln agent for this territory. He has opened sales and service quarters in the building formerly occupied by the Red Band garage.

NEW YORK—NEW YORK.—Plans have been completed for the construction of a six-story garage with stores, 75 x 100. The building will be located at 421-425 West 54th street and will be erected at an approximate cost of $125,000.—A three-story building at 71 West Third street, occupying a site of 25 x 100, has been renovated into a garage.—Leon Nadel has leased for a term of twenty-one years the new garage at the southwest corner of Whitlock and Bryant avenues. It is situated on a plot 140 x 150 and has been rented for $14,500 a year.

NEW JERSEY—NEWARK.—Packard Motor Car Co., besides renewing its lease of 37,000 square feet at Sherman avenue, has acquired the additional property at the corner of Earl and Sherman avenues, which gives the firm control of about 44,000 feet.

PENNSYLVANIA — PHILADELPHIA.—Walter E. Lanagan Ignition Co. has sold its business to McCarthy Bros. & Wilson, Inc., who has combined the two businesses in its new building at 2253 North Broad street.

SOUTH

WEST VIRGINIA—LOGAN.—Packard distribution for this city has been taken over by the Hutchinson-Aldridge Motor Co., composed of Frank B. Hutchinson and W. A. Aldridge. Plans are under way for the construction of a two-story garage and salesroom, 40 x 150. located on East Stratton street.

GEORGIA—ATLANTA.—D. C. Black has disposed of his interest in the Dodge Brothers agency, operated as Black & Maffett, to his partner, F. E. Maffett. Maffett will conduct the agency under the new name of the F. E. Maffett Motor Co. Black has taken on the Buick distribution for southern Atlanta.

SYLVESTER.—Work will soon be completed on a service station and display room under erection for the Tifton Buick Co.

KENTUCKY—LOUISVILLE. —With the acquisition of the Lincoln and Ford lines, the name of the Strube garage has been changed to the Strube-Pettit Motor Co. E. B. Strube is president, J. B. Pettit, vice-president, and E. H. Strube, secretary and treasurer. The new company will maintain sales and service quarters at 909 East Broadway.

NEWPORT.—Monmouth Auto & Tire Co. has been named dealer for Haynes cars in this section.

MIDDLE WEST

OHIO — CLEVELAND. — Royer-Brunner Co. has opened a Chevrolet sales and service station at 5909 Broadway. C. R. Brunner was at one time connected with the Ford Motor Co.—Cornell Sales Co. has been made dealer of the I. J. Cooper battery and battery parts. Lloyd Hamilton, former manager of the Cooper battery department, will be retained.

XENIA.—Harry Lampert has been appointed dealer of the Haynes in this territory, operating under the Jennings Motor Car Co., distributer with headquarters in Cincinnati.

ILLINOIS—ARENZVILLE.—A loss of $5,000 was suffered by J. W. Krueger when fire damaged the Red Arrow Garage.

BATAVIA.—Richard Berguson and Robert McGarry have formed a partnership to conduct a garage at 410 Main street.

CHICAGO.—William F. Hodgson has purchased the garage of the Christopher Motor Sales Co. The building is located at 5045 Broadway and is 100 x 235.—Dimitreos Limberopulos has sold his garage at 5650 Broadway to Lewis T. M. Slocum for a consideration of $70,000.—A new agency has been opened at 1519 West 63rd street under the name of the De Luxe Motor Co.

A new garage and service station has been opened by Harding Brothers at 2609 East 75th street.—An agency handling the Wills Sainte Claire will soon be located at 6608 Stony Island avenue.—Sherman Motor Car Corp. has located at 51st street and Ashland avenue with the Ford agency. — Chicago-Lexington Co. has opened a branch at 4006 Washington boulevard, dealing in Lexington and Gardner cars.

DECATUR. — Tony Bowman has bought the garage located at 305 South Franklin street recently occupied by the Auburn Motor Co. This building has a frontage of 60 feet. Bowman will conduct an accessory and repair shop.

GENESEO.—A one-story garage, 90 x 135, is now under construction for F. E. Brown.

MOUNT AUBURN.—A garage, to be built of concrete blocks, will soon be erected for Charles H. Squires on a lot with a frontage of 72 feet on South Broad street. In addition to dealing in automobiles, trucks and tractors, Squires and his son, Virgil, will also conduct a general service and automobile supply business.

ROCKFORD.—C. S. Gustafson and Tony Meyers, with a location at 1312 Seventh street, have opened an accessory station and garage, specializing in battery service.

STREATOR.—Streator Battery Station has been opened by Charles Jones at 614 East Main street, dealing in the Vesta battery. Jones will also carry a line of automobile supplies.

WISCONSIN—APPLETON.—A $15,000 garage will be erected here for A. H. St. John, of Green Way.

BONDUEL.—Lewis Hoeffe has sold his garage to his brother, George Hoeffe.

CLINTONVILLE.—A garage, to be 50 x 120, will be constructed by the Service Auto Co.

HAYWARD.—Frank A. Christ has purchased the City Livery & Garage from Bert Wells.

MADISON.—Under the management of J. J. Johnson, who will be in charge of car storage, the new Wingra Park Garage will be reopened at Monroe and Regent streets. The repair department of the new garage will be operated by the West End Auto Repair Co., formerly at 21 West Dayton street, which has as managers M. H. Delaney, D. H. Crary and Claude C. Luckey.

RHINELANDER. — Othersall & Sorenson will open a garage in the McKenzie building.

RICE LAKE.—An automobile service station will be opened by William E. Dale.

SPARTA.—Work will soon be started on the erection of a new home for the Cross Overland Co.

IOWA—DAVENPORT. — Lexington and Gardner distribution has been added to the line of the Simpson Motor Sales Co., recently installed at a location at 331 East Second street.

DES MOINES.—A new location at 1124 Locust street, formerly occupied by the A. G. Graben Motor Co., has been obtained by the Lawrence Auto Co.—L. A. McLaughlin has purchased the accessory sales storage and service department of Bell's Garage, located at 2315 University avenue. He will devote his time exclusively to the sale of the Chevrolet.—

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New quarters have been secured by the Chase-Nash-Franklin Co. at 1420-22 Locust street.

MISSOURI—APPLETON CITY.—G. H. Scholz, who has been one of the proprietors of the Golden Rule Garage since its establishment about two years ago, has sold the business to W. S. Sharp and son, Roy, who are now in charge.

BOLIVAR.—O. G. Teogarden has sold his Ford agency and stock to Guy M. Babst and Norman D. Twichell, of Kansas City. He has leased for five years his garage building, which has a 50-foot frontage and a depth of the whole block. —W. J. Burleson and sons have purchased the garage owned by O. O. Cowden.

BROOKFIELD.—A garage, 42 x 80, will soon be erected for R. H. Clarkson at 217 West Helm street. When occupied, it will be under the management of his son, R. O. Clarkson.

CENTRALIA.—J. D. Honey, of St. Louis, has purchased the business of the Lyon Auto Co., of which he has already taken charge.

DE SOTO.—K. Jones Auto Co. has moved to a new location at 300 North Main street.

EXCELSIOR SPRINGS.—Tony Orfan has sold his garage to C. O. Ellsworth, of Kansas City.

FULTON.—Wallace and Benjamin Renner have established a garage on East Tenth street which will be conducted under the name of Renner Brothers.

HARRISONVILLE.—B. W. Bien has moved his garage from East Pearl street to 203 North Independence street.

MACON.—Kemper Motor Co. has taken possession of the Motor Inn.—A garage building, 46 x 120, will soon be constructed for Cooper & Peaslee on a site on Bourke street.

MARYVILLE.—A loss of $2,500 was sustained by the Phipps Garage, located at Dewey and Second streets, when fire damaged the building and equipment.

MOKANE.—S. L. Baldwin, owner of the Motor Inn Garage, has leased the Becker Garage building to where he has moved his business.

MONTICELLO.—Michael Rodefer has purchased Chester Smith's interest in a garage here.

POWERSVILLE.—E. E. Baker has sold his interest in the Baker & Osborn Garage to his partner, J. W. Osborn, but retains a half interest in the building in which the business is located.

RICH HILL.—Durant distribution for this section has been taken over by Montgomery and Son.

ST. LOUIS.—New quarters at 3015 Locust street have been obtained by the Cadillac Exchange Car Department.—H. P. McQuiston and Hugh H. Shields have formed a partnership under the name of the McQuiston-Shields Motor Car Co., with headquarters in the two-story building at 3401-17 Locust street. The building was formerly occupied by the Universal Painting Co. The new concern will specialize in the sale, trade and purchase of used cars. The building which has 23,000 square feet of floor space, is being redecorated. When work is completed, it will be used as a salesroom, service and repair shop and for storage.

KANSAS — ANTHONY. — C. D. Cooper has purchased and taken posession of the garage of Elmer Schmidt.—Larger quarters will soon be opened in the Cornick building by the Kern Battery Station, now at 224 West Main street.

ARNOLD.—J. G. Leaderer has sold his stock of automobile accessories and leased his garage building to W. O. Bramfield, of Solomon. The new proprietor will devote his entire time to automobile repairing.

ASSARIA.—R. King, of Salina, has purchased the garage business of Ericson Brothers.

ATCHISON.—D. Miller has sold his interest in the Miller Motor Co. to Frank Harwi, Milton Cain and W. Hetherington.

BURLINGTON.—Fire completely destroyed the Schultz Brothers' Garage and Rapair Shop, located at 6th and Neosho streets.

CANEY.—Quiett's Auto Repair Co., formerly with the 666 Garage, has now located with the Jackson Battery Station at 114 North Spring street.

CHETOPA.—An authorized Ford and Fordson sales and service station has been opened by the Brady Motor Co. in the Flannelly building, first door west of Lehman's store.

ELDORADO.—An automobile repair shop has been opened in the rear of Allison's furniture store at 221 East Central by J. Evans.

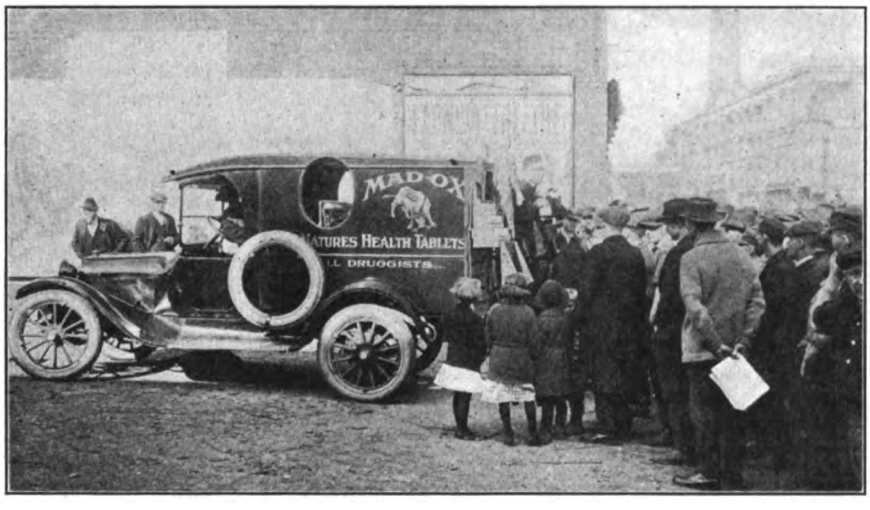
ENTERPRISE.—Removal into its new garage building has been completed by the City Garage.

GRENOLA.—John R. Thompson has sold the Santa Fe Garage to his brother, Harry G. Thompson, who has taken over the management.

HAYS CITY.—An Associated Tire Co. store has been opened in the Mulroy building, just east of the Windsor hotel, with T. N. Fox in charge.

HUNTER.—Arrangements for the establishment of a Ford sales and service

Motor Car Revolutionizes Habits of "Medicine Man"



***LONG-BEARDED** gentlemen, travelling from town to town in their canopied horse-drawn wagon, typifying the "medicine man" of by-gone days, probably never dreamed that the day would come when they could traverse thousands of miles in less time than they formerly covered hundreds. The equipment of the modern successor pictured consists of an attractive Dodge Brothers business coupe and a uniphone*

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THE fact that there never is a *doubt* among dealers or users as to the *maintained quality* of U. S. Tires—at any price—*says a lot.*

And says it in terms of *permanent retail business*—based on *confidence.*

United States Tires are good tires.

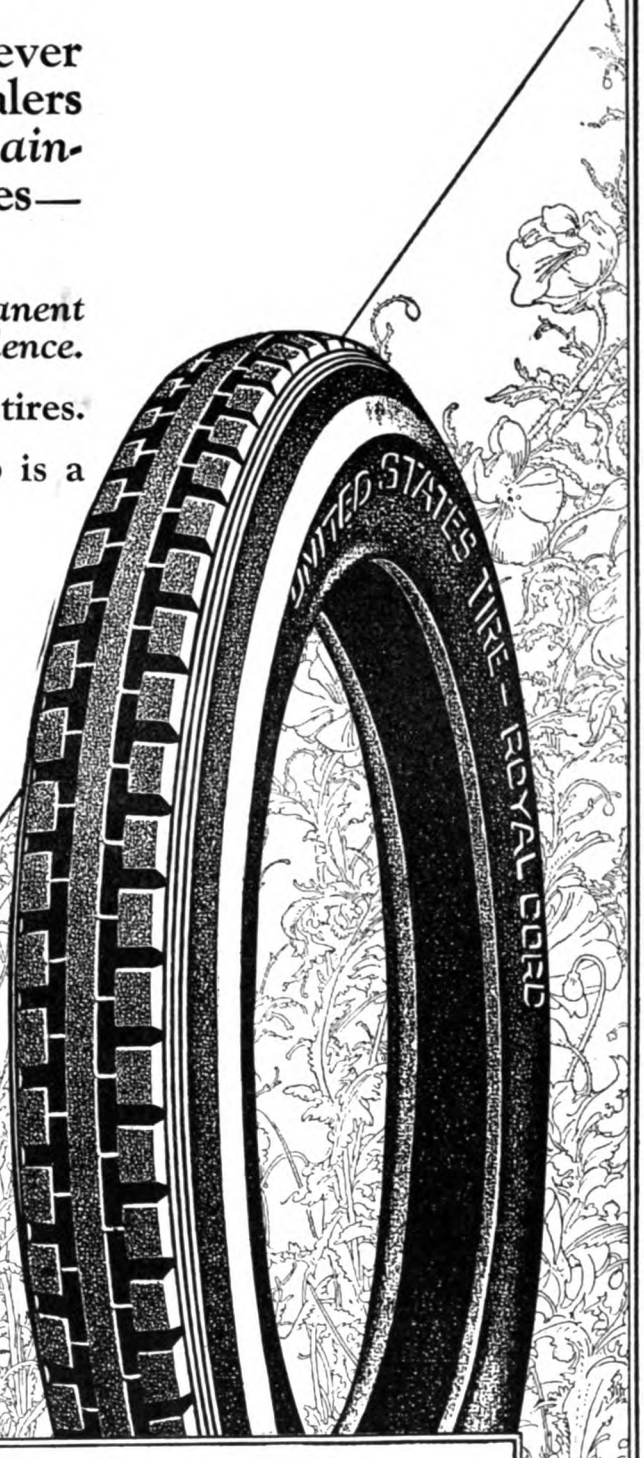
The U. S. Sales Relationship is a good relationship.

The U. S. Sales Relationship brings to the dealer's store the most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

Isn't this the kind of Franchise the tire dealer needs?



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

Copyright 1922 U. S. Tire Co.

United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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station has been completed by E. E. Bilger, proprietor.

LEAVENWORTH.—Long Vulcanizing Co. has sold its equipment to the Allen Vulcanizing Shop, which has moved to new quarters at 112 North Fourth street.—A garage will soon be erected for the Enright Motor Co. The proposed building, to cost $6,000, is to be located at Fifth and Olive streets.

LINN.—J. H. Alexander has sold the Linn Garage to the proprietors of the White Way Garage.

MADISON.—P. D. Stoughton & Son have purchased the Harkness Garage business and will continue to operate it, selling oils and gasoline.

MANHATTAN.—Walter Schade, located at 429 Colorado street, has secured the agency for the Paige and Jewett cars for Manhattan county.

OSAWATOMIE.—L. Goodrich has sold his interest in the White Way Garage to J. G. Condiff. The business will be known as the Condiff & Son Garage.

PITTSBURG.—Renovation of the Weir Supply Garage has been started.

PRATT.—An automobile repair shop has been opened at the Brooks and Barkers Garage by P. Williams.

STERLING.—Distribution of the Nash has been taken over by A. E. Whitzell. He expects to open an office and display room in the near future.

TOPEKA.—John Capper, of the Capper Auto Supply Co., has purchased the Shelton Tire Co., located at 919 Kansas avenue, from J. R. Shelton.—Peers Battery Co., of which W. G. Pyle is manager, will consolidate its shop at 113 West Seventh street with the one at 629 Jackson street.

TRAER.—A service station is being erected for Dr. Little, salesman for Hudson and Essex cars.

NEBRASKA—AUBURN.—Paul Hoagland has located with the Leeper Battery and Electric Service. He will carry a complete line of parts.

BRADY.—Clarence Coon and William Thanel have purchased the G. L. Travis Garage and have taken over the management.

NORTHWEST

MINNESOTA—RED WING.—E. W. Olson has disposed of his interest in the Seufert & Olson Garage to Fred. Saupe.

NORTH DAKOTA—MOTT.—O. S. Axlen has obtained Robert D. Berry's interest in the Berry & Botten Garage.

SOUTHWEST

ARKANSAS—FORT SMITH.—Robert Lewis, having purchased the interest of his partner in the Lewis-Ward Motor Co., 13-15 North Seventh street, will conduct the business under the name of the Lewis Motor Co.—Work has been started on the annex to the building occupied by Paul Sheridan as a Ford agency. It is under erection at a cost of $35,000. The addition will front on Eleventh street, will have two stories, and be 70 x 140.

LITTLE ROCK.—H. A. Schaer, Jr., and Hugo Norvell have purchased the T. & T. Tire Co., located at Third and Center streets, from L. H. Theobold. The new owners will operate the business as the Schaer-Norvell Tire Co.

MOUNTAIN HOME.—Work is nearing completion on the garage under construction for Neal Eatman. It is of cobblestone with Indian arrowheads and stone axes embedded in the concrete as decorations.

PINE BLUFF.—E. W. Hood has obtained a ten-year lease on the building at 118-121 West Fourth avenue and after extensive remodeling of the building will occupy it as the location for the U-Drive-Em System. Hood has conducted that business heretofore at Second and Walnut streets. Renovations of the newly acquired building will amount to approximately $15,000.

SALEM.—A garage will soon be opened at this place by McKinley Landers and Austin Barker.

OKLAHOMA—DEER CREEK.—A brick building has been constructed here which will be occupied by L. Walker as a garage.

LINDSAY.—J. A. Wilson, of Oklahoma City, has obtained the business of the Reed Motor Co. in this city. The company still retains its garage and automobile business at Pauls Valley.

OKLAHOMA CITY.—Quarters in the building at the corner of Sixth and Broadway, formerly occupied by the McKissick, Smith Motor Co., have been taken over by the Reo Vespers Motor Co. The McKissick, Smith company has moved to 820 North Broadway, the former location of the Reo Vespers company.—Salesrooms of the Oklahoma Tire Co. have been located at 702 North Broadway. J. E. Harris is manager of the firm.

TRINITY.—Monroe Smith has been appointed manager of the Highway Garage, owned by W. B. Riley and H. S. McKay.

TULSA.—W. A. Bradshaw, proprietor of the Bradshaw Harness Co., has obtained the agency for this city for the Gillette tires and tubes. He is located at 17 West First street.

WAXAHACHIE.—Extensive improvements are being planned by the Waxahachie Nash Co. for their quarters at the Central Texas Garage on West Main street.

TEXAS—ABERNATHY.—Campbell has disposed of his interest in the City Garage to his partner, Bryan.

BEAUMONT.—Gasow-Howard Motor Co., local Ford and Lincoln dealer, will soon occupy its new home on Calder avenue.

CORSICANA.—Steve. Mayor has purchased the Wood Battery Co., continuing the operation of the business at the same location.

DEL RIO.—A three-story building, two large rooms of which will be utilized as garages, is nearing completion.

EASTLAND.—G. M. Harper has purchased the Brooks Auto Supply Co., which he will operate in connection with the Eastland Storage Battery Co., local Willard battery agency.

HOUSTON.—Johnston Motor Co., authorized Ford and Lincoln dealer, has moved into its new home at the corner of McKinney avenue and San Jacinto street.—A used car branch of the Drexel Motors Co. has been opened at 1014 Main street.—Work will soon be started on a one-story garage to be erected at an estimated cost of $27,000 at Leeland avenue and Main street for Edel-Bergman & Bonart.—A garage and repair station have been opened at 110 Preston avenue by G. J. Montgomery and W. D. Ittle.

ORANGE.—Perry Goodman Motor Co. will be established in the new Dayton Perry building on Main street, between Fourth and Fifth. The new firm is comprised of Dayton Perry and Willard Goodman, who have obtained the Dodge Brothers agency.

RANGER.—Fire in the Leville-Maher Motor Co. damaged nine cars and a repair shop, resulting in a loss of $2,000.

WAXAHACHIE.—C. L. Youngblood has sold the Highway Garage on West Main street to T. R. Foundron, who is now in charge.

ROCKY MOUNTAINS

COLORADO—PUEBLO.—An automobile repair shop has been opened by Swanney & McDaniels at 603 Grand avenue.

UTAH—SALT LAKE CITY.—A $250,000 building is nearing completion for the Covey-Ballard Motor Co., Ford agency. The structure is located at 2 West Fifth South street.

PACIFIC COAST

CALIFORNIA—BERKELEY.—A branch has been opened by F. H. Dailey Motor Co., dealer for Maxwell and Chalmers cars. F. H. Fuller is manager of the branch.—Western Auto Supply Co. has opened a branch at 2426 Shattuck avenue.

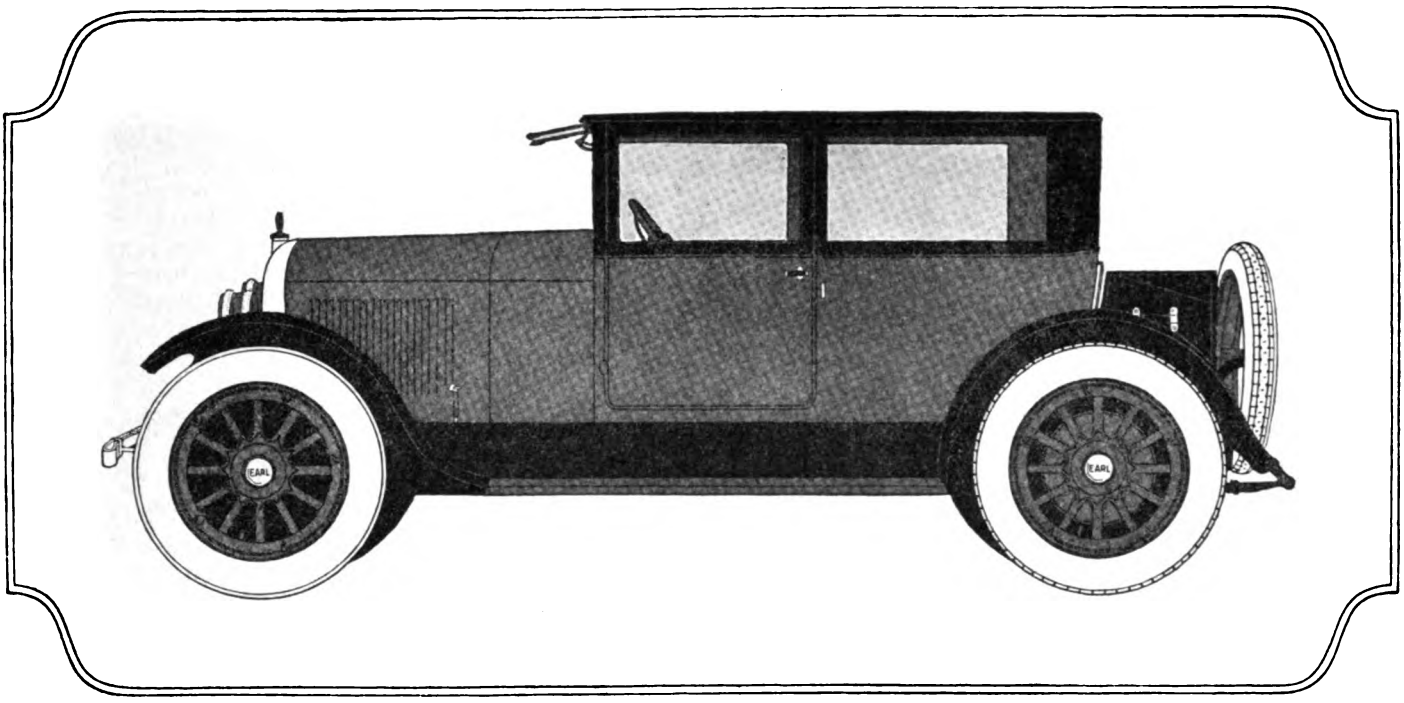
HUNTINGTON BEACH.—S. V. Smith has taken on the agency for the distribution of the Chevrolet. He has obtained a location at Third and Walnut streets.

SAN GABRIEL.—Alick Barlow has established the East San Gabriel Garage at this place.

VACAVILLE.—Oscar Madson and A. Klotz have leased the Nay garage.

WATSONVILLE.—L. Fergoda, Hupmobile sales and service agent, has located temporarily at 632 Main street, pending completion of new quarters he has leased on the opposite side of the street.

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TRUNK, BUMPER, MOTOMETER, SUN VISOR, ETC., INCLUDED IN CABRIOLE'S COMPLETE EQUIPMENT AT $1395.

Cabriole Equipment Appeals To Buyers

They recognize that full equipment increases value of distinctive new Earl type at $1395

THERE is no question about it: a "one-price" policy appeals to American men and women with money to spend—and a keen eye for substantial values.

Earl distributors and dealers are writing to me every day that Cabriole buyers never fail to comment approvingly on the fact that the standard price—$1395—covers all the accessories they need for comfort, safety and convenience.

These buyers appreciate the distinctive good looks of the Cabriole, its responsive power, economy and splendid road performance. But they do not overlook the saving of at least $100 which they make because all the usual "extras" are included in the regular Cabriole price.

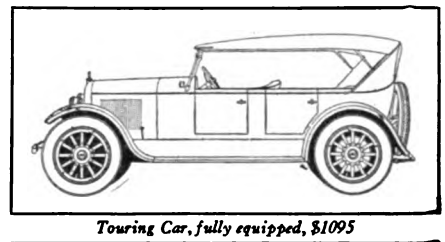
Check up this equipment for yourself and compare it with the equipment of other cars in the Cabriole's price class. Here are some of the features you will find in the Earl:

Touring trunk with cover and two suit cases and hat box. Bumper and motometer. Sun visor and dome light. Drum type head lamps, with dimmers and non-glare lenses. Left-hand ignition and dimmer switches. One-piece wind shield, swinging inward and outward. Wind shield wiper.

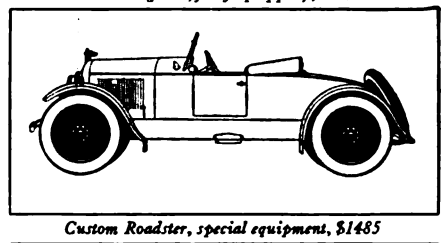
Masked light on instrument board of solid walnut, illuminating oil-pressure gauge, speedometer, ammeter and fuse box. Light under hood. Sparton horn. Alemite lubrication. Complete set of tools in compartment under rear seat.

Your territory may be open. Wire or write me for the facts about our dealer contract and the "one price" Earl line.

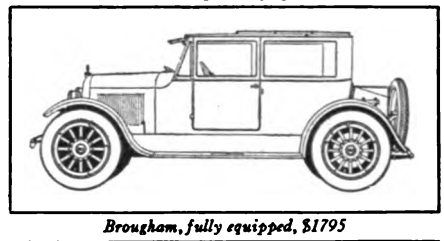
President and General Manager



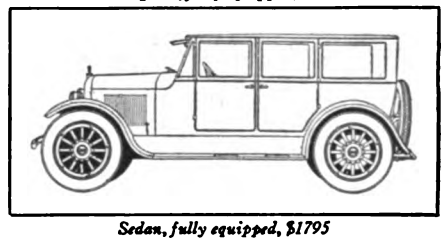
Touring Car, fully equipped, $1095



Custom Roadster, special equipment, $1485



Brougham, fully equipped, $1795



Sedan, fully equipped, $1795

Touring Car $1095
Cabriole 1395
Custom Roadster . . . 1485
Brougham 1795
Sedan 1795
Prices f. o. b. Jackson

EARL MOTORS, INC.

JACKSON MICHIGAN

"The right line, at the right price, with the right dealer discount"

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INCORPORATIONS

NEW YORK.—H. M. Jackson, Manhattan, N. Y. Capital $10,000. Incorporators: W. P. Hooper, H. M. Jackson.—Picture Plex Corp., Manhattan, N. Y. To manufacture tires. Capital $10,000. Incorporators: E. M. and L. W. Daus.—Radio Taxi Corp., Manhattan, N. Y. Capital $10,000. Incorporators: W. Bettinger, P. Sherman.

B. & L. Garage, Bronx, N. Y. Capital $20,000. Incorporators: P. Levine, B. Beilin, B. Levine.—Nation-Wide Tire Stores, Bronx, N. Y. Capital $20,000. Incorporators: W. C. Koupal, C. Bisgard, W. M. Watson.

Garage of the Bell Owners, Brooklyn, N. Y. Capital $50,000. Incorporators: F. Schwartz, P. Woolf, C. Schwartz.—Jacobi & Brown, Inc., Brooklyn, N. Y. To deal in automobile tires. Capital $5,000. Incorporators: W. Brown, L. E. Jacobi, A. E. Lawson.—New Auto Top Corp., Brooklyn, N. Y. Capital $10,000. Incorporators: W. S. McClure, G. H. Rathgeber, S. A. Duge.

Non-Tube Tire Co., Brooklyn, N. Y. To manufacture tubeless rubber tires. Capital $100,000. Incorporators: I. F. Trautman, W. J. O'Farrell, C. Stork.—Smith Rubber Products Sales Corp., Brooklyn, N. Y. To deal in tires. Capital $25,000. Incorporators: N. Levy, M. Didshun, H. Swiryn.—35th St. Brooklyn Garage, Brooklyn, N. Y. Capital $5,000. Incorporators: J. Guralnick, J. Roth, N. Guralnick.

Boyce Motor Sales Co., Buffalo, N. Y. Capital $50,000. Incorporators: O. D. Hunsinger, M. F. Weber, M. P. Hunsinger.

Sound Rubber Sales Co., Rockville Center, N. Y. To deal in tires. Capital $5,000. Incorporators: P. H. Latus, J. F. Dempsey, W. H. Phillips.

NEW JERSEY.—Bennett Auto Sales Co., Bayonne, N. J. To deal in automobiles. Capital $100,000. Incorporators: Olive M. Bennett, John Khampton, Reuben R. Bennett.

Creeley, Inc., Camden, N. J. To deal in automobiles. Capital $30,000. Incorporators: Clarence E. Ely, Victor R. Cramer, Jessie C. Ely.—Oil Trol Piston Ring Co., Camden, N. J. To manufacture piston rings. Capital $100,000. Incorporators: F. R. Hansell, I. C. Clow, John A. MacPeak.

General Grinding Co., Newark, N. J. To manufacture automobiles. Capital $100,000. Incorporators: Ida Belle Davis, Peter R. Abeille, Melville J. Long.

DELAWARE.—Box Motors Co., Dover, Del. To manufacture motors. Capital $1,000,000. Incorporators: W. Box, C. S. Belford, E. G. Gillett.—Wellston Auto Sales Co., Dover, Del. Capital $75,000. Incorporators: Alvin Haubenriser, Emil Weibel, Louis E. Zewig.

Auto Dirigible Light Co., Wilmington, Del. Capital $500,000.—Boulevard Tire Sales Co., Wilmington, Del. To manufacture and deal in tires. Capital $5,000. Incorporators: S. H. Jones, A. S. Bishop, E. H. Feustel.—Brownell Wild Fire Battery Co., Wilmington, Del. Capital $1,000,000.

Clinton Tire & Rubber Co., Wilmington, Del. To deal in tires. Capital $100,000. Incorporators: C. H. Jarvis, L. B. Phillips, M. F. Vance.—Continental Gasoline Producing Co., Wilmington, Del. Capital $600,000.—Ford Wheel Corporation, Wilmington, Del. Capital $1,000,000.

NORTH CAROLINA. — Columbia-Westcott Co., Charlotte, N. C. To distribute Westcott and Columbia cars.

Oldsmobile Sales and Service Co., Raleigh, N. C. To distribute Oldsmobile cars. Incorporators: C. E. Hanbury, R. E. Winstead.

SOUTH CAROLINA.—Courtney and Cannon, Inc., York, S. C. To deal in automobiles, trucks and tractors. Capital $20,000. Incorporators: J. R. Cannon, S. L. Courtney.

OHIO.—Homeier-Whorley Motor Co., Akron, O. Capital $25,000. Incorporators: A. L. Homeier, Merton M. Whorley, Pierce A. Snyder, Z. M. Whorley, C. H. Stahl.

Bob Allen Overland Willys Knight Sales Co., Cleveland, O. Capital $25,000.—Peerless Motor Co., Cleveland, O. Capital $100,000. Incorporators: D. A. Burke, W. H. Collins, J. E. Porter, F. A. Trester, E. R. Cameron.

Cookston Motor Car Co., Dayton, O. Capital $25,000. Incorporators: C. R. Cookston, R. H. Brundrett, Roland C. Landis, A. F. Hullinger, Ralph P. Dixon.

Dalrymple Motor Freight & Express Line Co., Lacon, O. To operate a motor truck line. Capital $5,000. Incorporators: Walter J. Dalrymple, Daisy Dalrymple, Tracey Hancock.

Toledo Oldsmobile Co., Toledo, O. Capital $50,000. Incorporators: Otto H. Spengler, Joseph S. Feneley.

INDIANA. — Service Manufacturing Co., Elkhart, Ind. To manufacture automobile accessories. Capital $20,000. Incorporators: Harry M. Smith, Florence P. Smith, Warren A. Reichert, Lulu D. Reichert.

ILLINOIS.—Mid-City Auto Body & Wagon Works, Inc., Chicago, Ill. To manufacture and repair truck, wagon and automobile bodies. Capital $25,000. Incorporators: Leo L. Gardner, J. W. Singleton, Marshall Reagen.—Roosevelt-Paulina Garage Co., Chicago, Ill. To deal in and hire automobiles, motorcycles, etc. Capital $4,000. Incorporators: S. Levin, L. Rebofsky, Herbert Levin, Samuel Rosenfeld.—S. & K. Motors Co., Chicago, Ill. To manufacture and deal in motors of all kinds, automobiles, etc. Capital $15,000. Incorporators: K. K. Kizer, Roy L. Sutton, J. R. Considine.

Bennett Motor Sales Co., Litchfield, Ill. To engage in a general automobile sales, storage, garage, repair and battery business. Capital $10,000. Incorporators: Frank E. Cox, Danville Bennett, George W. Bennett.

WISCONSIN.—Edwards Motor Co., Milwaukee, Wis. To deal in automobiles, buses, trucks, tractors, bicycles and engines of all kinds. Capital $200,000. Incorporators: Carl B. Rix, Hugh M. Reindl, Frank J. Edwards.

MISSOURI.—G. E. Cable & Co., Harrisonville, Mo. To engage in a wholesale and retail automobile business. Capital $15,000. Incorporators: G. E. Cable, A. E. Lyon, P. K. Glenn.

Stivers Motor Co., Piedmont, Mo. Capital $20,000. Incorporators: G. W. Stivers, Nettie B. Stivers, P. R. Stivers.

Poplar Bluff Rubber Co., Poplar Bluff, Miss. To manufacture sponge rubber inner tires. Capital $100,000.

Frahn-Zeliff Motor Co., St. Joseph, Mo. Capital $5,000.

Gertrude Motors Co., St. Louis, Mo. Capital $40,000. Incorporator: J. Carter Carstens.

KANSAS.—Ray Battery Service Co., Wichita, Kans. To deal in batteries. Incorporator: H. E. Nichols.

MINNESOTA.—Lord-Fisher Co., Duluth, Minn. To manufacture and deal in automobiles. Capital $50,000. Incorporators: Abner H. Lord, Sherwood Fisher, Elmer J. Kennedy.

TEXAS.—Burge Garage, Beaumont, Tex. Capital $5,000. Incorporators: C. C. Lewis, R. A. Morris, M. Burge.

Bell Shaw Co., Dallas, Tex., has changed its name to the Bell Brothers & Co.

Stuckert-Whitehurst Company, Fort Worth, Tex. To deal in automobiles. Capital $50,000. Incorporators: J. L. Stuckert, J. N. Whitehurst, F. W. Stuckert.

West Motor Co., Hearne, Tex., has changed its name to Hearne Motor Co.

J. N. Dolson & Co., Inc., Houston, Tex. To operate a garage. Capital $3,000. Incorporators: B. B. Rice, J. N. Dolson, Alva Carlton.

C. M. Van Zandt Tire Co., San Antonio, Tex. Capital $10,000. Incorporators: C. M. Van Zandt, D. L. Dennis, James Caldwell.

CALIFORNIA.—Fontana Service Co., Fontana, Cal. To deal in automobiles and accessories. Capital $25,000. Incorporators: H. C. Spring, Harry Miller, Harry E. Spring.

Milo Lite Co., San Francisco, Cal. To manufacture searchlights and automobile spotlights. Capital $200,000. Incorporators: H. L. Fedderson, Miles Caughrean, B. O. Selbach, E. Longwill, Louis Stocktmier.—Pacific Heights Garage Co., San Francisco, Cal. Capital $25,000. Incorporators: A. Ortiz, E. Materne, J. E. Colsten.

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General Motors Trucks

Throughout their many years of useful service most GMC trucks remain in the hands of their original owners.

The satisfactory performance of these trucks in all kinds of hauling and the enduring service which they give over a long period of time, and with a minimum of expense, result in their staying on the job at which they first are started.

This fact should have a deep significance for every motor truck dealer. It is direct evidence of the feeling which GMC owners invariably have for these trucks and of the possibilities which such good will offers to the holder of a GMC selling franchise.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 *2 Ton $2375* *3½ Ton $3600* *5 Ton $3950*

Chassis Only—At the Factory—Tax to be Added

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CALENDAR

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Toledo, Ohio, September.—Annual Convention of the Ohio Automotive Trades Association.

Sacramento, Cal., Sept. 2-10.—Automobile Show, auspices of the Motor Car Dealers' Assn., State Exposition Grounds; Royal Miller, manager.

Rio de Janeiro, Brazil, Sept. 7-Nov. 15.—Automobile Show during International Exposition.

Modesto, Cal., Sept. 9-16.—Automobile and County Industrial Show, auspices of the Stanislaus County Auto Tradesmen's Assn.

Louisville, Ky., Sept. 11-15.—Used Car Show, to be held in connection with the Kentucky State Fair, auspices of the Louisville Auto Dealers' Assn.; George T. Holmes, manager.

Syracuse, N. Y., Sept. 11-16.—New York State Fair.

Red Bluff, Cal., Sept. 11-17.—Automobile Show, to be held in connection with the Second Annual Tehama County Fair, auspices of the Tehama County Fair Assn., Fair Grounds; George Wahl, manager.

Buffalo, N. Y., Sept. 13-15.—Annual Credit Meeting of the Motor and Accessory Manufacturers' Assn., Lafayette Hotel.

Chicago, Ill., Sept. 14-15.—National Used Car Conference of Trade Association Secretaries, auspices of the National Association of Automobile Show and Association Managers.

Sioux City, Iowa, Sept. 15-19.—Automobile Exhibit, to be held in connection with the Interstate Fair, auspices of the Motor Trades Bureau, Interstate Fair Grounds; Milton E. Duggan, manager.

The Hague, Netherlands, Sept. 15-20.—Annual Automobile Show.

Kansas City, Mo., Sept. 16.—Opening meet of the new Kansas City Board Speedway.

Rome, Italy, Sept. 18-23.—Second Annual Meeting of the International Chamber of Commerce.

Cleveland, O., Sept. 18-28.—Exhibition of Closed Cars during the Merchants and Manufacturers Exposition, auspices of the Cleveland Automobile Manufacturers' & Dealers' Assn.; Henry Buckman, manager.

New York, N. Y., Sept. 23-30.—Closed Car Show, auspices of Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of German Automobile Manufacturers' Assn., Kaiserdamm Hall.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Ventura, Cal., Oct. 4-8.—Automobile Show, to be held in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson, manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Detroit, Mich., Oct. 17-21.—Closed Car Salon, auspices of the Detroit Auto Dealers' Assn., General Motors Building; H. H. Shuart, manager.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile Building; Fay Waldin, manager.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

London, England, Nov. 3-11.—Olympia Automobile Show.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Chicago, Ill., Nov. 13-18—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Boston, Mass., March 10-17.—Passenger Car, Truck, and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics' Building; Chester I. Campbell, manager.

* Tentative.

HOUSE ORGAN KEYNOTES

For twenty years two chess players met daily at Brown's Chop House, silently took their places, silently played their game and silently departed. For twenty years a third party sat by and silently looked on.

Then one of the two players failed to show up—for the first time in twenty years. After waiting a few minutes, his partner said to the onlooker: "I guess he isn't coming today. Will you play his men?"

"Sorry," was the answer, "but I don't know the game."

He had followed every move for twenty years, but he didn't know the game. He had watched the drama of king and castle for two decades without sensing a single undercurrent of strategy, speculating on a single motive, or anticipating a single coup.

He had displayed infinite patience in looking at the game, but he couldn't be bothered looking into it. He showed every symptom of life except its first symptom—curiosity.

He belonged to that listless army of passive observers who clutter up the sidelines of business—men who look without seeing, listen without hearing, do without understanding.

Placed in an office—at a bench—he would remain twenty years ignorant of his neighbor's job, his superior's problems, his own significance. When the opportunity for advancement came, he would have to say: "Sorry, but I don't know the game."—*Bearing on Us.*

It was a hot July day when two colored workmen checked out for lunch. One said to the other that he wished he had a fine Summer home, way out west in the mountains, where the cool breezes always blow and that he had nothing else to do but just rest and enjoy life. His companion thought this was a splendid idea and inquired, "If you had this fine Summer home, would you ask me to come out as your guest and spend the Summer?" The first man said, "No, sah! I should say not. Any nigger that is too lazy to do his own wishin' can jest sit there and wilt."—*Republic Round Table.*

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PUBLISHER'S OBSERVATIONS

ABOVE THE RAPIDS

AS the final quarter of the year approaches, automobile executives must give serious attention to several vital questions: Will 1923 be a bigger year? Is there justification for the further expansion of those enterprises that are again approaching maximum capacity? Must the market be nursed along further with price concessions, or will respect for established repute and inherent quality attain greater ascendancy over the buyer's mind?

To answer with assurance one or all of these, would require superlative perception. No one knows exactly what is going to happen next year and even the best surmises are still vague. Yet the man upon whose decisions large responsibilities depend must somehow answer them—to his own satisfaction at least—for that is the biggest part of the executive's job.

Others may not know what is in the back of the big man's head, but it is at least possible for them to assemble and weigh in their own minds the salient facts upon which the judgment of the superman is based. These are patent to any careful observer.

¶ As far as the industry itself is concerned, the published record of shipments indicates that the total movement of the product for the nine months ending September 30 may exceed by as much as 67 per cent the corresponding total for 1921. Past experience has shown that generally about 77 per cent of the year's total output is shipped in the first nine months, and 23 per cent in the remaining three months. Given only an average volume of shipments during the last three months of 1922, therefore, the great activity between March and August should be sufficient to advance the year's total by about 50 per cent over that of last year. That, in turn, would indicate a total production for the year of about two and a half million passenger cars and trucks, or a considerable advance over the banner year of 1920.

This seems to establish pretty clearly the fact that the automobile business is running way ahead of most other lines, since current reports contain mention of no such relative prosperity elsewhere. Practically all retail lines, in fact, are well below the levels of 1920, instead of being above them.

¶ The reasoning mind cannot fail to ask itself whether this is normal. Is the automobile industry rushing to fill a vacuum in its markets, or is it crowding them, and incidentally crowding itself?

All one has to go upon is the fact that the demand for automobiles has never yet been wholly satisfied, although there have been times when purchasing power has lagged, and when certain types have been overproduced. Over against this, however, is the relentless struggle between competitors to attain undisputed possession of their chosen areas. Until consolidations and withdrawals from activity relieve the pressure, this factor will probably contribute to continued increases in total production, all other factors aside. Against the possible expansion of the market as a whole, therefore, must be balanced the probable growth of closely competing concerns.

Theoretically all competition is subject to the governing influence of general market condition. In wars, panics and boom times, to be sure, industries may advance, mark time or halt in set formation, but ordinarily their progress is that of an impetuous and ill-governed crowd, the government of industries by themselves being undeveloped. So it often happens that the motive to compete may override even the instinct of caution.

¶ Just now, general conditions are more propitious than for many months. As for the world at large, it is thought the settlement of the German reparations question, looked for very soon, will go far toward hastening the end of many other vexatious questions. A settlement of the exchanges to more harmonious levels, revival of international commerce, the dawning of prosperity in the western hemisphere are beginning to be anticipated.

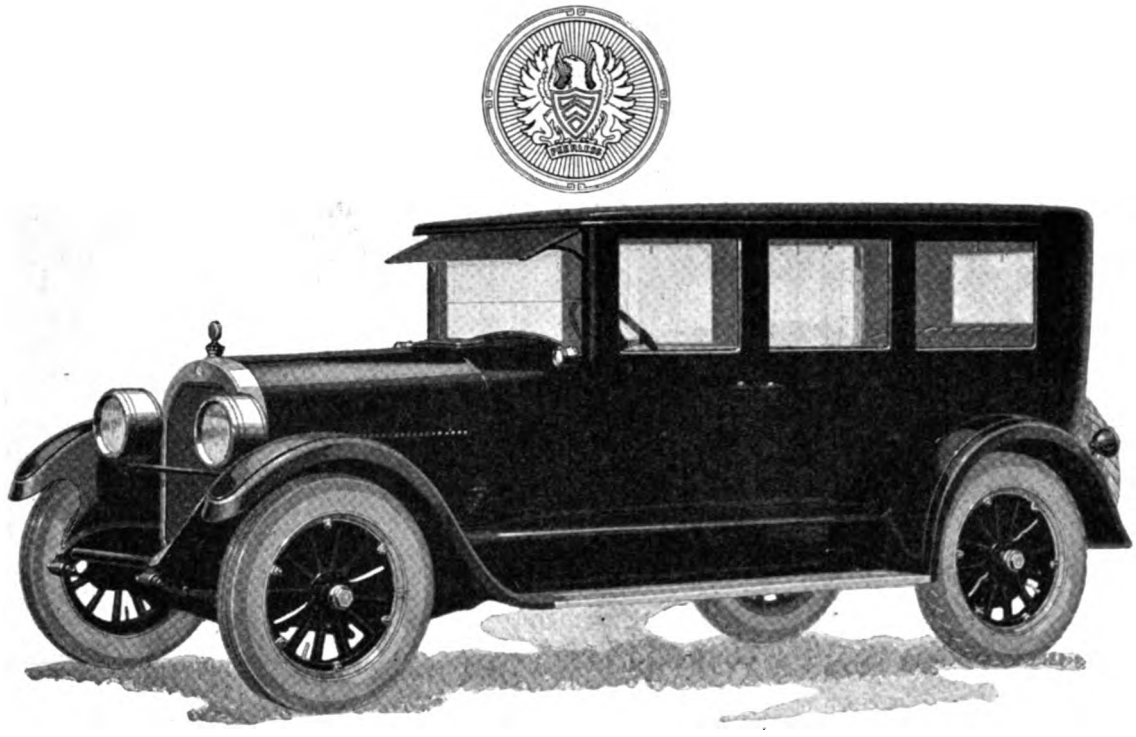
In this Country it is assumed that another year will find fuel and transportation services removed from the doubtful list and once more restored to something like a fair relation to natural requirement. The fruits of this year's harvest will have liquidated the farmer's debts in large measure and to some extent fattened his purse. Industries that have lagged behind will have had time to catch up. Greater manufacturing activity should have greatly stimulated trade, stabilized wages and bred greater confidence.

¶ There remains, then, the larger question of competitive influence upon automobile affairs. Here, obviously, only the surface indications can be read, since all plans for the future are closely guarded. But it is evident that there is to be no yielding of place merely through faint heartedness or fear that the industry as a whole may again suffer through over expansion. It is to be a case of "Devil take the hindmost."

As prices in general are holding up, with some tendency to rise, and as open competition always tends to breed better value for the money, the public will probably benefit. The general hope is that it will benefit by a better product at the same or higher prices, rather than by capitulation of quality as well as price.

Such a development might come, however, were the manufacturers to lose their heads, and it would be a descent into the maelstrom indeed.

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Only one conclusion can be drawn from the warmth of the welcome given to the new Peerless Eight.

That conclusion is, that this latest eight-cylinder creation has exceeded all that was expected of it in the way of power and speed and ductility.

Peerless dealers report that the new Peerless is being seen and driven by experienced motorists everywhere.

And everywhere, the consensus is the same—the eight-cylinder Peerless has attained new heights of finished performance.

Power, and ease of power-control, probably never paralleled in a stock car; new and finer degrees of flexibility, and an unusual capacity for sustained speed—these are the distinguishing marks of the new Peerless Eight.

They even overshadow the attraction of its exquisite beauty and almost perfect comfort—for they are so new and rare among cars of the highest grade.

THE NEW PEERLESS EIGHT IS BUILT IN THE FOLLOWING TYPES:

Four Passenger Touring Phaeton	*Four Passenger Town Coupe*	*Seven Passenger Suburban Sedan*
Seven Passenger Touring Phaeton	*Four Passenger Suburban Coupe*	*Five Passenger Berline Limousine*
Two Passenger Roadster Coupe	*Five Passenger Town Sedan*	*Four Passenger Opera Brougham*

THE PEERLESS MOTOR CAR COMPANY, CLEVELAND, OHIO

PEERLESS

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Announcing

1923 Series

A New Series *of the* New Oakland

The 1923 Series of the New Oakland Six-44 announced September first, embraces a line of cars distinctly new in beauty of line and in refinement of detail. Among the numerous improvements are exclusive features found on no other car.

These new models, following close upon the substantial price reductions made August first, have brought to Oakland dealers everywhere a volume of business without precedent in Oakland's history.

Oakland dealers everywhere are breaking all records for sales and profits with these new models at their new low prices. Avail yourself of the unusual opportunities the Oakland franchise offers today. There are still a few territories open — communicate with the factory.

Oakland Motor Car Company, Pontiac, Mich
Division of General Motors Corporation

New Prices at Factory

Roadster	*$ 975*	*2-Pass. Coupe*	*$1185*
Touring Car	*995*	*4-Pass. Coupe*	*1445*
Sport Car	*1165*	*Sedan*	*1545*

The New Oakland Six

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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FOUR-CYLINDER PASSENGER CARS

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cor'ling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter–Dem.Wheels	3¾x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3⅛x4¼	Con	L	H	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5					760	4				3⅝x4	Own	L	H	T		Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680	2	860	5	C.	3¼x4	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	550	5		550	2		850	2	895	5		3½x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980	2	1,440	5	C, K, N, P	3⅞x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3½x4¼	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3¼x5¼	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,095‡	5	1,385	5	B	3½x5	Lyc	L	H	T		Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	1,235	4	1,335	5	C, D, K, P, T	3½x4½	Own	L	H	T		Eag	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3¾x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D H	895	2	C, D, H	1,095	2	1,345	5	C, D, H	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275	5	1,545	5		3⅜x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5		985	2		1,400	3	1,450	5		3½x5	Gry	H	H	T		Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Dixie Flyer	995	5	D, G, O	1,095	4	D, E G, O	1,395	3	1,395	5	D, G, N, O, V	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, V, Z	1,395	4	1,795	5	C, E, H, N, T, V, X, Y	3½x5¼	Own	L	H	T		Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C, D, H, N, O, P, T, U, b	3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5					1,295	5				3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5		1,225	4	C, D, M, P, Z	1,425	5	1,745	5	P, V	3¼x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335	2	1,785	5	C, O, N, P, V	3¼x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	4		1,795	4	1,795	5		3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,375	5	B	1,350	2		1,875	4	2,095	5		3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	G, I	2,175	4		2,650	4	2,785	5	A, H, I, N, V	3⅜x5½	Own	H	C	P		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T			Del	Del		Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4			B, D, H, J, L, O, U	4⅜x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T		Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3½x5½	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z	3,985	2	A, D, G, J, L, Z			4,650	4		4¼x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	5,250	7	B, G, 2I, L	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				7,000	5	G	4x5½	Own	S	C	P		Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster

SIX-CYLINDER PASSENGER CARS

Studebaker Light Six	975	5	B, D, K¹	975	2	B, D, K¹	1,225	3	1,550	5	B, D, C, G, K¹	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S		31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, V	3½x5	Own	L	H	P		Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185	2	1,545	5	C, N, O, T, V	2½x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	W-M	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3½x4½	Own	H	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3¼x4¼	Fal	H	H	T		Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1 145	2	C, K, P	1,595	4	2,295	5	C, D, K, P, T	3½x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P									3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C D, P	1,175	3	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3¾x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R	1,395	4	R			2,040	5	D, R, V	3½x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, K¹	1,250	2	B, C, D, G, K¹	1,875	4	2,050	5	B, D, G, K¹, S	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P, Z	1,275	2		1,795	5	1,795	5	V	3½x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1 295	5	E, J, K, O, Z						1,795	5	E, O	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5 1	31x4	114	Davis "71"
Elgin "K-1"	1,295	5	C, D	1,345	4	C, D, H, K, Z	1,695	4	1,695	5	C, H, N	3¼x4¼	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5 09	33x4	118	Elgin "K-1"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cycling	Cool'g Con.										
(SEE FOOTNOTES)	SIX-CYLINDER PASSENGER CARS—Continued																										(SEE FOOTNOTES)
Liberty	$1,295	5		$1,495	5	C, D, G, H, K, O, T, Z	$1,695	2	$2,245	5	C, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.66	32x4	117	Liberty
Moon "6-40"	1,295	5							1,695	5		3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T Vab	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3¼x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	O	1,895	4		2,275	4	2,345	5	O	3¼x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	G-L	Sal	S	5.0	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3⅜x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	G, K	1,685	4		2,985	4	2,985	5		3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Zb	2,355	4	2,435	5	B, G	3⅜x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Ovn	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4	1,985	5		3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Mitchell	1,490	5	A	1,790	5	A C D F H I K T V W	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O	1,545	2	D, G, H, K¹, O	2,095	3	2,395	5	D, G, H, K¹, O, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5		1,500	4							3⅛x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Davis "61"	1,595	5		1,695	4		2,095	4	2,195	5		3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	2,550	7	A	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	.....	War	Tim	S	5.0	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, K¹, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, K¹, O, S	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "A-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	4.66	32x4	120	Westcott "A-44"
Hudson	1,695	7	B	1,645	4		1,745	5	2,295	7		3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Col	S	4.45	34x4½	126	Hudson
Lexington "23"	1,695	5		2,045	5		2,345	4	2,545	5		3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
Stanwood	1,765	5		1,765	2		2,750	3				3¼x4½	Con	L	H	P		Str	A-K	Wes	B&B	G-L	S-P	S	4.5	33x4	118	Stanwood
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Zb			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-48"	1,785	5	B	1,785	2		2,785	4	2,785	5		3¼x4½	Con	L	H	P		Ray	Del	Del	B&B	B-L	Tim	S	4.66	32x4	122	Moon "6-48"
Moon "6-58"	1,785	7										3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	....	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	4.66	32x4½	122	Case "X"
Jordan	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,785	5	2,785	5	B, D, Z	3⅞x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅞x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Franklin "10"	1,950	5	A, B, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3¼x4	Own	H	H	A		Own	A-K	N-E	B&B	Own	Own	E	4.33	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, O	2,100	4	C, D, E, G, O	2,950	4	3,000	5	C, D, E, G, O, N	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5							2,985	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3⅜x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4	3,825	7		3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3¼x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5⅛	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,600	7	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	4,250	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"
Packard Single-Six	2,685	7	C, G, O M						3,525	7		3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	....	34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)	SIX-CYLINDER PASSENGER CARS—Continued																											(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X	.....	..	$3,795	4	A C F G H J K O P T X	3⅝x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5	.....	2,975	2	.....	.....	..	4,500	5	.....	3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5⅛	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6	.....	3,100	4	.....	.....	..	5,500	5	.....	3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, G	3,100	4	A, B, G	4,300	4	5,100	7	A, B, G	3⅝x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	35x5	132	Winton "40"
Ogren	3,750	5	.....	3,750	4	.....	4,500	4	4,800	5	.....	3⅝x5¼	Con	L	C	P	...	Ray	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	.....	3,800	4	.....	4,600	4	4,800	7	.....	3¾x5¼	Own	S	C	P	...	Ray	Sen	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H J M O T W Z	.....	..	.....	4,900	3	4,900	5	A C D G H J M O T W Z	3⅝x5	Own	H	H	A	...	Zen	Sen	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A G H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G H, O, Q, W, X, Y	.....	..	6,500	5	A, G, H, O	3⅝x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5	.....	.....	..	.....	.....	..	6,825	..	.....	3¾x5¼	Own	H	S	P	...	Ray	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A, B, C, D, G, J, M, O, Z	6,300	4	A, B, C, D, G, J, M, O, Z	7,500	4	7,500	7	A, B, C, D, G, J, M, O, Z	4½x6	Own	T	H	P	...	Ray	Spl	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4	.....	.....	..	8,900	7	.....	4⅞x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X	.....	..	11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	...	B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	.....	..	.....	.....	..	.....	..	.....	4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
	EIGHT-CYLINDER PASSENGER CARS																											
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	2,145	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P	.....	..	2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, Y, Z	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Cole	2,485	5	A, B, G, N	2,485	4	.....	3,185	4	3,685	5	A, B, G, N	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Standard	2,500	7	A, D, G	2,500	4	A, D, G	2,750	4	3,200	7	A, D, G	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Apperson	2,645	7	A, G	2,620	4	.....	3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3¼x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2	.....	5,350	..	6,000	..	.....	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O X Z	5,800	4	A B E G H I J M O X Z	7,150	4	7,650	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	.....	6,500	4	.....	7,800	4	7,800	7	.....	2⅞x5	Own	H	V	P	...	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
	TWELVE-CYLINDER PASSENGER CARS																											
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) A—power tire pump; B—theft lock; C—windshield wiper; D—cowl lights; E—front bumper; F—bumpers front and rear; G—clock; H—heat indicator; I—spare tire; J—spare wheel; K—disc wheels; K!—disc wheels optional; L—wire wheels; M—wheels optional; N—car heater; O—snubbers or shock absorbers; P—pressure chassis lubricating system; Q—spotlight; R—gasoline gauge (dash); S—glove box; T—mirror; U—vanity and smoking sets; V—sun visor; W—windshield wings; X—trunk rack; Y—trunk; Z—color option or special color; a—tilting steering wheel; b—rear signal; c—permanent top.

† **TWO-DOOR CLOSED TYPE:** Regular coupe listed except where low-priced two-door closed model is included in line. Latter is distinguishable in most cases by passenger capacity. ‡ Four-Door.

ENGINE: Ans—Ansted; Con—Continental; Due—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lyc—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wei—Weidely.

VALVES ARRANGED: H—in head; L—at side; N—side and head; R—horisontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith.

IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Lecco-Neville; N-E—North East; Rmy—Remy; Sca—Scintilla; Sim—Simms; Spl—Splitdorf; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; Rek—Rockford; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

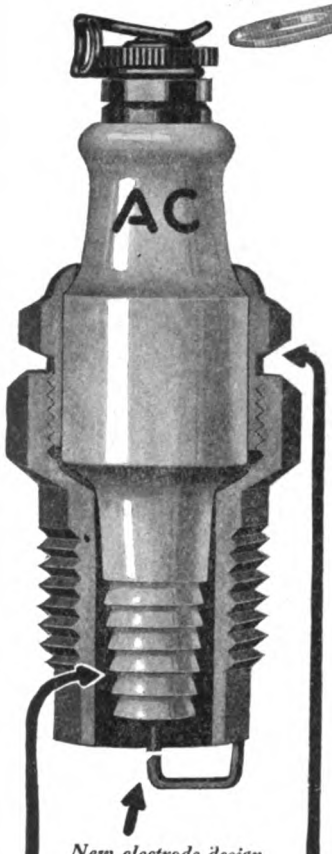
REAR END: Adm—Adams; Col—Columbia; Fli—Flint; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

Digitized by Google



Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost



New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain with its high temperature fins attains sufficient heat to burn oil deposits, thus offering effective resistance to carbon

78 LT



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

SAELT



Long SAE
Durant 4
Oakland
Olds
Saxon

78 DT



Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

78 LBT



Long Body 7/8
Chandler
Willys-Knight

How to Get a Profitable Spark Plug Business

Few car owners realize that hard starting and other motor troubles usually come from old, worn-out or incorrectly designed spark plugs. YOU ARE THE DOCTOR—you can help your customers by inspecting their engines and prescribing the remedy in the following way:

A new set of AC plugs to all car owners whose engines start hard.

A new set of AC plugs to owners who want the original pep restored to their engines.

New AC's when you find old, worn-out plugs.

New AC's when you find incorrectly designed plugs.

Sell a few extras to every car owner, old or new, as every motorist should carry some spares.

Do this and in no time you will find that you are making real worth-while profits out of your sales of AC Spark Plugs.

WE ARE DOING EVERYTHING TO HELP THE DEALER—Now it's up to you to help yourself.

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum—the AC line gives you this opportunity to reduce your plug stock to one line—the best line, the most profitable line. Sell only AC's.

AC 1075

The Best Spark Plug Ever Made for Fords

The AC 1075 is AC's answer to the need for better plugs for Ford engines—cars, trucks and tractors.

In addition to many other unique features, it has the famous AC Carbon Proof Porcelain with its high temperature fins that facilitate starting and avoid short-circuiting.

Every Ford owner who comes into your store is a prospect for a set of AC 1075 plugs.

Think of it—this plug gives you first place in the biggest automotive market. And when you build up an AC trade among Ford owners of your community you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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The Standard Spark Plug of the World

18 MT



Reg. Metric

Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½

Overland 4

SAENT



Extra Long SAE

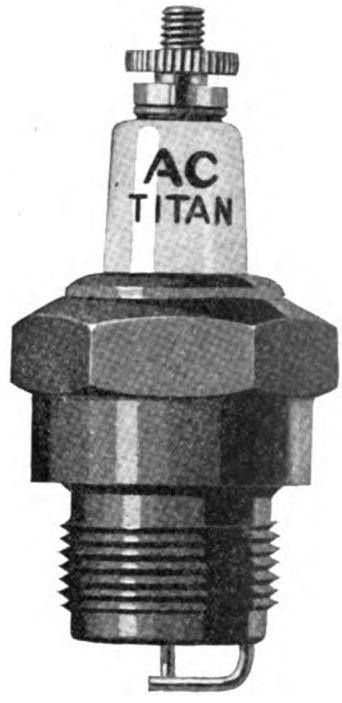
Elgin
McFarlan
Nash

SAET



SAE

Apperson
Durant 6
Mitchell
Marmon
Standard 8



Reg. ⅞ T

Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton

and 170 other makers of cars, trucks and tractors

Why You Should Carry the Full AC Line

More than 200 car and truck makers now use and have for years used AC Plugs as standard factory equipment. Among these:

DODGE BROTHERS cars have been AC-equipped since the company was founded.

BUICK cars have been AC-equipped for fourteen years.

NASH cars, both Sixes and Fours, have always been equipped with AC's.

OAKLANDS for the past fourteen years have been AC-equipped.

CHEVROLET cars have always had AC Plugs in their engines.

CADILLAC, CHANDLER, CLEVELAND, DORT, DURANT, ESSEX, HUDSON, HUPMOBILE, LaFAYETTE, MAXWELL, OLDSMOBILE, OVERLAND, PAIGE, WILLYS-KNIGHT and others are all standard AC-equipped.

The leading racing men use only AC Plugs.

At Indianapolis, Memorial Day, AC-equipped cars finished 1, 2 and 3.

—And There Are AC Plugs For All Other Cars, Too

Of course, the plugs shown here give only a small idea of the many cars that are factory-equipped with AC's. But they give you some thought of the great ready-made market that already exists for the dealer who goes after the AC business of his neighborhood.

And don't forget—there are specially designed AC's for any engine. If you have the complete AC line you can easily meet the spark plug needs of every customer. You need waste no time in "introductions" or long-winded explanations.

ALL YOU HAVE TO DO IS SAY "AC."

Here, then, is a second great market for the dealer who sells AC's, for the opportunity to put complete sets of AC's in cars that were not originally AC-equipped offers an opportunity that should not be passed by. SELL ONLY AC's.



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915. U. S. Pat. No. 1,216,139, Feb. 13, 1917. Other Patents Pending

By the Set

Digitized by Google

FISHER BODIES

Body by Fisher—this little symbol is concentrating the attention of tens of thousands of people upon this product. The eagerness of the motor car manufacturer to encourage this scrutiny bespeaks his satisfaction more eloquently than any words of ours.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT



Digitized by Google

COLUMBIA

ONE – PIECE – HOUSING

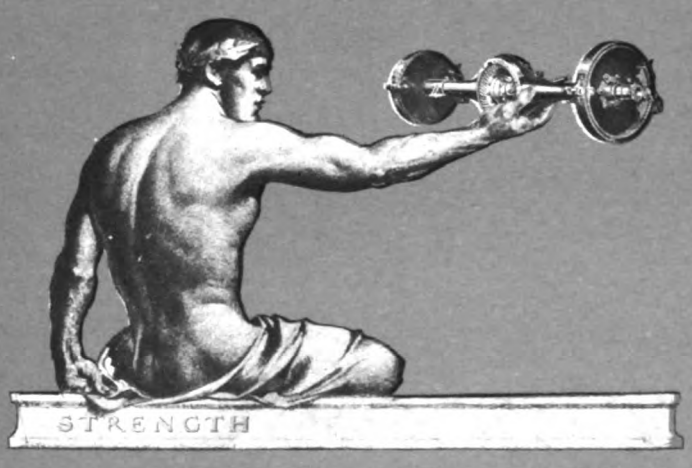
AXLES

Quite apart from the consideration of quality of material and workmanship which gives Columbia Axles enviable reputation, is the design which results in unusual strength.

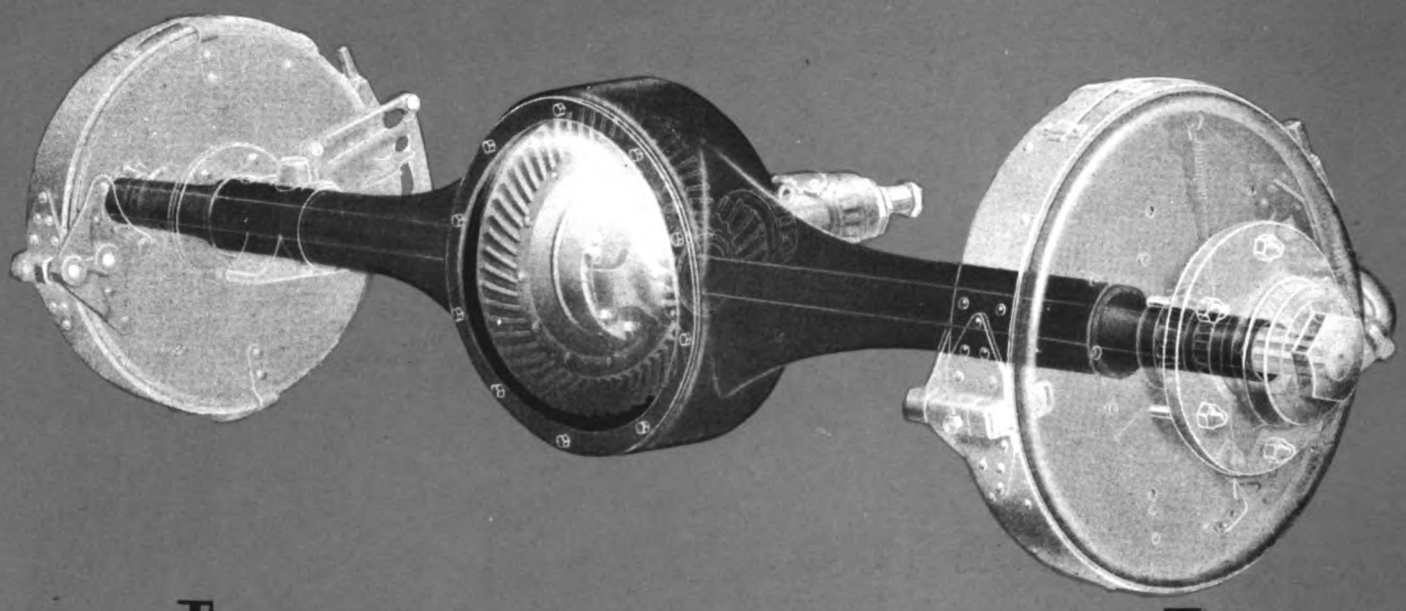
Greater than usual strength contributes two elements, both of which appeal strongly to Automobile Dealers.

From the sales angle, the greater margins of safety are a potent force,—from the service standpoint, the remarkable freedom from trouble of any kind is a substantial advantage.

THE COLUMBIA AXLE COMPANY
CLEVELAND, OHIO



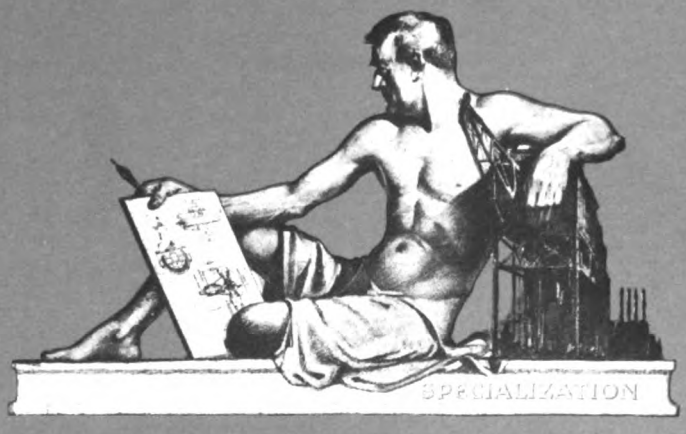
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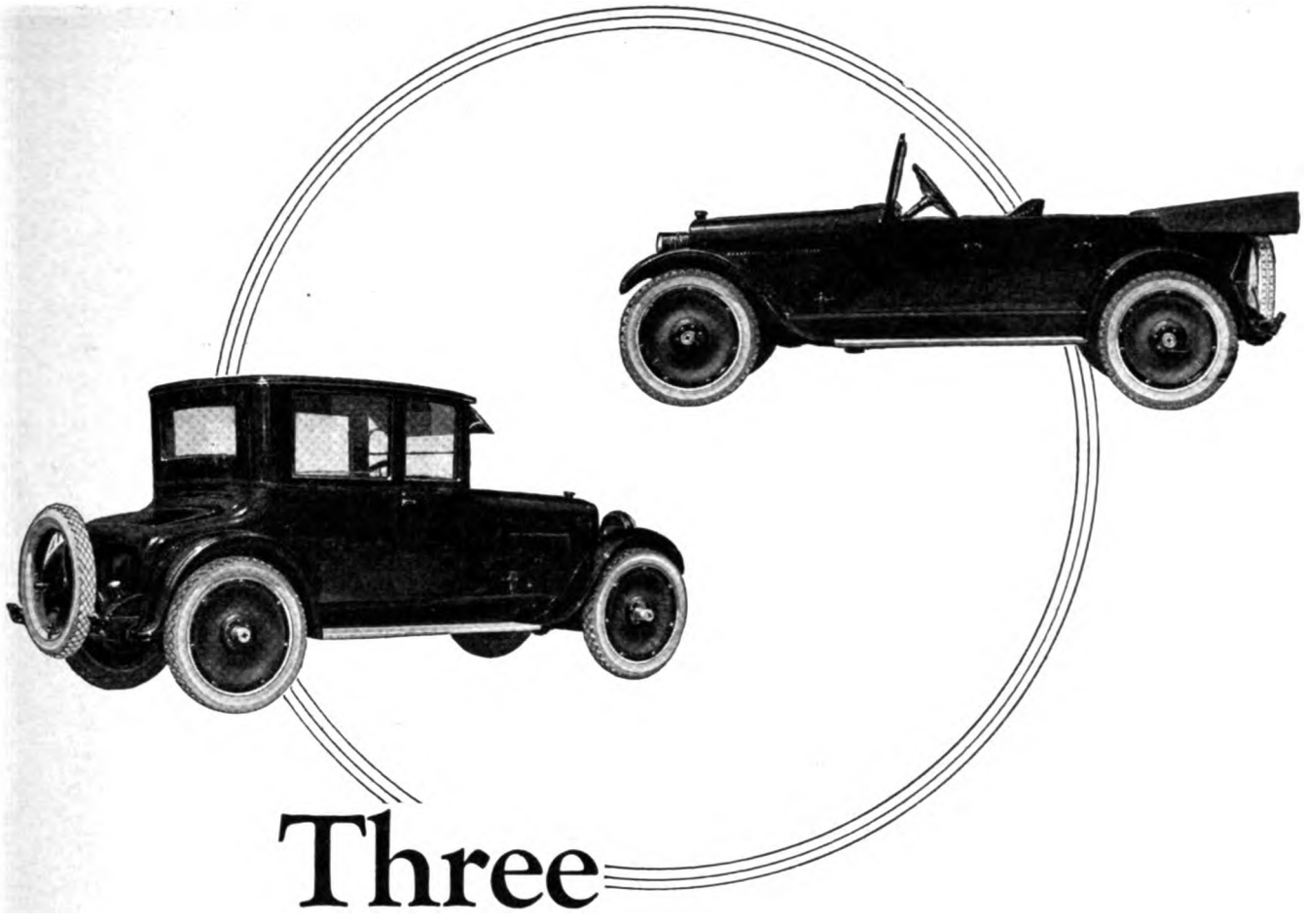
The Columbia organization is a conspicuous example of the standing which can be acquired by strict specialization in one clearly defined, closely limited line of endeavor.

Over a long period of time, this constancy to one specific problem of motor car engineering has given the Columbia organization an unusually authorative position which it values highly and fosters by every thought and deed.

THE COLUMBIA AXLE COMPANY
CLEVELAND, OHIO



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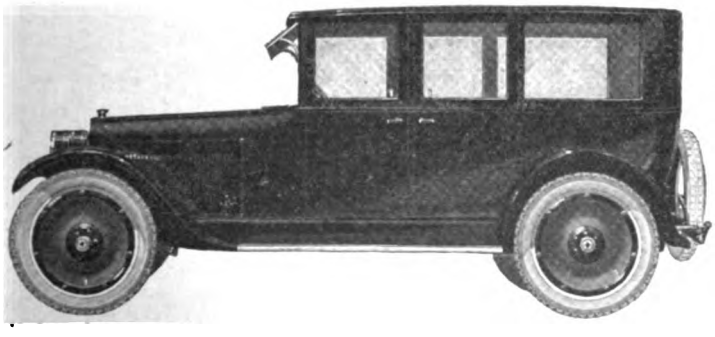
Three

of the greatest sellers ever placed on the American market! Dealers: Write us for particulars.

Rickenbacker Motor Company
Detroit Michigan

Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME



Organization Builds Success



Digitized by Google



Use These Two Thoughts
In Selling Gilmer Products

DO you know that you have two valuable selling thoughts on every Gilmer product? Your first argument is the product itself—its quality and serviceability. The second is the Gilmer story that stands back of every Gilmer product—a story that is rich in sales possibilities.

Gilmer leadership is acknowledged. Sell this leadership to your customers. It's a part of every man's make-up that makes him desire the leading article in its class—whether it's a fan belt or a new hat.

Let your customers know that Gilmer was the originator of woven automotive products for mechanical uses. Tell how every advance and improvement in the manufacture of woven automotive products has been started by the Gilmer Company. Tell of the three modern Gilmer plants that make Gilmer the *largest company of its kind in the country.*

It is a fact that to-day the automotive industry looks to Gilmer as the authority on woven products. Give your customers this same view-point and your sales of all Gilmer products will increase still further.

When the time comes that an improvement can be made in the field of woven automotive products, Gilmer will be ready to take that step—first!

L. H. GILMER CO., Philadelphia



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Welcome the Motorist Who Asks This Question

WELCOME the motorist who asks, "Why should I put Gilmer Bounce Absorbers on my car in preference to any others?" Let the old joyous selling instinct rise up strong. For you've got the strongest kind of a selling answer to that question.

Tell him! Explain that the Gilmer operates fast enough to absorb the small bumps—the hundreds of little bounces that hammer the life out of a car.

Tell him—that the lightning-fast action will smooth every bump in a series—such as cobblestones. Of course the Gilmer absorbs the big wallops, too!

Show him—that there are only *two* working parts in the Gilmer. Neither of these is metal—no lubrication necessary. Nothing to get out of order.

Show him—that the Gilmer is instantly adjustable to any weight of car, stiffness of springs or any driver's preference. You'll sell him!

There are two types of the Gilmer Absorber. One for Ford cars and one for all other cars. It's a cinch to install. The majority of cars need no drilling on the rear. Fifty per cent need no drilling at all.

The same generous Gilmer margin of profit is found on the Bounce Absorber as on all other Gilmer products. Write your jobber about it to-day.

L. H. GILMER CO., Philadelphia



Gilmer

It's a Gilmer Product — you can depend on it

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At its present reduced prices the Stutz ranks as the pre-eminent fine car value. Never before has Stutz prestige been available to as large a percentage of buyers.

Digitized by Google



A Bigger Market Than Ever Before

Price, alone, in the past has prevented a vast body of motorists from exercising their preference for a Stutz. Now, that condition no longer exists.

At the present unprecedented prices, the Stutz market is increased immeasurably. Literally hundreds of buyers now will be able to gratify their long-cherished desire to acquire the distinction which Stutz ownership imparts.

Other interesting developments are maturing rapidly. It will pay you to learn the full details of our plan. Write or wire.

STUTZ PRICE REDUCTIONS

MODEL	Price June, 1921	Price July, 1921	Price January, 1922	Price Aug., 1922	Percentage of Reduction
Coupe	$5500	$4800	$3990	**$3490**	36.55%
Roadster	3900	3250	2950	**2450**	37.18%
4-Passenger . . .	4000	3350	2990	**2790**	30.25%
6-Passenger . . .	4000	3350	2990	**2640**	34.00%

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.

Indianapolis, Indiana, U. S. A.

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Filling the Gaps

"Standard Equipment" Is Given Away

But 51% of the Leading Lines Carry Added Equipment as a Sales Inducement.

That makes a market for similar goods on every car that is Standard Equipped.

Wideawake dealers sell more cars at higher profits by adding extras of their own selection. Alert manufacturers are constantly studying the demand for new features. A chart of equipment specifications is a map of the market for accessories.

AUTOMOBILE TOPICS'

Table of Passenger Car Selling Points Shows the Alignment of Accessories.

The Gaps in the Columns of "Added Equipment" Indicate Open Territory for the Sale of Products that Are Growing More Popular.

This illustrates but one of many useful and suggestive applications of this new table (see Page 355 of this issue) which appears every week (revised weekly) in

AUTOMOBILE TOPICS
The Trade Authority

1790 Broadway New York City

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Suppose some manufacturers made a car to look as nearly as possible like yours?

That wouldn't make it like yours, would it?

And its performance would soon convince the public that it wasn't yours. Don't you think so?

KLAXON

Company, Newark, N. J.

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EATON

A Greater Percentage of Sales

is credited to speed truck models this year than to all other truck models combined. Why not face the facts then, and put your time and energy and promotional work behind the leader of the hour?

Build and sell the kind of transportation that is popular, because of its proved economy and efficiency.

A Greater Percentage of Power

is delivered to the rear wheels by the bevel gear drive embodied in Eaton Speed Truck Axles. This means efficient and economical performance.

The Eaton Model 1000 Axle, designed solely for the strenuous and exacting requirements of this service, has had much to do with the growing popularity of Speed Trucks.

THE EATON AXLE COMPANY
CLEVELAND, OHIO

SPEED TRUCK AXLES

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

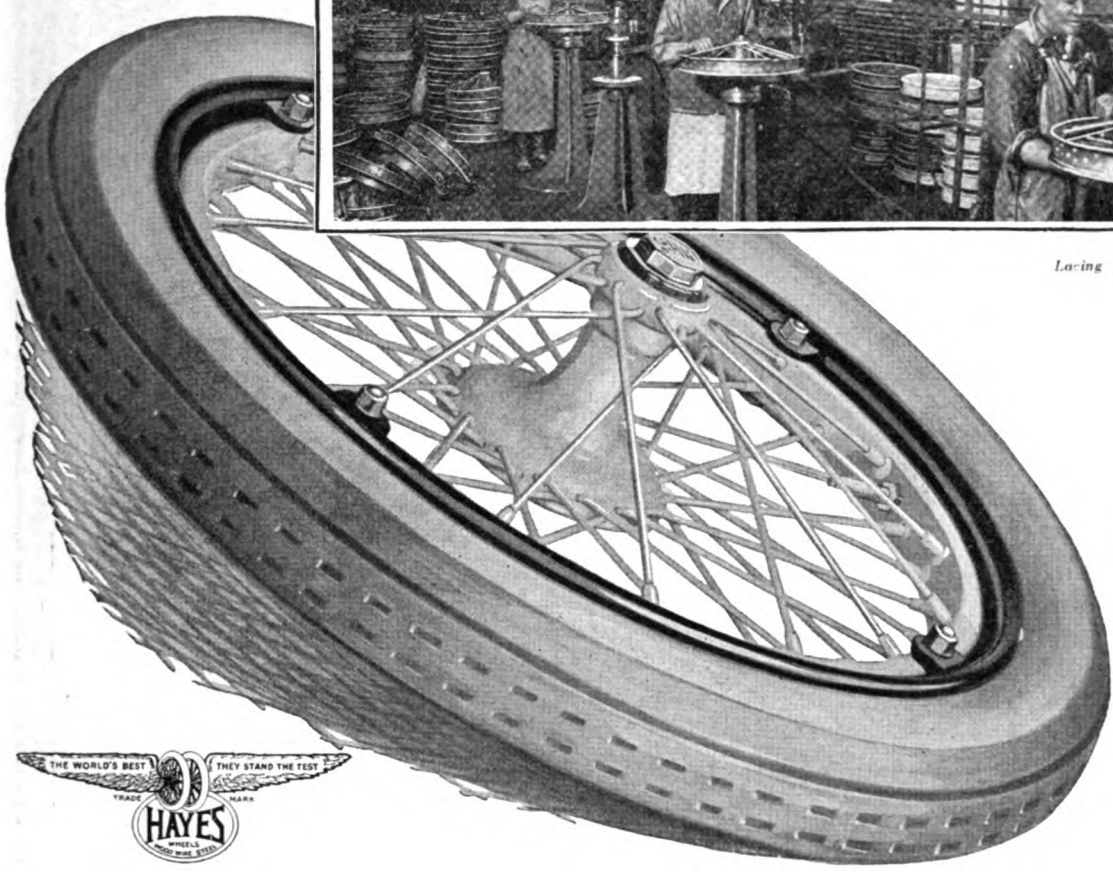
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HAYES

DEMOUNTABLE AT THE RIM



Lacing and Tightening Spokes



DEVOTION through long years, directed toward a single aim—the building of the best automobile wheel of which men and materials are capable—has brought its own reward.

There has been nothing sensational in the steady climb of the Hayes Industries to the position of acknowledged leadership occupied today.

Hayes wheels of wood, wire or steel have proved themselves worthy of every trust and test—that solely is the reason a large majority of all automobiles produced are Hayes Wheel equipped.

Every process of manufacture, every ounce of material, is watched and guarded with jealous care against imperfection.

We are always glad to place our engineering counsel and our immense resources fully at the disposal of manufacturers in planning for future wheel requirements.

(45)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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It Costs More to Make a Motor Car Right. But it Pays

On no other points are the interests of the distributor, dealer and manufacturer of a motor car so close together today as on the size, quality, performance, price and operating cost of the car.

There are as many "standards of value" as there are price groups. There is no doubt, however, that one of the most attractive markets of the future belongs to the car which unites performance with substantial size, comfort and quality, reasonable price and low running expense.

It costs more to produce a motor car that will travel 100,000 miles and make no compromises with comfort, performance and economy along the way. *But not enough mo e* to require a price that puts it beyond the reach of a million Americans who can afford such a car if it strikes the right balance between size, quality and cost.

The Stephens Six is built to strike that balance. The 5-passenger touring car costs $1595. With a wheel base of 122 inches, it has room for luxurious comfort. Its body is hand-built and hand-finished—twenty-seven painting operations alone. Its seats are 18 and 20 inches deep, with Marshall spiral springs under thick cushions of crisp, curled hair and hand-buffed high grade leather.

Its Stephens-built, valve-in-head motor develops 59 horse power—more than double the rated energy for a motor of its size. With superb performance, it combines low upkeep cost and twenty thrifty miles per gallon. Acceleration is unusual—from standing start to 50 miles in 20 seconds.

The Timken axles, Fedders radiator, full alloy-steel springs and Gemmer steering gear with the new spark and throttle controls—no quadrant on the steering wheel—have to be oversize and first quality to match the Stephens-built units.

Thousands of Stephens motor cars have been made and sold. Owners, distributors, dealers alike are enthusiastic. If Stephens is not represented in your city, write today for our contract terms and discounts. The Stephens strikes the right owner's balance.

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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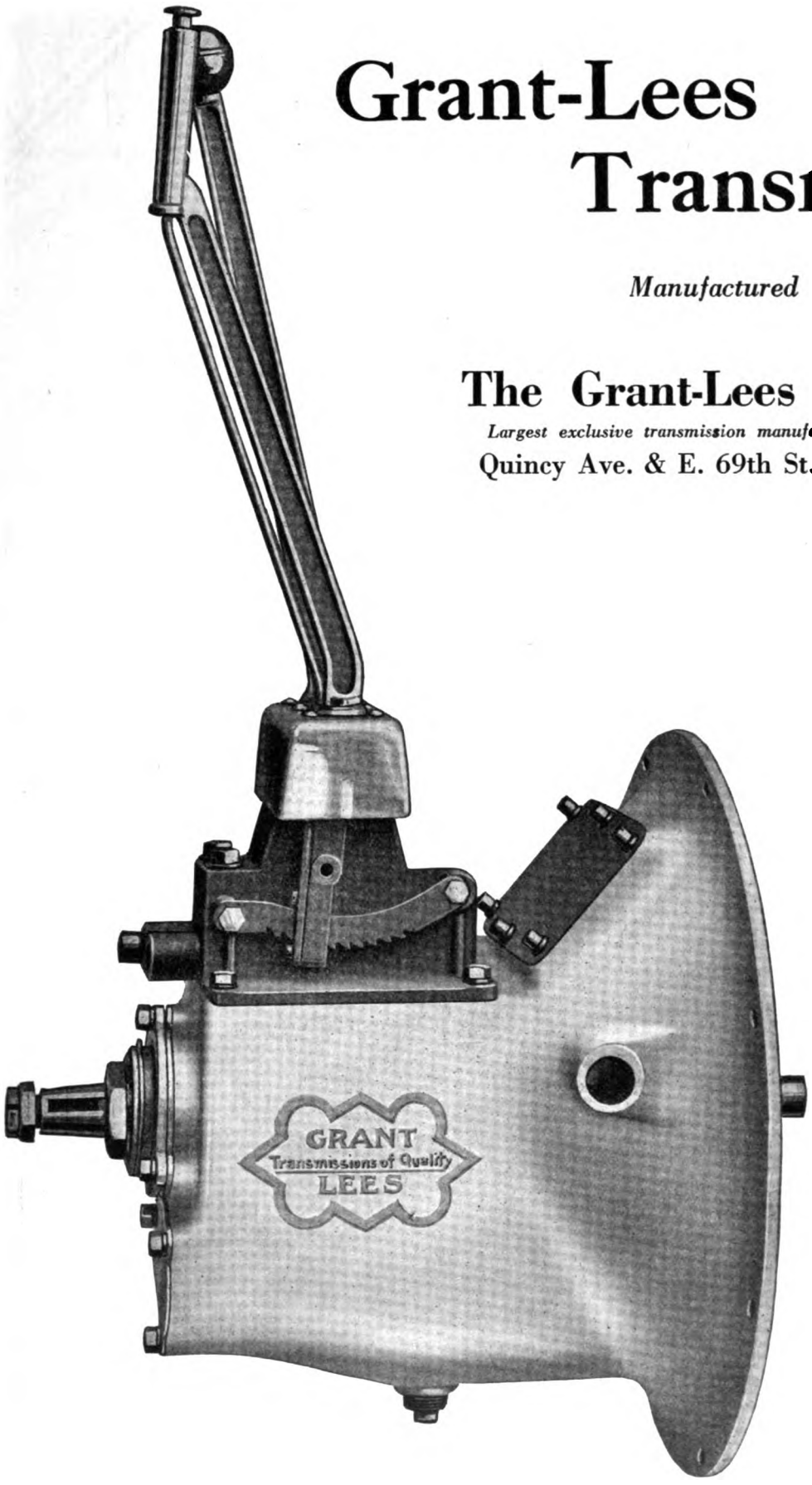
Grant-Lees Transmissions

Manufactured by

The Grant-Lees Gear Co.

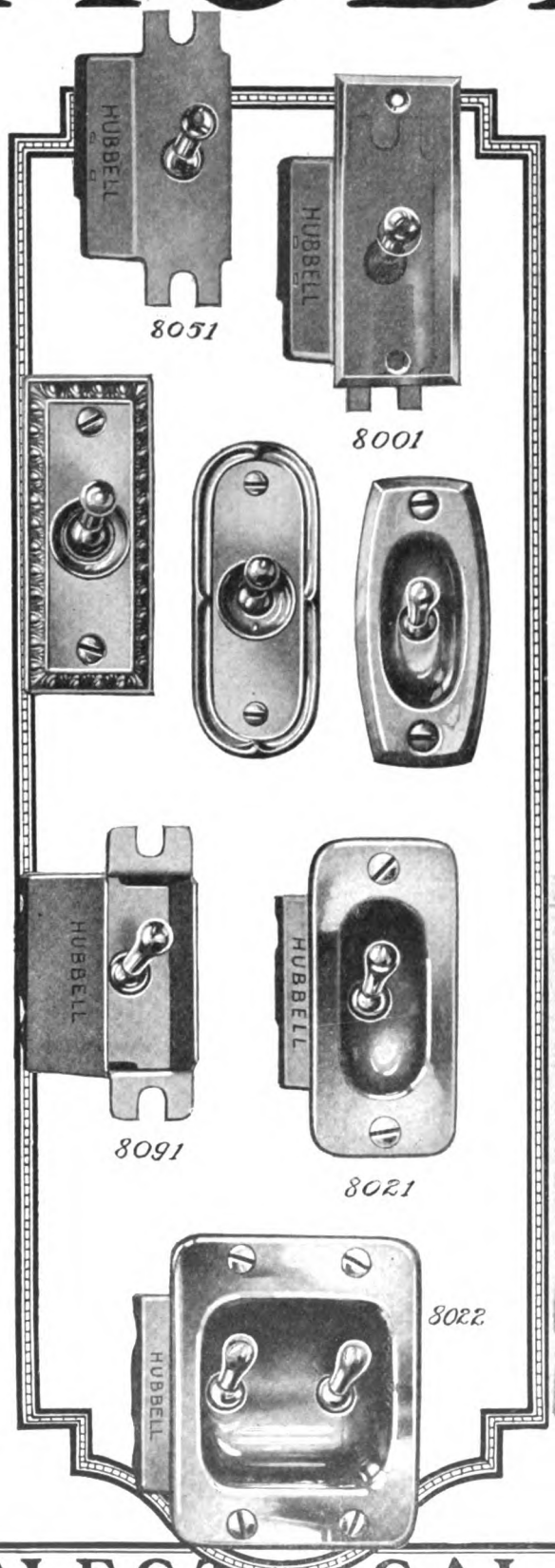
Largest exclusive transmission manufacturers in the U. S.

Quincy Ave. & E. 69th St., **Cleveland, O.**



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HUBBELL



Toggle Switches

Add character to enclosed automobile Lighting Equipment.

Mechanism is strong, neat and convenient.

Furnished with standard or special plates—any finish.

Specify Hubbell Toggle Switches for enclosed body work.

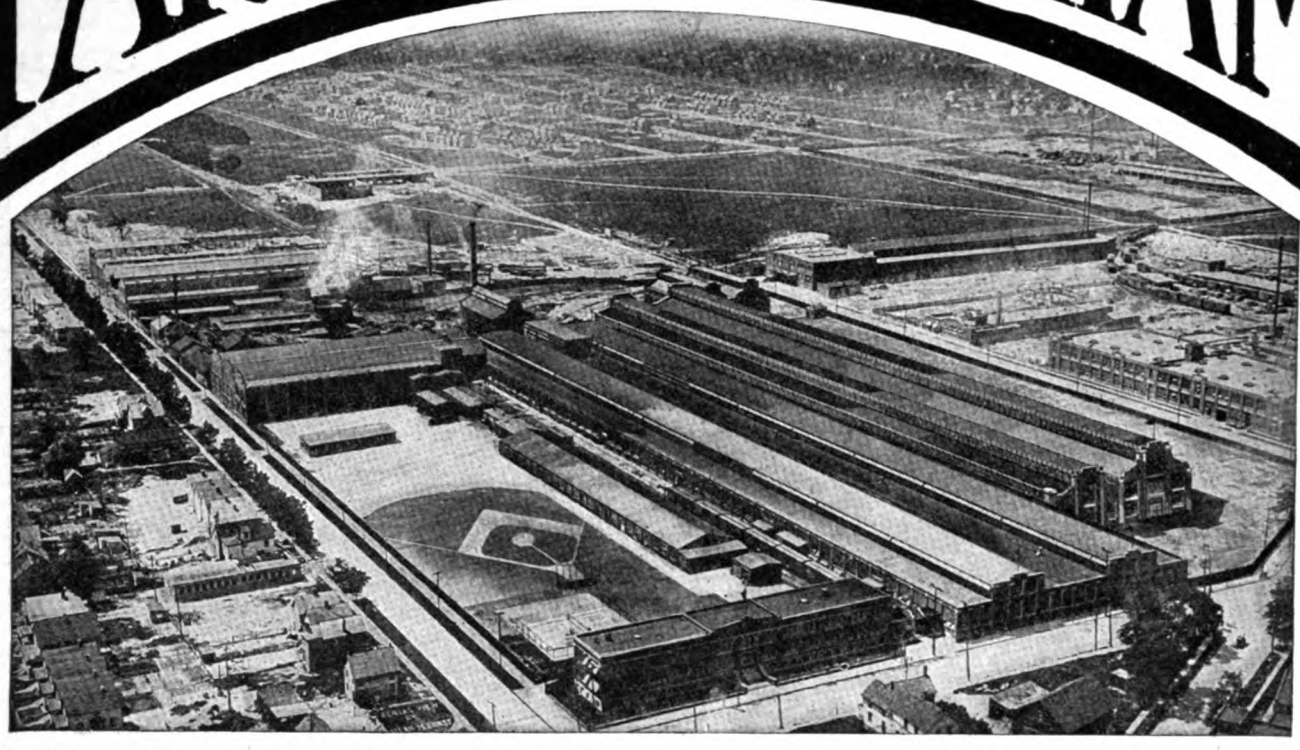
HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.
2232-U



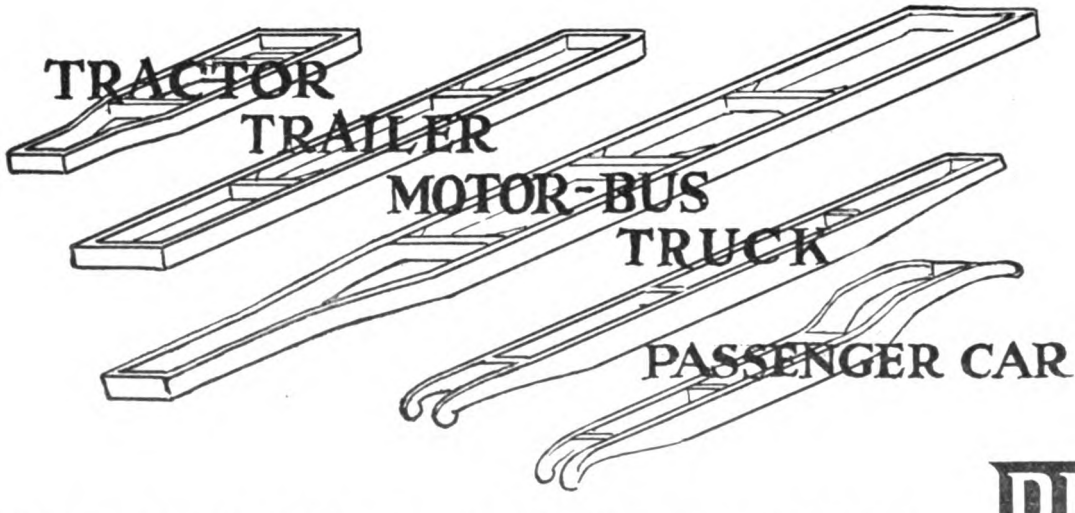
ELECTRICAL SPECIALTIES

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PARISH & BINGHAM



An Organization founded in 1894, devoted to the exclusive manufacture of Heavy Steel Stampings, specializing in Pressed Steel Frames and Parts for Automotive Chassis.



PARISH & BINGHAM CORPORATION

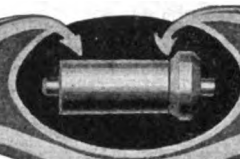
CLEVELAND, OHIO

P&B

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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CARRIES THE LOAD



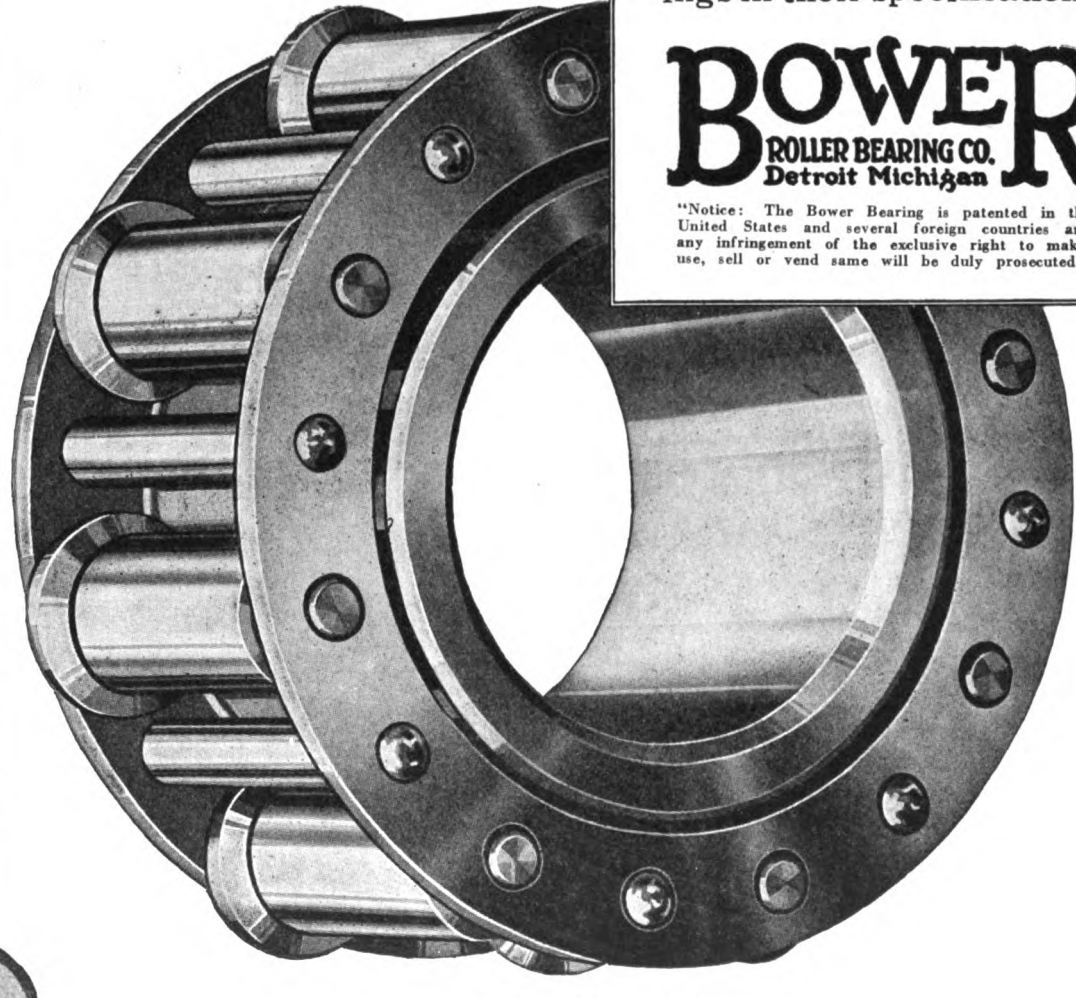
TAKES THE THRUST

AUTOMOTIVE manufacturers have always conceded that Bower Roller Bearing design was not only logical but practical.

They backed this belief up by including Bower Bearings in their specifications.

BOWER
ROLLER BEARING CO.
Detroit Michigan

"Notice: The Bower Bearing is patented in the United States and several foreign countries and any infringement of the exclusive right to make, use, sell or vend same will be duly prosecuted."



Exclusive Bower Features

Separate bearing surfaces for load and thrust. Parallel raceways. Self-aligning Never need adjusting. Does not develop end thrust under loads. Will not bind or end-slip.

BOWER SAVES POWER

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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OFF'N'ON CHAINS



You can put them on and take them off *in a hurry!*



Note the clever slip-on link

Either the complete chain or a cross chain

You can take off and put on a cross chain *in a hurry.* The patented slip-on link does it. A child can make the change.

You can put on or take off the entire chain *in a hurry.* The patented, positive lever lock does it. *Also takes* up the slack and saves wear on tires and chains.

And yet these chains cost no more.

These two features make OFF'N'ON Chains rapid sellers.

Your jobber will supply you. Order now.

It is a good idea to order spare cross chains at the same time, because you can sell a set of cross links with every chain.

Note the leverage of the positive lock that takes up the slack



PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers

520 Belmont Avenue, Newark, N. J.

Branches:

CHICAGO	ATLANTA	KANSAS CITY	SAN FRANCISCO
17 So. Jefferson Street	24 Nassau Street	1712 Grand Avenue	977 Mission Street

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Make Your Profit on Buying

Empire Tires Enable You To Face The Future In Safety

In these days of reduced tire prices and increased competition, it is unwise to figure too closely on your selling profits. The big fellow makes his profit on buying and you can do the same if you sell Empire.

Empire Tires allow you so wide a margin of profit at time of purchase that you have ample leeway to face any sudden change in market conditions.

One of the reasons for the generous profits for dealers in Empire Tires is briefly set forth in

EMPIRE PROFIT POINTER
No. 3

Sold Direct From The Factory To You

To meet the prevailing demand for lower prices without loss of quality, one of our first moves has been the elimination of sales through middlemen. The profit that formerly went to this source is now given the dealer in lower "direct from the factory" prices.

You Will Find

upon investigation, that the new Empire dealers' proposition will enable you to make your retail prices so low that the tires will literally sell themselves. We invite comparison in appearance, size, weight, endurance and profit to the dealer.

Write Today Dept. ET-4



Empire Tire & Rubber Corporation

FACTORIES **TRENTON, N.J. U.S.A.** MAIN OFFICES

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VELIE

Six touring car now only $1275
The Sedan but $1795

THE call for the Velie 58 at these prices published over a month ago is overwhelming. Car buyers everywhere are responding to the opportunity to obtain the unprecedented value offered in this beautiful Six. A value absolutely unmatched.

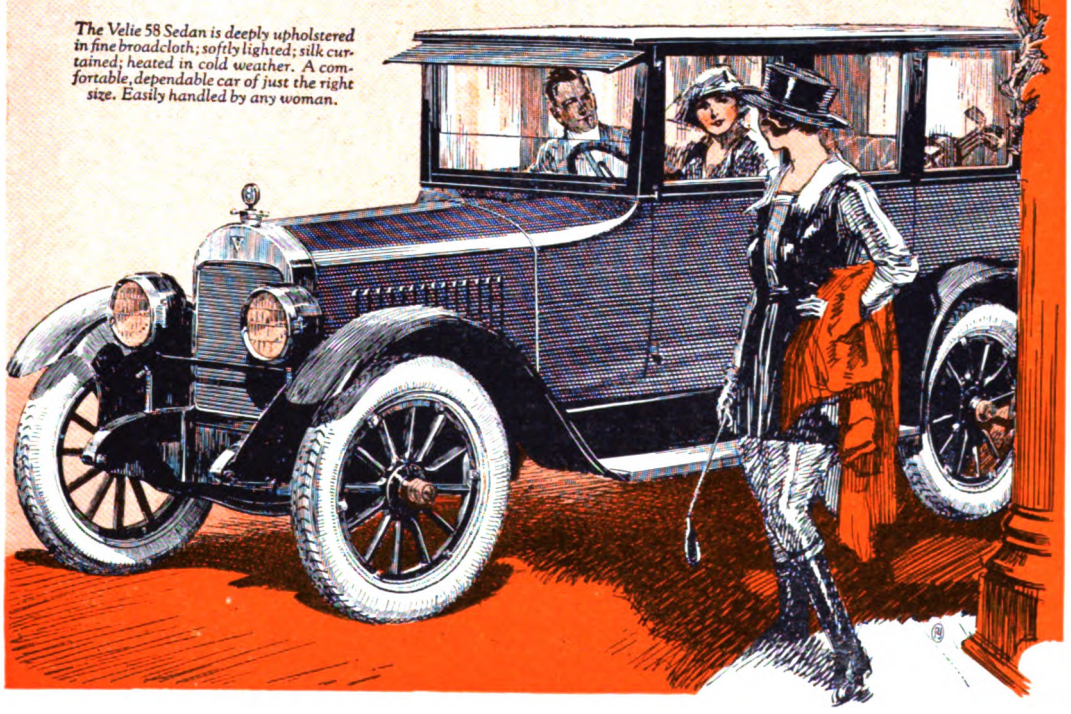
This is exactly the same Velie 58 everybody has been admiring. Velie Quality is apparent at a glance.

The same Velie-Built Six Cylinder Motor. Force feed oiling system to every moving part, even the piston pins. Vibrationless at any speed. Dirt and dust-proof. A marvel of power and performance.

Here is a car any motorist will be proud to own. Four body styles, open and closed. Catalog upon request.

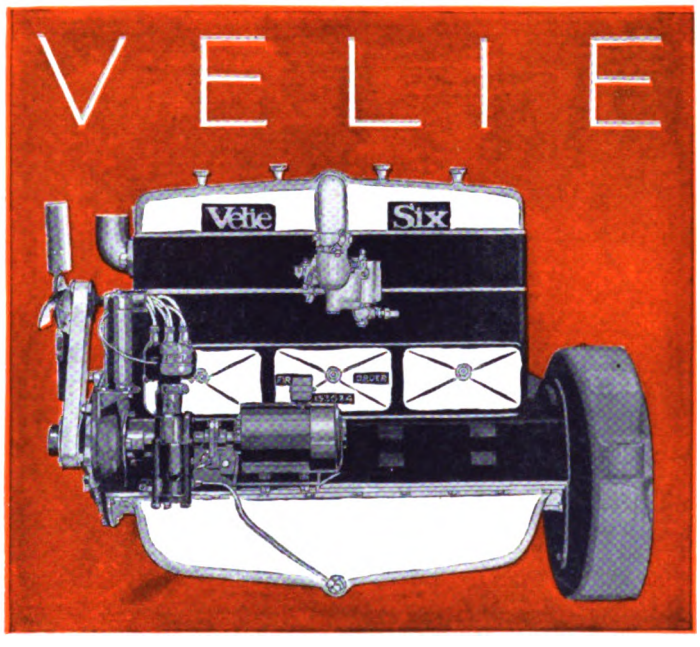
VELIE MOTORS CORPORATION
MOLINE · ILLINOIS

The Velie 58 Sedan is deeply upholstered in fine broadcloth; softly lighted; silk curtained; heated in cold weather. A comfortable, dependable car of just the right size. Easily handled by any woman.



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Only Highest Priced Motors Have Features Comparable to the Velie



The Chief Engineer of Velie Motor Plant gives this data on other motors that in any way are comparable to Velie:

"Rolls Royce, Mercedes, Benz and Hall-Scott engines feed oil under pressure directly to piston pins. These are for the terrific ordeal of aircraft and are the most expensive engines in the world.

"Passenger car engines having direct lubrication to piston pins are: Marmon, Fiat and Dusenberg Straight Eight. All in much higher-priced cars than Velie.

"Engines having valve action comparable to Velie—entirely enclosed and directly lubricated under pressure from oil pump: Hispano-Suiza, Curtis, Mercedes, Liberty Aircraft, Rolls Royce and Hall-Scott. All for aircraft use, very costly, built to withstand the most severe service.

"Passenger car engines having enclosed valve action comparable to Velie — pressure lubrication and enclosed — are Dusenberg Straight Eight, Wills St. Claire, National, Marmon, Premier and Weidely Six.

"The only passenger car engines feeding oil directly to piston pins, and having similar enclosed valve action, pressure-lubricated, are Marmon and Dusenberg Straight Eight. Very much higher-priced cars than Velie. In other words the Velie-Built Motor has no equal for anywhere near its price."

DEALERS: The demand for Velie cars taxes the capacity of A Mile of Velie Factory. If your territory is open we suggest that you get in touch with us.

VELIE MOTORS CORPORATION · MOLINE, ILLINOIS

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Service in *Quality*

The automotive electric equipment manufacturer to be a factor in the business must have a modern plant of capacity to produce and deliver the apparatus of quality in large quantities, but he must not lose sight of the need of maintaining the highest standards in accuracy.

The large Automotive Equipment Manufacturing Plant, which Westinghouse has built in Springfield, Mass., is equipped with the latest types of machine tools and testing apparatus. This plant has at present a normal capacity for manufacturing electrical starting, lighting and ignition equipment up to twenty-two thousand car equipments per month.

But Westinghouse has gone further and supplemented mechanical excellence with intelligence and a conscience. Experienced Specialized Engineers guide each process in the production of Westinghouse automotive equipment. Under the guidance of these men, skilled machinists and electricians build Service into each electrical unit that passes through their hands.

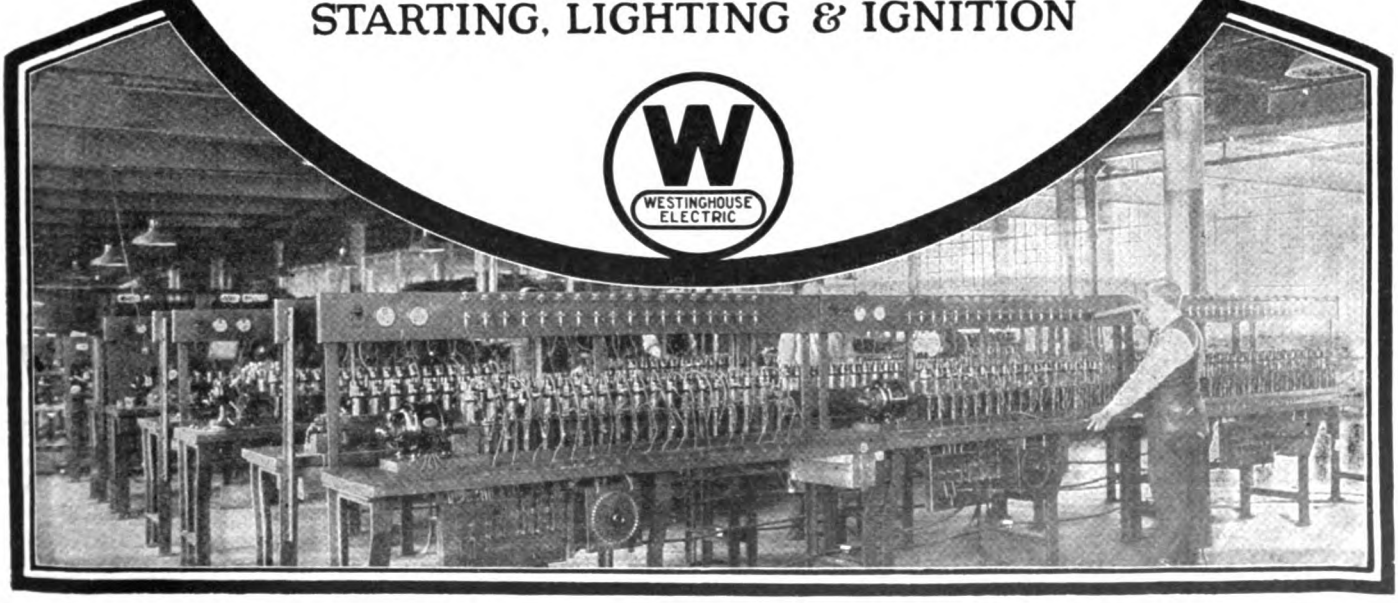
It is this Service of Quality before and after the sale, that marks Westinghouse Starting, Lighting and Ignition Apparatus as leaders in the Automotive Equipment Field.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Automotive Equipment Department
Sales and Service Headquarters: 82 Worthington St., Springfield, Mass.

Westinghouse

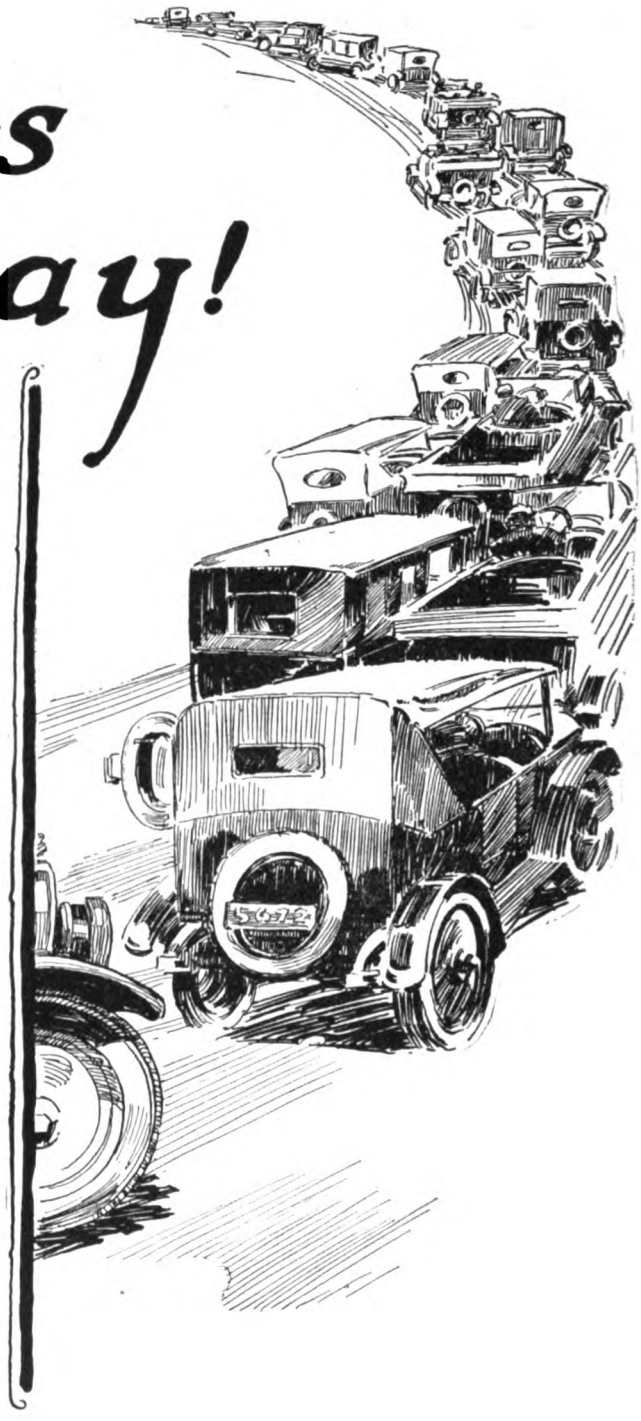
STARTING, LIGHTING & IGNITION

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2000 Cars a Day!



Morse Front End Drives are now being produced for 2000 cars daily. Twenty-three makes of leading cars use them as standard equipment.

Such a volume of production for so exacting a market reflects the high confidence placed in this equipment by automotive engineers. It registers their conviction that no better form of cam and accessory drive is available.

The correct rocker-joint design of Morse Silent Chain, the rigid adherence to Morse standards in its manufacture, and the ability of Morse engineers to co-operate in the solution of every problem of front end drive are the factors to which we credit this success.

Investigate this equipment for your car. It is your only assurance of silent, flexible, durable cam and accessory drive.

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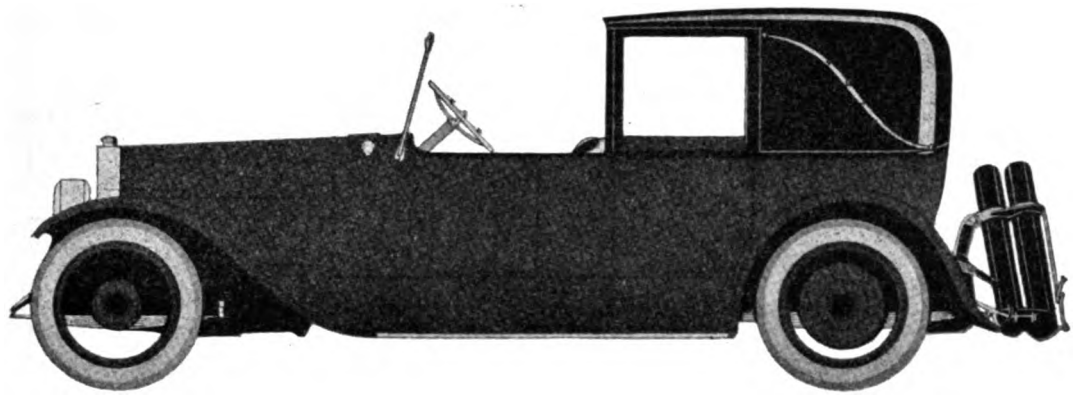
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STEVENS-DURYEA, *Inc.*, CHICOPEE FALLS, MASSACHUSETTS

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No backlash—no jerks or rattles

Why 75 manufacturers have adopted the disc of Fanwise Construction

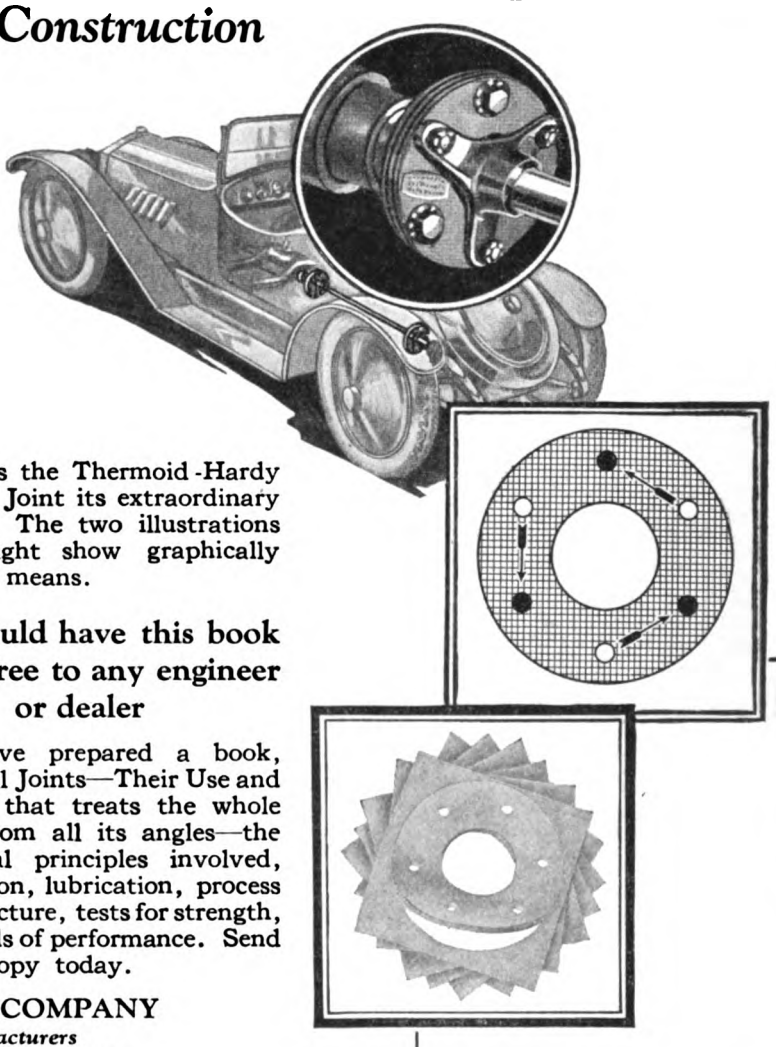
ENGINE running smoothly—plenty of power—and yet jerks, rattles and lost motion in the gears and bearings. Ever since the automobile has been in use—car owners have had this condition to contend with.

Backlash—that's the trouble. It comes from metal universal joints. It is a danger signal. Metal universal joints fail to cushion the shocks of starting, shifting gears, or driving over rough roads. They transmit every blow and jar. They quickly wear loose—causing backlash.

To eliminate backlash and its accompanying troubles the Thermoid-Hardy Universal Joint has been perfected. It is constructed of flexible fabric discs which cushion the racking blows. It transmits a smooth, even flow of power instead of lost motion and rattles. Having no metal-to-metal wearing surfaces the Thermoid-Hardy Universal Joint cannot wear loose. It requires no lubrication—no constant attention.

Fanwise Construction for strength

The patented Fanwise Construction of the flexible fabric discs gives the Thermoid-Hardy Universal Joint its extraordinary strength. The two illustrations at the right show graphically what this means.



You should have this book —sent free to any engineer or dealer

We have prepared a book, "Universal Joints—Their Use and Misuse," that treats the whole subject from all its angles—the mechanical principles involved, construction, lubrication, process of manufacture, tests for strength, and records of performance. Send for your copy today.

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Factory and Main Offices: Trenton, N. J.
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UNIVERSAL JOINT

Fanwise Construction for strength
Makers of "Thermoid Hydraulic Compressed Brake Lining" and "Thermoid Crolide Compound Tires"

AT the top is an ordinary disc, its layers of fabric laid parallel. The three black holes are the driving bolts—the three white ones the driven. Notice that the left-hand driving bolt is the only one that can pull in the direction of the strands of cotton. The other two must pull on a bias. This stretches the whole disc out of true, causing vibration and "whipping" of the entire shaft.

In contrast, examine the Thermoid-Hardy patented Fanwise Construction. Notice how the disc is built up with the strands of each layer of fabric running in a different direction. Each sector is of uniform strength and elasticity. Every stress is balanced—

—the torsional stresses between the bolt holes
—the centrifugal stresses from the center outward
—the lateral stresses from the forward and back motion of the shaft.

This means the elimination of "whipping" and vibration. It means that the shaft is held in true on every revolution.

LIST OF USERS

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Available Truck Co.
Barley Motor Car Co. (Roamer)
Crow-Elkhart Motor Corp.
Jas. Cunningham Son & Co.
Dart Truck & Tractor Corp.
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Doane Motor Truck Co.
Elgin Motor Car Corp.
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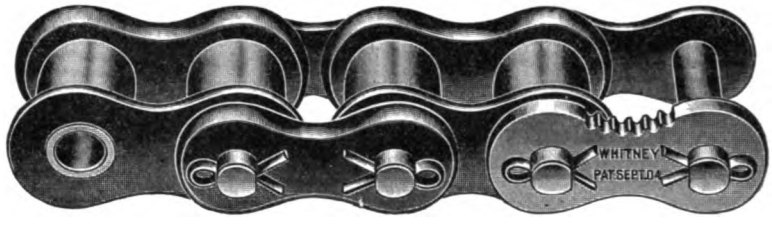
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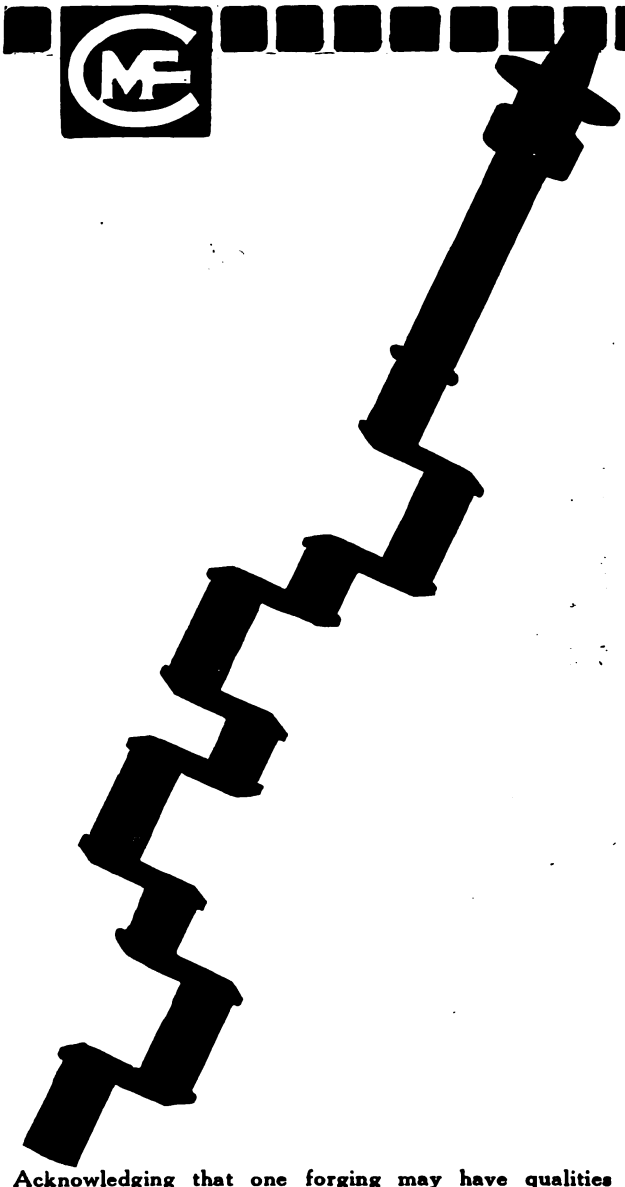
EXCEPTIONAL MILEAGE
AND NEVER KNOWN
TO SKIP THE
SPROCKET TEETH



THE WHITNEY MFG. COMPANY
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CHAMPION



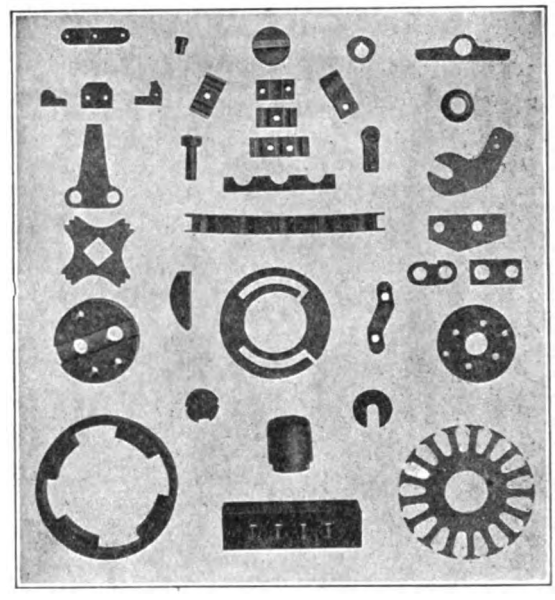
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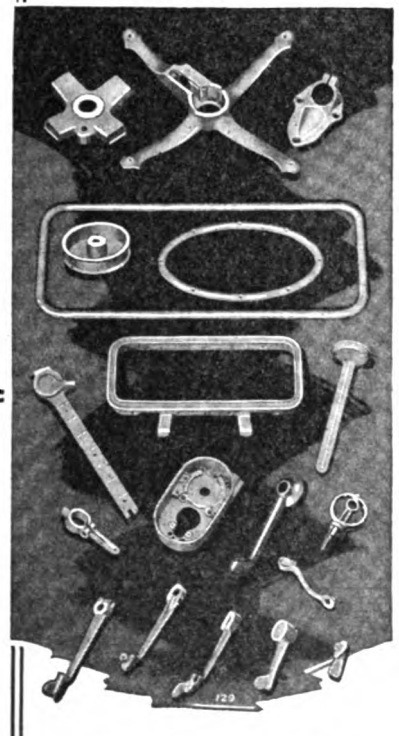
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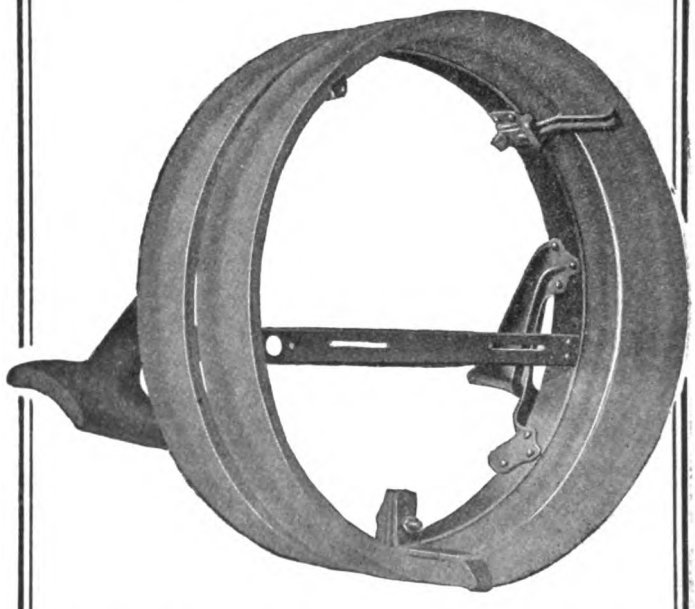
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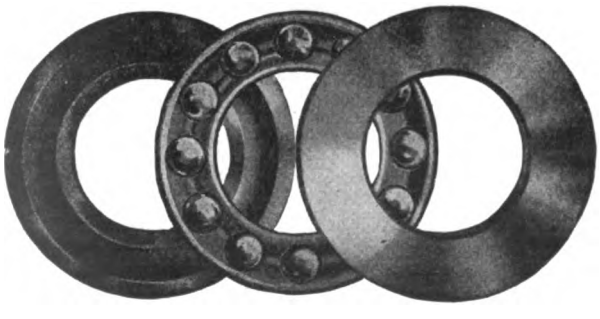
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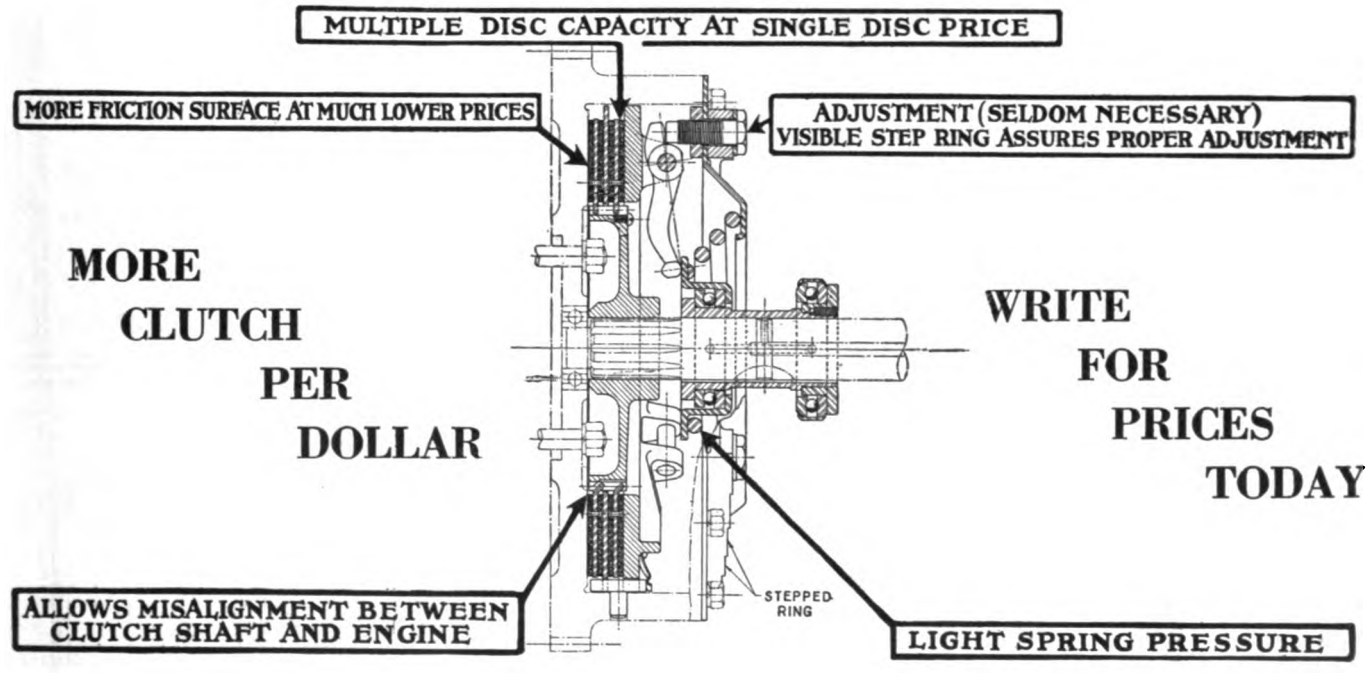
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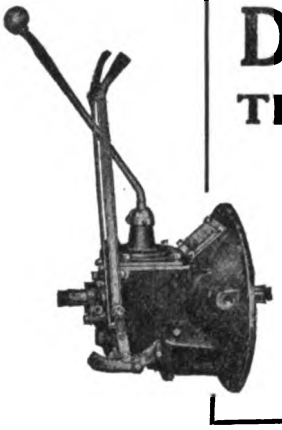
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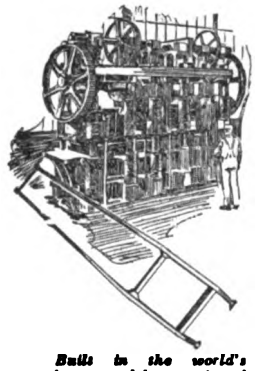
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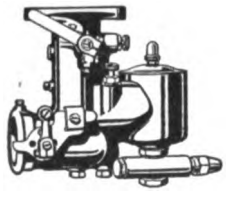


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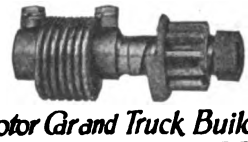


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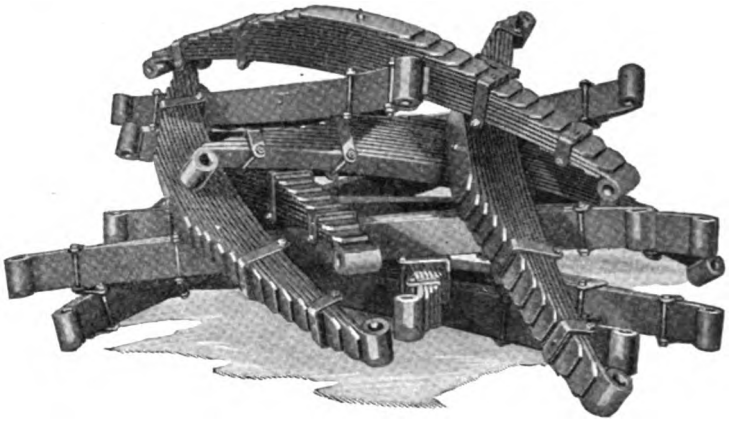
A long established, progressive automobile company in the mid-west is desirous of securing the services of a high grade man experienced in the conduct of a large purchasing department. Applicant must be capable of taking charge of entire follow-up work, and supervise small purchases. Applications to be written in your own handwriting, stating fully your experience, age, description, references and salary expected. Address Box 905, Automobile Topics.

Want to hear from owner having automobile or other business for sale. State cash price and particulars. John J. Black, 207th St., Chippewa Falls, Wisconsin.

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MATHER SPRINGS

Standard of the World



The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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Accuratime means Accurately Timed and Accurately Built



We make a specialty of

FORMED TUBULAR

STEEL PARTS

such as

TORQUE TUBES, AXLE HOUSINGS, RADIUS RODS, EXHAUST TUBES, TAIL PIPES, IGNITION WIRING TUBES, STEERING COLUMN POSTS LAMP TIE RODS, RADIATOR OUTLET PIPES

The STANDARD STEEL TUBE Co.

TOLEDO, OHIO

General Sales Office:
General Motors Bldg. DETROIT, MICH.

INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co.....358, 359
Ahlberg Bearing Co..... 383
American Sheet & Tin Plate Co. 388

B

Bearings Co. of America.. 384
Bowen Products Corp..... 386
Bower Roller Bearing Co.. 374
Brown-Lipe Chapin Co..... 386
Brown-Lipe Gear Co..... 386
Buick Motor Co..... 309

C

Champion Machine & Forging Co..... 382
Columbia Axle Co.....360a
Courier Motors Co..... 387
Crosby Co..... 388

D

Detroit Carrier & Manufacturing Co..... 384
Diamond State Fibre Co.... 382
Dodge Brothers..... 310
Doehler Die-Casting Co.... 383
Durston Gear Corp..... 386

E

Earl Motors, Inc..... 347
Eaton Axle Co..... 368
Eclipse Machine Co..... 386
Edmunds & Jones Corp.... 384
Empire Tire & Rubber Corp 376
Essex Motors.....Back Cover

F

Firestone Tire & Rubber Co. 386
Fisher Body Corp..... 360
Fisk Tire Co., Inc..... 305

G

Gabriel Manufacturing Co.. 306
General Motors Truck Co.. 349
Gilmer Co., L. H.....362, 363
Goodrich Rubber Co., B. F. 311
Grant-Lees Gear Co..... 371
Grant Motor Car Corp..... 387
Gurney Ball Bearing Co... 387

H

Hayes Wheel Co..... 369
Holley Carburetor Co..... 386
Hoover Steel Ball Co..... 391
Hubbell, Inc., Harvey..... 372

I

Interstate Iron & Steel Co. 384

K

Kelly-Springfield Tire Co.. 392
Klaxon Co..... 367

L

Laidlaw Co., Inc., Inside Front Cover
Lang Body Co..... 303
Lavine Gear Co..... 307

M

Mather Spring Co..... 389

Digitized by Google

INDEX TO ADVERTISEMENTS

Maxwell Motor Corp..... 304
Merchants & Evans Co..... 385
Morse Chain Co..... 378
Motor-Kleen Corp..... 387
Motor Wheel Corp..... 387
Muskegon Motor Specialties Co. 390

N

Nash Motors Co..... 312
National Twist Drill & Tool Co. 388

O

Oakland Motor Car Co..... 354

P

Packard Electric Co..... 388
Parish & Bingham Corp.... 373
Parish Manufacturing Corporation....Inside Back Cover
Park Drop Forge Co..... 388
Peerless Motor Car Co..... 353
Perfect Window Regulator Co. 386
Pyrene Manufacturing Co.. 375

R

Racine Rubber Co..... 351
Republic Truck Sales Corp. 298
Rickenbacker Motor Co.... 361

S

Salisbury Axle Co., Inside Back Cover
Sharon Pressed Steel Co.... 388
Sheldon Axle & Spring Co., Inside Back Cover
Signal Truck Corp..... 387
Smith Corporation, A. O.... 386
Spicer Manufacturing Corp., Inside Back Cover
Standard Steel Tube Co... 390
Stephens Motor Car Co., Inc 370
Stevens-Duryea, Inc..... 379
Stewart-Warner Speedometer Corp..... 297
Stromberg Motor Devices Co. 302
Studebaker Corp..... 301
Stutz Motor Car Co. of America, Inc.....364, 365

T

Ternstedt Manufacturing Co. 328
Thermoid Rubber Co..... 380
Timken Roller Bearing Co., Front Cover
Torbensen Axle Co..... 308

U

Union Drawn Steel Co..... 385
United States Rubber Co... 345

V

Velie Motors Corp.....376a

W

Warner Gear Co..... 387
Westinghouse Electric & Mfg. Co..... 377
Whitney Manufacturing Co. 381
Wyman-Gordon 299

Z

Zenith Carburetor Co..... 300

THOSE who have experienced the "just as good kind" now demand Hoover.



STEEL
BRASS
BRONZE
MONEL METAL
BELL METAL
ALUMINUM
HOLLOW BALLS

The World's Largest Manufacturer

Hoover Steel Ball Co.
ANN ARBOR, MICH.

CHICAGO .....180 N. Market St.
PHILADELPHIA.....259 Middle City Bldg.
CLEVELAND.....3124 Edgehill Road
CHATTANOOGA.....Sanford Brothers

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KEEP SMILING WITH KELLYS

Lotta Miles

KELLY-SPRINGFIELD can offer you only two things which cannot be offered by any other tire manufacturer.

1st—Kelly-Springfield Tires.

2nd—Kelly-Springfield Policies.

About the tires themselves it is necessary to say little. Their reputation for high quality is too well known to need praise.

Kelly-Springfield policies are just as high grade as Kelly-Springfield Tires. They assure Kelly dealers absolute protection against unfair competition and fullest cooperation in building a permanent and profitable business.

We will gladly go into details if you ask us.

Now, it costs no more to buy a KELLY

KELLY-SPRINGFIELD TIRE CO.

GENERAL SALES DEPARTMENT

250 West 57th Street

NEW YORK

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A TRUCK or motor car is as good as its vital parts. Sheldon, Spicer, Salisbury and Parish represent an extraordinary group of high quality parts that mean much in the specification table.

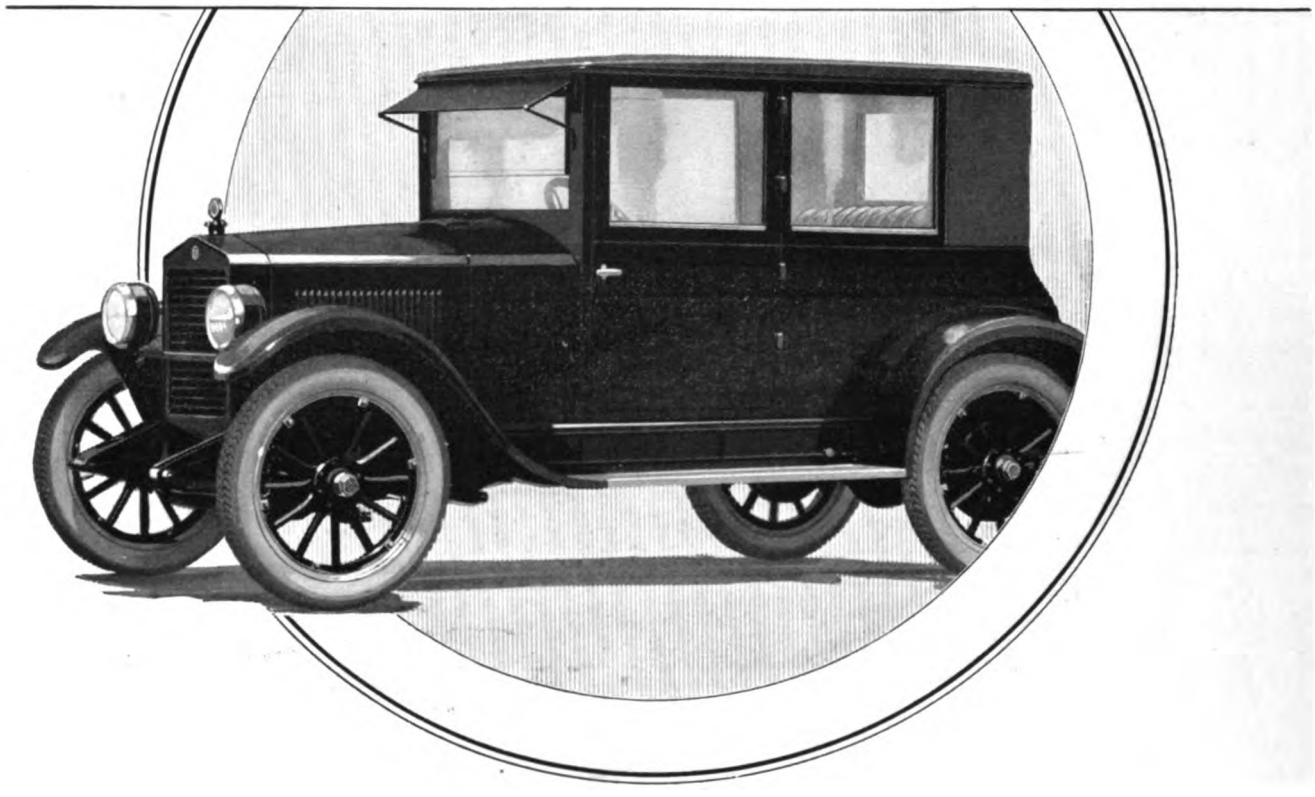
They help to establish for the finished vehicle a standard of worth equal to their own, and one that is readily appreciated by the man who necessarily has the last word—*the purchaser*.

Sheldon Axle and Spring Co. - - Wilkes-Barre, Pa.
Salisbury Axle Co. - - - - Jamestown, N. Y.
Parish Mfg. Co. - - Reading, Pa., and Detroit, Mich.
Spicer Mfg. Corporation - - South Plainfield, N. J.

C. A. DANA, *President*

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ESSEX COACH $1295



Essex Dealers Are Making Money

The Essex line is limited to three models—the Touring car, $1095—the Cabriolet, $1195—the Coach, $1295.

All are wanted types in every community. The values have no equal. No closed car approaches the Coach in utility, attractiveness and price. The Cabriolet is the ideal individual car—in special demand for business and professional use.

Thus Essex dealers have no slow selling models. Their sales effort is applied to types for which there is big demand. And they have little service cost. The reliability of Essex cars keeps them away from the shop.

Factory production was never so great. Yet sales exceed the supply.

Don't you want a business with orders booked ahead, and real prosperity and growth to reward your efforts?

Get in touch with the nearest Essex distributor if you would like to sell the Essex, either as Dealer, Associate or Resident Dealer (the last takes no capital requirement). Or write the factory direct.

Touring $1095 **Cabriolet $1195** **Coach $1295**

Freight and Tax Extra

ESSEX MOTORS, DETROIT, MICHIGAN

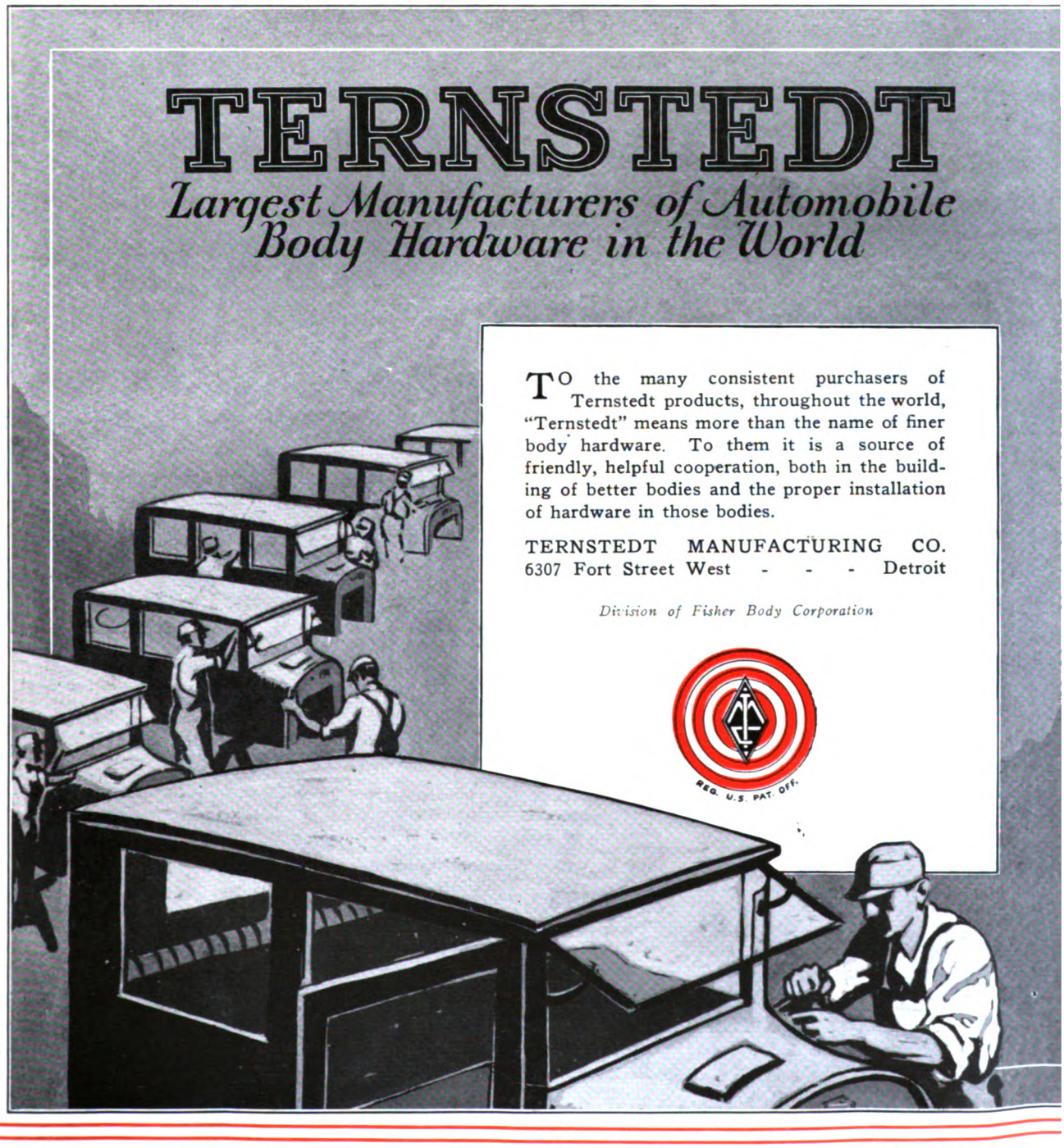
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Automobile Topics

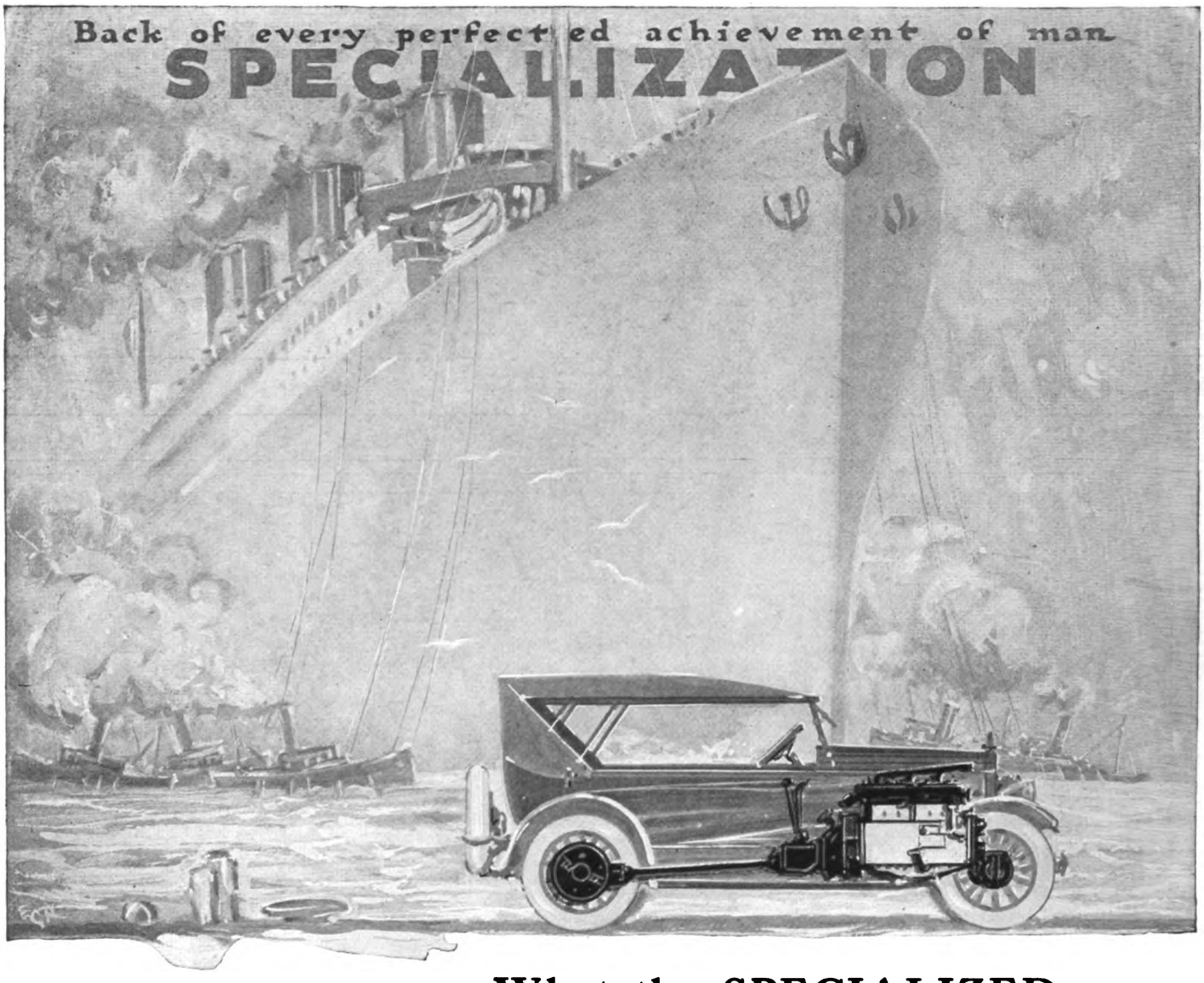
THE TRADE AUTHORITY

Vol. LXVII. No. 5 | PUBLISHED WEEKLY NEW YORK, SEPTEMBER 16, 1922 | FIFTEEN CEN $3.

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



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S. S. MAJESTIC—the world's largest ship. 956 feet long. 100 feet wide. 9 decks. 48 boilers. 240 furnaces. Quadruple screws. 100,000 horsepower. Capacity 4,100 passengers.

The *S. S. Majestic* is the achievement of literally thousands of engineering firms, contractors and sub-contractors each a specialist in a particular line.

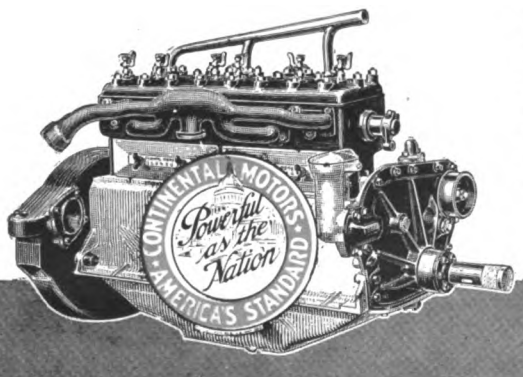
What the SPECIALIZED car actually gives the purchaser

Travelers upon the *S. S. Majestic* are conscious of a feeling of absolute reliance born of the knowledge that each vital part of the great ship is the product of a highly specialized marine, mechanical or electrical engineering force—each fitted to solve *one* problem *well.*

The purchasers of genuine SPECIALIZED cars are conscious of a similar feeling of absolute reliance, born of the knowledge that each performing unit of their car—motor, transmission, universal joints, axles, clutch, etc.—is the product of the infinite skill of a specialized unit manufacturer fitted to make *one* unit *well.*

Identify your organization with a SPECIALIZED vehicle because it is the car the public trusts. It is the car they buy. It is the car that gives the most that money can buy in the automotive industry. It is the car whose uninterrupted performance is assured by convenient parts-distributing stations throughout the world.

Remember this:—the certain identification of *motor* specialization is—the Continental Red Seal.



CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U. S. A. *Factories: Detroit and Muskegon*

Largest Exclusive Motor Manufacturers in the World

Continental Motors

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Federal Bearings



Microphotograph of the Babbitt Lining of a Federal Bearing —Enlarged 100 Diameters

This picture graphically illustrates the extra close, even grain, the dense crystallization, the fine structure and absolute uniformity which make Federal Bearings so superior in wearing quality and toughness.

This finer crystallization in the Babbitt Lining of Federal Bearings is due to the rapid rate of cooling—which prevents the large and uneven crystallization so noticeable in the bearing pictured below.

Microscope Reveals Outstanding Quality of Federal Bearings

Look at the two microphotographs shown here. They tell a graphic story.

The picture at the top reveals the inherent, structural qualities of the Babbitt Linings of Federal Bearings. Notice the even, close grain, the fine structure and notice especially the absolute uniformity of grain and structure.

This picture shows conclusively *why* Federal Bearings outwear any other make of Bearing on the market—for the microphotograph shows the actual, physical superiority of Federal Bearings—which is due to the Federal Centrifugal Force Process.

The picture below shows an average bearing, used in a well-known make of automobile. Here is revealed the absence of uniformity, the coarseness of grain, the large, uneven crystallization which cause such bearings to break down long before they should.

Everywhere Federal Bearings are winning enthusiastic approval. Our engineers are at your service with reference to your requirements. Federal Bearings will give your motor unusual strength and stamina in the most wear subjected parts. Write for details.



Microphotograph of a Bearing Used by a Well-Known Automobile—enlarged 100 Diameters

Notice the large and uneven crystallization as compared with the Federal Bearing pictured above. This bearing is uneven in structure and diverse in texture—it will show wear quickly in spots—in other words, will flake off under frictional pull.

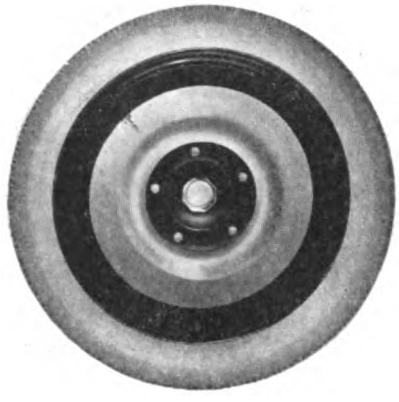
The structural and physical defects shown in this microphotograph are not visible to the naked eye—and while it looks like a good bearing upon casual inspection, a microscopic analysis shows that it is not.

FEDERAL BEARING & BUSHING CORPORATION

BABBITT-LINED BRONZE-BACK BEARINGS—BRONZE BUSHINGS—BRONZE CASTINGS

DETROIT — MICHIGAN

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Flexible Strength

EVERY Disteel Wheel is supreme in its strength. Yet, because of its design, that strength is definitely flexible, the concave disc materially absorbing both radial road shocks and sidestrain before they can reach the mechanism of your car.

Many brands of steel disc wheels have appeared since Disteel so emphatically established the superiority of this type over all others. . It is a significant fact that, in every case but one, so far as we know, the designers of these wheels have followed this concave basis of Disteel's flexible strength.

But the concave disc is only one of many principles of wheel merit developed during this company's long experience as the pioneer in the steel disc wheel field. It is these merits—not isolated but in combination—which today cause wise motorists everywhere to declare that there is no adequate substitute for genuine Disteel Wheels.

Exclusive Manufacturers

DETROIT PRESSED STEEL COMPANY

6660 Mount Elliott Avenue Detroit, U. S. A.

DISTRIBUTORS:

189 Academy Street LONG ISLAND CITY
732 So. Michigan Avenue CHICAGO
682 Beacon Street BOSTON
865 Post Street SAN FRANCISCO

DISTEEL WHEELS

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, SEPT. 16, 1922 NO. 5

TABLE OF CONTENTS

Prosperity Is Here, M. A. M. A. Is Assured..... 409
Show Space Drawing Set for October 5..... 409
Automobile Tariff Now 25 Per Cent..... 409
Willys Sees Tariff as Affecting Export Sales.... 410
General Motors Officials Going Abroad 410
Barker Finds England Fighting Its Way Back... 410
Fisher Body Builds Six Assembly Plants..... 411
Cadillac Plans for Larger 1923 Output..... 411
Dodge Brothers Steel Sedan $1,195..... 411
Europe Eventually Large Buyer Here..... 413
Anderson Losses End with July Business..... 414
Flint Motor Shares Offered 414
Cleveland Profits Now Over a Million..... 415
Willys to Pay on Approved Claims 415
Bauer Sketches Plan to Triple Exports 416
Traffic Problem 416
McFarlan Increases Output to Maximum 417
Hayes Disc Wheels Made in Quantities 417
Packard Employes Forego Usual Vacation Period 417
Tire and Rim Assn. Is Reincorporated 418
Tire Readjustment Still Goes Forward 418
Rubber Imports in August 21,764 Tons 419
Crude Rubber Output Is Still Stretching 419
Slash Freight Rates on Passenger Bodies 420
Rail Shipments in August Break Record 420
Drop Forging Men to Convene at Detroit 420
Chemists Show Worth to Motor Industry 421
General Tire Plans to Double Capacity 421
Olds Gives 9 Acres for Lansing Power Plant 421
New England Towns Bid for Motor Trade 422
Hulett Stages His Second "Drop" Sale 422
Ohioans "All Set" for Sixth Annual Convention 422
Western Sales Wait on Cattle and Crop 423
Closed Car Now Bulk of Cadillac Output 423
California August Sales Nearly up to June High 423

FEATURES IN THIS ISSUE

Making the Headlight Laws National 427
West Faces Problem in Road Construction 430
By C. W. Apperson
Selling Goods at Retail 431
What Is Wrong with That Sales Letter? 432
New Cars That Will Stimulate Sales 434
Ideas That Lead to Greater Sales 436
In the Field of Accessories 437
With the Wholesalers and Retailers 439
Calendar 446
Table of Passenger Car Selling Points (copyrighted) 451

Alphabetical Index to Advertisers 494

"NORMA"
PRECISION
BALL BEARINGS

One magneto or lighting generator bearing may cost a trifle more than another. At most, that difference is but the smallest fraction of one per cent of the total cost of the car, truck or tractor in which it is to be used. Yet that small price difference may represent added value of tremendous effect upon the ultimate earning power of the car, truck or tractor.

Magnetos and lighting generators having "NORMA" Precision Bearings continue, through the years of changing standards, to be the standard equipment on cars, trucks and tractors of the better class—simply because the added value in the "NORMA" Bearings themselves is multiplied many fold in the over-all service capacity of the automotive unit.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Double-row, maximum type, radial bearing



Double-acting, self-aligning thrust bearing. 2100 Series



Double-acting, self-aligning thrust bearing with leveling washers. 2100-U Series



Single-acting, self-aligning thrust bearing, leveling washer. 1100-U Series



Double-acting, thrust bearing, flat seats. 2100-F Series



Double-row, deep-groove Conrad type, radial bearing

Strom BEARINGs

Play an Important Part in the Automotive Industry

THE rapidly growing appreciation of the superior qualities of Strom Bearings is best evidenced by the increasing numbers of fine cars and trucks that use them as standard equipment.

The listing of these names would form a select blue book of the automotive industry.

And it is only after the most rigid tests of all makes of bearings that they have selected Strom Bearings as meeting most exactly every requirement.

Outstanding among the points that appeal to such manufacturers are the established correctness of design, the extreme accuracy of workmanship and the unfailing high quality of materials characteristic of Strom Bearings.

Then, too, the fact that they are made in a wide range of styles and sizes is an added feature in the selection of the **right** type for a particular duty.

Our corps of engineers will be glad to serve you and we should like to send you our catalog and price list.

U. S. BALL BEARING MFG. CO.

(Conrad Patent Licensee)

4538 Palmer Street CHICAGO, ILLINOIS



Single-row, deep-groove Conrad type, radial bearing

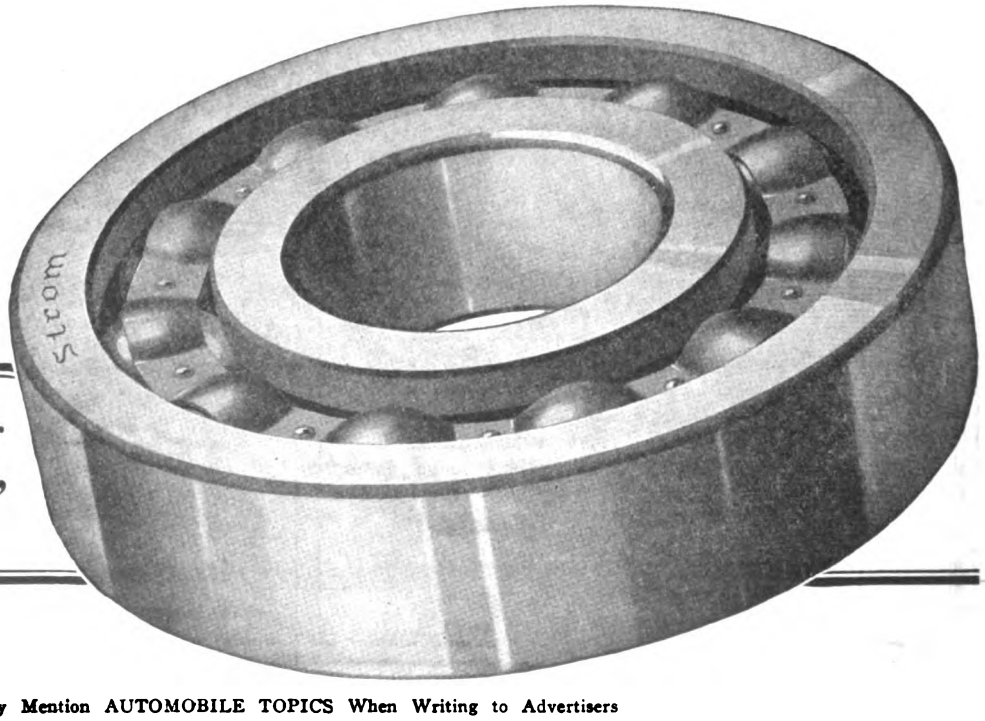


Angular contact bearing —combination radial and thrust



Single-row, maximum type, radial bearing

—used "Wherever a Shaft Turns"



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Someone Has Said That

BEAUTY IS ONLY SKIN DEEP

But no one ever said that about quality.

If it were possible to take an X-ray picture of any of the three Studebaker models and look into the vitals of the car, you would find the same honest quality of materials down underneath the surface as is so evident where you can see every detail.

The Light-Six, for instance, has four extra large main bearings as compared with the three found even in higher priced cars. These bearings are backed with solid bronze bushings which make it possible to anchor them solidly, thereby insuring perfect bearing surface.

And note this: The crankshaft and connecting rods of the Light-Six are machined all over—a practice that is followed only on two other makes and they are among the highest priced cars built.

Studebaker uses the material which experience has proved is most suitable for the proper functioning of each part—and the *best quality* of each material that money can buy.

That's why Studebaker cars deliver such general satisfaction among owners and why each owner is a booster for Studebaker success.

Studebaker is building for the future today just as steadfastly as it was 70 years ago when the business was founded!

MODELS AND PRICES—*f. o. b. factories*

LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*		SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*		BIG-SIX *7-Pass., 126" W. B., 60 H. P.*	
Touring	$ 975	Touring	$1275	Touring	$1650
Roadster (3-Pass.)	975	Roadster (2-Pass.)	1250	Speedster (4-Pass.)	1785
Coupe-Roadster (2-Pass.)	1225	Roadster (4-Pass.)	1275	Coupe (4-Pass.)	2275
Sedan	1550	Coupe (4-Pass.)	1875	Sedan	2475
		Sedan	2050	Sedan (Special)	2650

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

Studebaker

T H I S I S A S T U D E B A K E R Y E A R

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Bearings Service will supply the proper Bearing *Immediately*

Whenever you are in need of a Timken, Hyatt or New Departure Bearing whether it is for a passenger car, motor truck or tractor, you can be certain of securing the proper bearing immediately at any Bearings Service Company's branch or distributor.

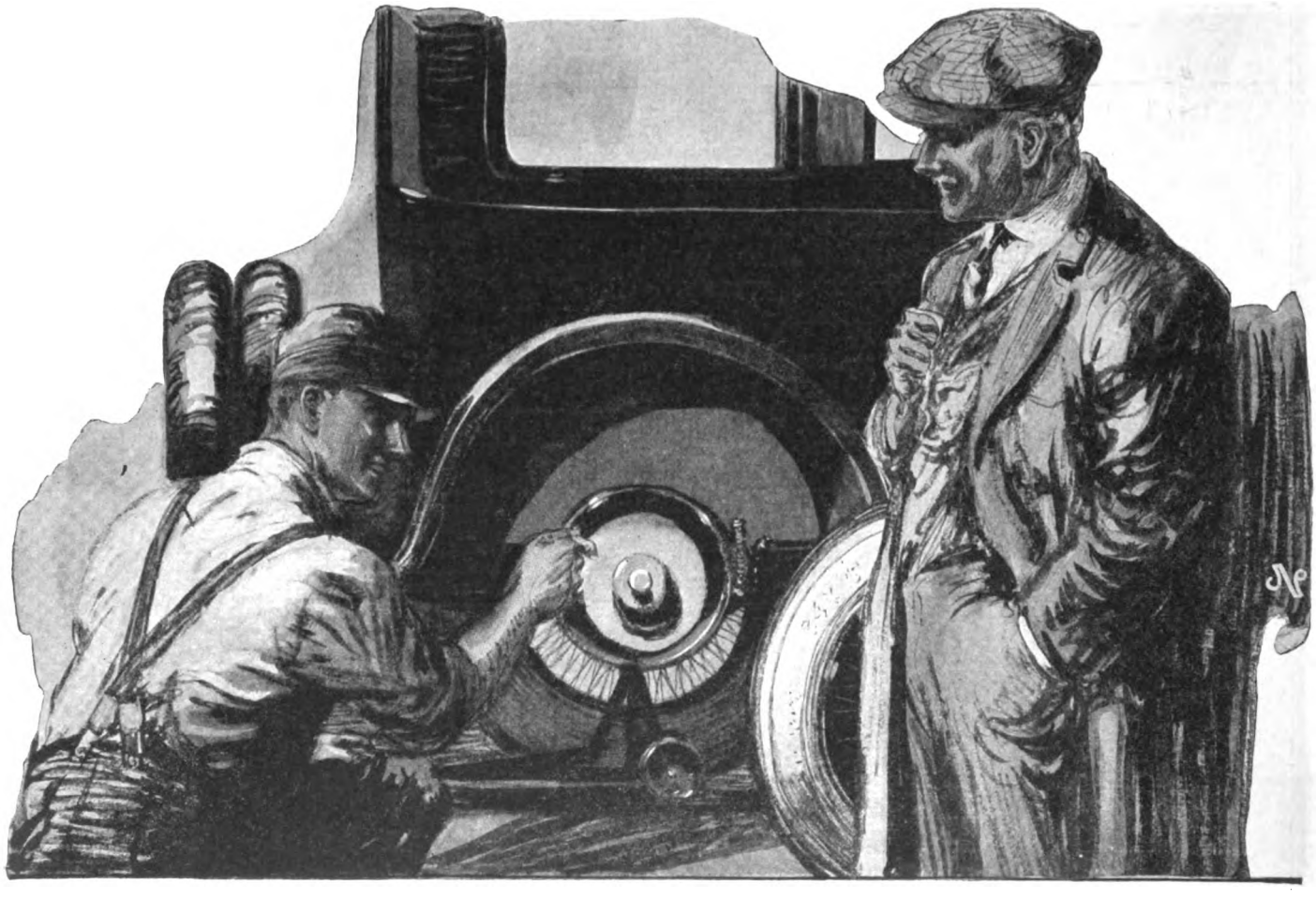
The Bearings Service Company acts as the service department of Timken, Hyatt and New Departure Bearing Companies. It has an organization of 33 direct branches and approximately 1000 distributors located at all convenient points throughout the country.

We want you to consider this company as much a part of your organization as though it were located under your own roof. It is maintained for just that purpose and its facilities for furnishing you with any bearing information you may need at any time are yours for the asking.

BEARINGS SERVICE COMPANY

General Offices: **Detroit, Michigan**

Branches in Principal Cities

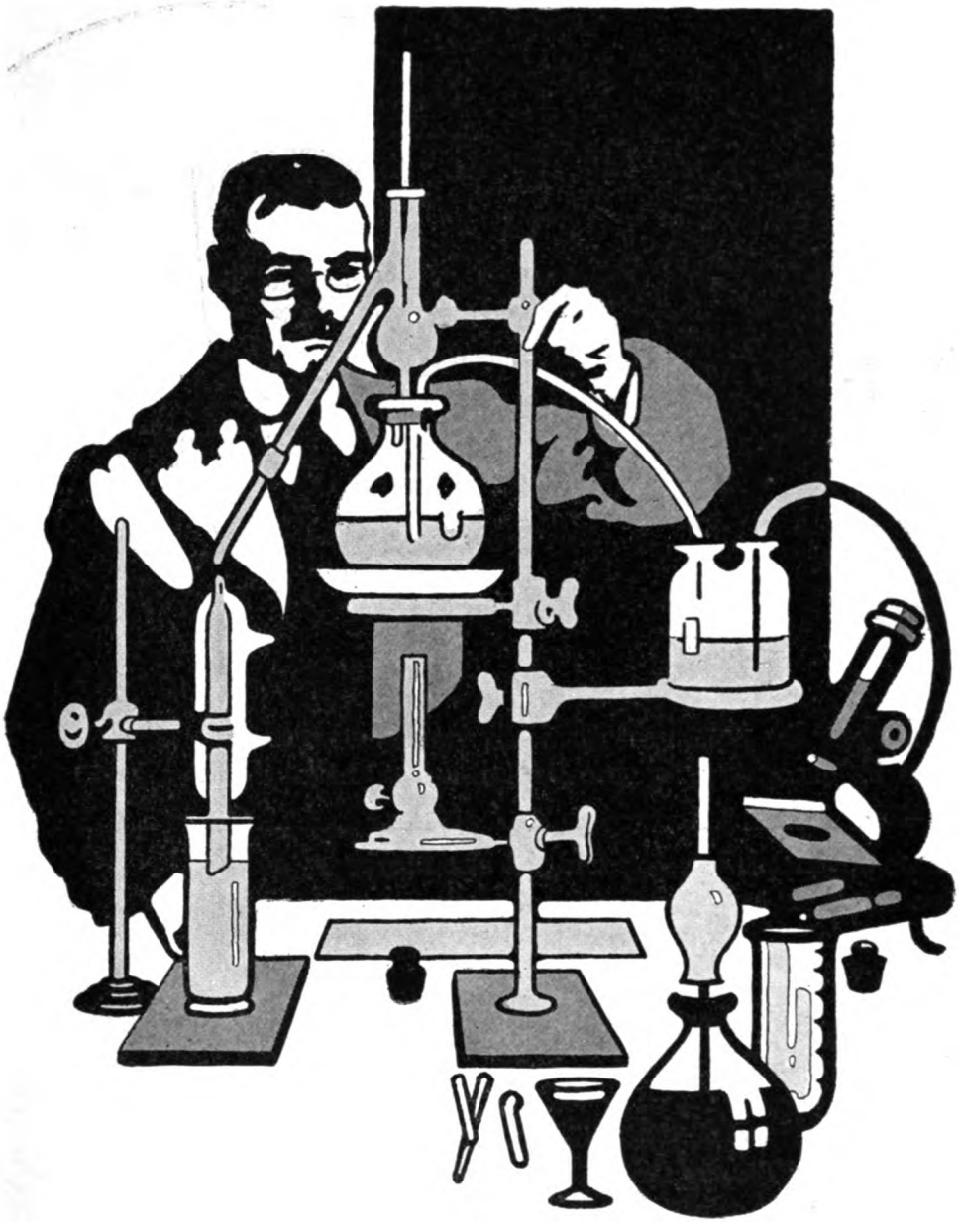


THIRTY-THREE BRANCHES

Atlanta	Buffalo	Detroit	Los Angeles	New Orleans	Pittsburgh	San Francisco
Baltimore	Chicago	Fresno	Milwaukee	New York	Portland, Ore.	Seattle
Birmingham	Cleveland	Indianapolis	Minneapolis	Oklahoma City	Richmond	St. Louis
Boston	Dallas	Kansas City	Newark	Omaha	Rochester	Toronto
Brooklyn	Denver			Philadelphia	Salt Lake City	Winnipeg

Approximately 1000 Distributors in Other Cities

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Constantly striving

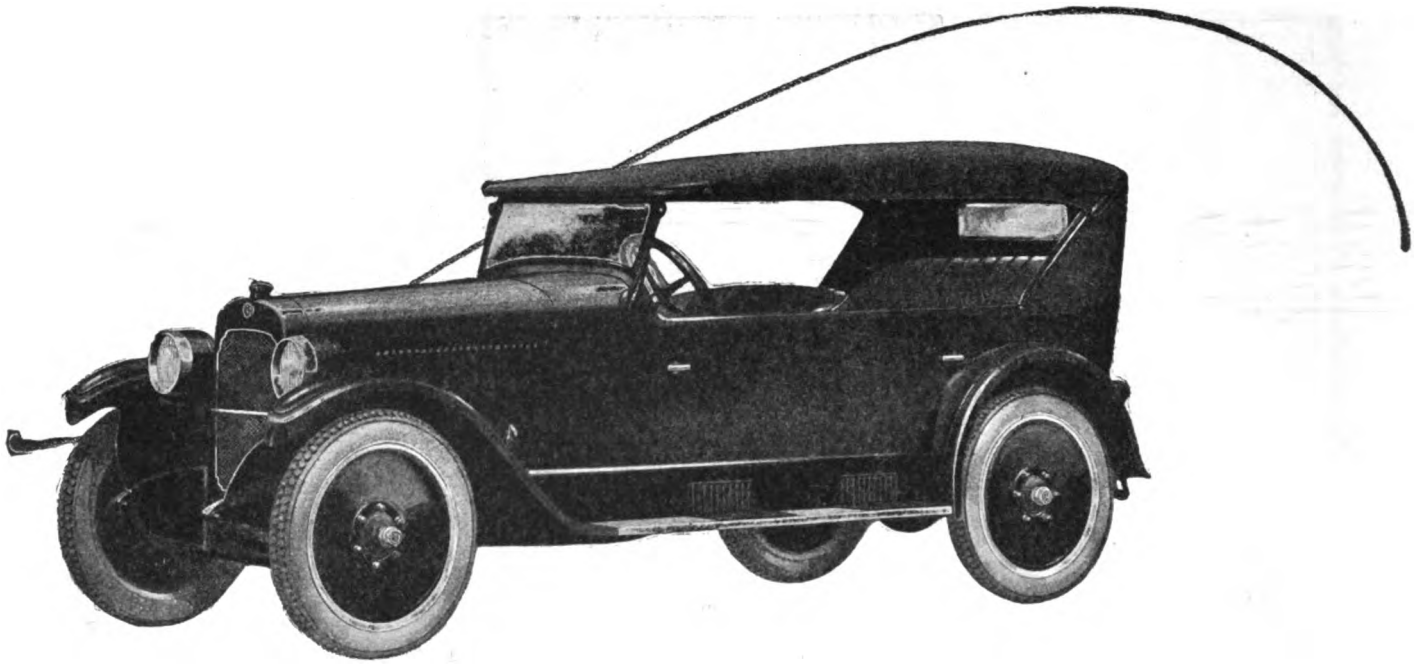
Despite the fact that our customers indicate their confidence in the quality of our products by their ever-increasing patronage, we are constantly striving to make them even better.

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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The beauty of the Chalmers Six wins instant admiration. But it is its exceptionally fine performance that is most impressive.

Chalmers engineers have developed the motor to a new high point in six-cylinder design and construction. The truth of this is quickly apparent to those who have driven the finest cars.

At the new price of $1185 the sound investment value of the Chalmers Six is more than ever outstanding.

Chalmers Six Prices

5-Passenger Touring Car, $1185 *Roadster, $1185*
7-Passenger Touring Car, $1345 *Coupe, $1595*

Prices f. o. b. Detroit. Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada, Limited, Windsor, Ontario

The
CHALMERS SIX

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Why You Should Sell Red-Tops

The letter below is by all odds the best evidence we could present to convince you that the Fisk Red-Top is a sure profit-maker, and a builder of the finest kind of business through creating good-will for the dealer:

Fisk Tire Company, Inc., Smith's Grove, Ky., 7/7/22
Nashville, Tenn.

Dear Sirs:—

I am pleased to note that the price of 30 x 3½ Red-Top has been reduced, as I am sure it will mean a still larger volume of business.

I started to handle Fisk Tires three years ago. My first order was for four 30 x 3½ Red-Tops. I had quite a time making my first sale because I had casings for less money.

I watched these casings run and they went beyond my expectations as well as my customers'. I was so thoroughly sold on them that I began to advise my trade to buy Red-Tops, and with very few exceptions every sale has been a repeater.

I have tried selling cheap tires, the result being dissatisfied customers and hard to resell; not so with Fisk line. Once a buyer always a buyer, has been my experience.

I find it easier to sell one line rather than to have several different kinds to sell provided you have the right kind. I have tested several standard brands and find Fisk Red-Tops the best yet, as well as the whole line of Fisk products.

With the strongest possible competition I am selling more casings than ever before. Car owners that never buy anything else from me come here to buy Red-Tops.

Yours very truly,
J. K. Cooke.

Put the Red-Top to work for you. Its extra strength, extra-ply construction, and its distinctive heavy red tread will do for your business what it does for the car owner—stand up, give you no trouble, last long and show a real profit.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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The

Generator Is One

of the

Smallest and Lightest

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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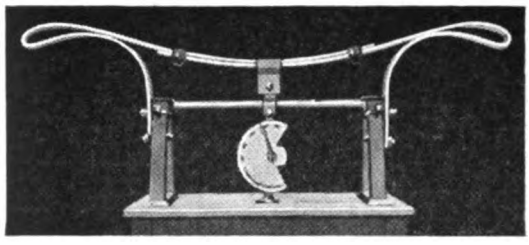
Auto-Lite

Starting, Lighting & Ignition



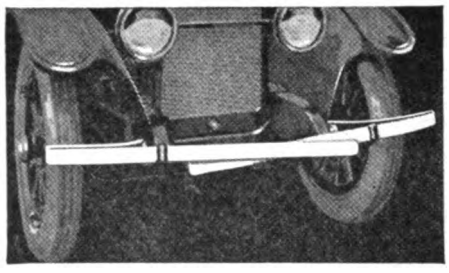
Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

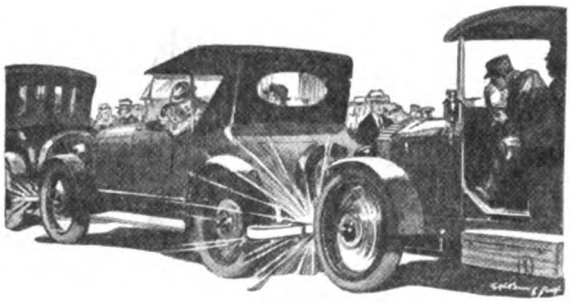
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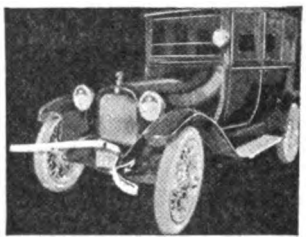


This factory testing machine is shown putting a Lyon Spring Bumper under a strain of 2200 pounds—equal to the most severe bump of a car in action.

This shows how the two leaves overlap in the center, giving a double thickness of impact surface and increased flexibility. Leaves are held tightly together by pressed steel clips.







This sedan ran into an elevated pillar at a speed of 30 miles an hour. No damage done to car. Lyon Spring Bumper deflected 24 inches. Driver, unhurt, owes his life to Lyon Spring Bumper protection.

Why we can make our famous GUARANTEE

We guarantee each Lyon Bumper to take the full force of a blow at 15 miles an hour without injury to the car or passengers

JUST ONE THING enables us to make this guarantee—the extreme resiliency of Lyon Spring Bumpers. Their *Lyon-patented* two-piece construction and their open "looped ends" yield to the blow like a spring—absorbing the shock instead of passing it along to the frame of the car. Any Lyon Spring Bumper will take an indentation of from seven to eight inches and spring back into perfect shape.

Years ago, when Lyon Spring Bumpers were practically unknown, we used to attract attention to these unusual advantages by actual bumping demonstrations in front of dealers' shops.

To-day, *over a million Lyon Spring Bumpers are in actual service on automobiles.* Users know that Lyon Bumpers offer them the cheapest collision protection they can buy—that insurance companies, themselves, allow decreased rates on Lyon-protected cars practically paying for bumpers, front and rear. Dealers know that Lyon Spring Bumpers offer them an easy-selling source of extra profit.

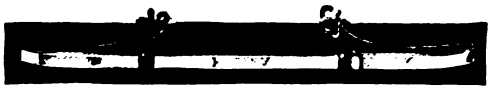
Every new car you sell—or, every bumperless used car that drives into your shop, is an A-1 prospect for Lyon Spring Bumpers, front and rear. Roll a Lyon Display Stand in front of the car—show the owner how a Lyon equipped car looks—tell him how the Lyon Bumper really protects—mention the famous Lyon guarantee—and the sale is made. If you don't handle Lyon Spring Bumpers you are overlooking one of the best bets in the accessory line. Ask your jobber for dealer proposition and our high-grade trade helps.

JOBBERS—*You will be interested in our fair and square proposition. Write us to-day about it.*

Retail prices—$10 to $25

Over one million Lyon Spring Bumpers in use.

METAL STAMPING COMPANY, LONG ISLAND CITY, N. Y.



Lyon Straight-Bar Bumper



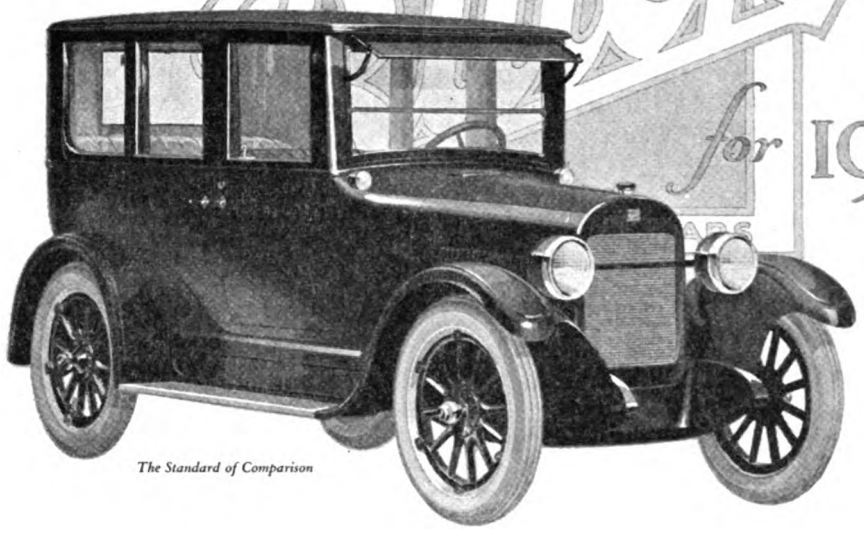
Lyon Convex Bumper

LYON RESILIENT BUMPERS

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The Literary Digest for October 14, 1922

VALVE-IN-HEAD Buick for 1923



The Standard of Comparison

A Fine Sedan at a Modest Price

The 1923 Buick Four—$1395

For those seeking the comfort, refinement and convenience of a closed car, this distinguished five passenger sedan affords every satisfaction at a cost well within the average purse.

The body, built by Fisher, rides low to increase the smart streamline appearance that a long wheelbase, higher hood and full crown fenders have given to this new model.

Beautiful plush trim and upholstering, handsome hardware, silk window shades, soft dome light and fine carpeting are all of a quality found usually only in closed cars of a much higher price.

The marked refinements in the chassis and in the famous Buick Valve-in-Head engine, the long wheelbase, the completeness of the equipment not only bring an enhanced riding comfort but add [illegible] of power, performance

Included in the appointments of this model are:—Transmission lock, drum type hood and cowl lamps, heavier door locks, longer steering column, aluminum steering wheel spider, new style door pockets, pull-in door handles, adjustable rear ride windows. $1395—f. o. b. Buick Factories

[illegible]LD THEM

Selling Buicks is a Profitable Business

Go into almost any town in the country, regardless of size and look for the Buick sales and service sign. You will find it hangs in front of the best garage and show room in the place. Selling the Buick line is a steady, profitable business—the kind that makes possible better buildings and better facilities. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of
Valve-in-Head Motor Cars

Branches in All
Principal Cities

VALVE-IN-HEAD Buick MOTOR CARS

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DODGE BROTHERS
BUSINESS COUPE

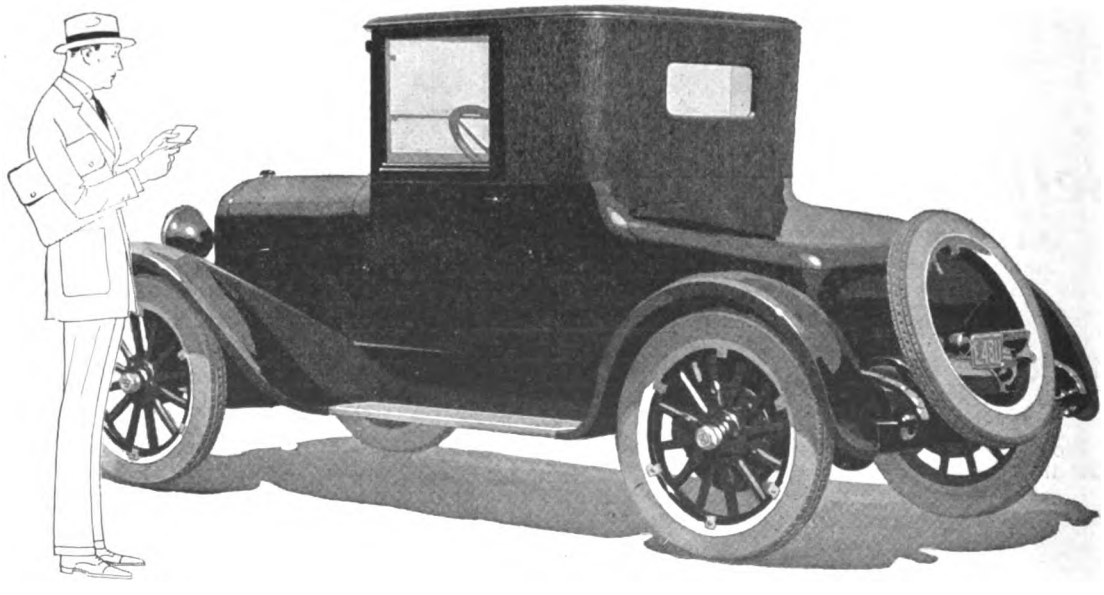
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

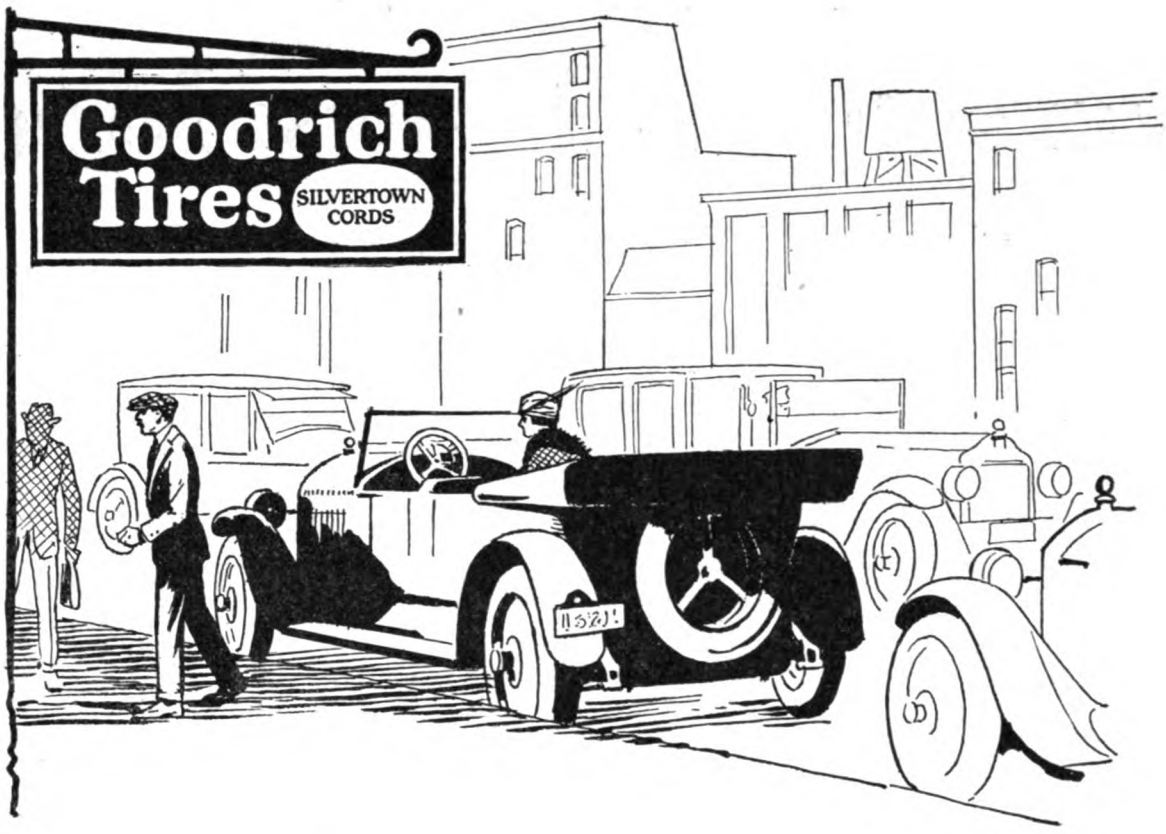
In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

The price is $980 f. o. b., Detroit

DODGE BROTHERS



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The Goodrich Dealer Has the Inside Track

The tire dealer selling Goodrich Tires has a decided advantage.

He does not start from scratch. The tire he sells is as old as the motor car itself. Its name is established and its quality and serviceability known and respected. With hundreds of thousands of motorists a new tire is just another Goodrich Tire. The dealer does not have to pioneer an unknown. He does not waste his sales energy and money pushing a "Great Unwanted," nor tie up his capital in something that will not move except at a losing discount.

Instead he is selling the fastest-moving tire in the country; he is selling more tires on less capital; he is making a bigger net profit; he is unflaggingly supported the year-round by Goodrich Advertising and a wonderful Goodrich Co-operative Sales Plan that insure profit and success. *He is linked to a winner!*

Are you? Write and let us give you full particulars why it pays to sell Goodrich Tires.

THE B. F. GOODRICH RUBBER COMPANY
Akron, Ohio

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Nash Leads the World in Motor Car Value

Oversold on Every Model

As part of the Nash manufacturing program of ceaseless improvement, there are now embodied many new refinements in appearance and performance.

And these added attractions coupled with sweepingly reduced prices throughout the entire line have so stimulated sales that orders on every model are running substantially ahead of our production.

It is nothing short of a national tribute to the value and quality that Nash cars have proved they possess in such superlative measure.

Reduced Prices Follow

SIXES		FOURS	
5-Pass. Touring	$1240	5-Pass. Touring	$935
7-Pass. Touring	1390	Roadster	915
7-Pass. Sedan	2190	Coupe	1385
4-Pass. Coupe	1890	5-Pass. Sedan (enclosed)	1545
Roadster	1210	2-Pass. Cab (enclosed)	1195
Sport Model	1395	5-Pass. Carriole (enclosed)	1275

(f. o. b. factory)

The Nash Continuous Contract—Not Annual—
Protects Dealers Against Decline in Price

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

Nash Leads the World in Motor Car Value

(582)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, SEPTEMBER 16, 1922 No. 5

PROSPERITY IS HERE, M. A. M. A. IS ASSURED

Business Good and Prospects Excellent Convention Delegates Told—Erskine, Nash, Jordan and Collins Wire of Big Expectations for 1923.

Prosperity is here. We do not have to look for it.

This phrase of E. W. Clark aptly sounded the key-note of the Sixth Credit Convention of the Motor & Accessory Manufacturers' Assn. at Buffalo this week.

After the first day when members heard of general progress of the association and listened to a forecast by Merryle S. Rukeyser, financial expert of the *New York Tribune*, the sessions got down to business in separate rooms and the members applied themselves diligently to the matters in hand.

Business is good and prospects are excellent. This was the consensus of opinions of speakers and of messages from numerous factories. C. W. Nash wired "expecting 1923 to be an excellent year. Time calls for courage and foresight to be used to limit." A. R. Erskine wired "forecast for best year next year." E. S. Jordan forecast a shortage induced by lack of manufacture or storage. R. H. Collins saw only menace to the trade in the still unsolved used car troubles. He continued to the effect that it must produce an effect in the parts field.

Attendance at this convention was gratifying both as to its numbers and as to the variety of interests assembled. By holding its first formal session on Wednesday afternoon the Association gave opportunity for those to be present on time who might otherwise have missed on account of delayed trains. And by appointing separate meetings on Thursday for credit, advertising, traffic and export executives, the whole service of the M. A. M. A. was given its chance to perform under the spotlight, and to show of what stuff its daily year-round usefulness is made.

In the absence of E. H. Broadwell, president of the Association, General Manager M. L. Heminway presided at the opening session, and supplemented his greeting with a brief digest of the activities of the past year. The membership has grown, Heminway showed, now reaching to 397. The ordinary routine within the executive offices has increased even more, due largely to the growing measure of services that are

(*Continued on page 412, first column*)

Automobile Tariff Now 25 Per Cent

Tariff rates on automobiles, bodies, chassis and parts remain at 25 per cent ad valorem in the official text of the permanent tariff bill as reported to Congress on September 14. A provision is included that the President may add to this figure in respect to any foreign country's products if it is found that that country levies a higher duty on our exportations than the 25 per cent we provide. However, in no case will this additional sum be greater than 50 per cent ad valorem.

"In the Wisdom of Congress"

Among the thousands of articles chosen by Congress for special tariff attention in the way of raised rates are the following, as set out in the permanent bill announced on September 14: Pig iron, from the free list to $1.25 a ton; scrap iron and steel, from the free list to $1 a ton; molybdenum, from the free list to 75 cents a pound; ferromanganese, from the free list to $2.50 a ton; various steel alloys, from 15 per cent to 30 per cent; electric storage batteries, heretofore specially provided for, 40 per cent; laboratory instruments from free list to 55 per cent; fir, spruce and cedar logs from free list to $1 a thousand feet.

SHOW SPACE DRAWING SCHEDULED FOR OCT. 5

August Production Within 2,868 of Record of Year—N. A. C. C. Directors Hear Heartening Reports From Divisions and Committees.

Drawing of space for the New York and Chicago National Automobile shows of 1923 will take place at the offices of the National Automobile Chamber of Commerce at 2 o'clock on the afternoon of October 5. Applications for space from non-members will be passed upon as soon as possible thereafter. All Detroit factories will send representatives to the drawing.

So announced the directors of the Chamber following their monthly meeting on September 13. The statement was followed by the good news that completed returns on August production revealed the month to have been the best August in the history of the business and the second largest month of this unparalleled year. The figure, 272,640, together with total output of 1922 to July 31 reached the unprecedented sum of 1,671,418 for the first eight months of the year, 2,868 more than the grand total for the entire year of 1921. It is likewise the high figure for the industry for the period under discussion, save only last June.

August's huge total of passenger cars and trucks produced during the 31 days is an increase over July of 12 per cent and over August last year of 53 per cent. August, 1921, showed only a one per cent growth over July of that year. The record is therefore all the more remarkable.

Shipping records of August reveal 32,563 carloads, 36,603 driveaways and 10,034 "boats." This driveaway figure is the largest for that class of delivery for this year. It is 8,000 more than in July and 3,000 greater than in June, the month of record production.

(*Continued on page 413, second column*)

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WILLYS SEES TARIFF AS AFFECTING EXPORT SALES

Will Meet Increased Competition with Greater Output at English Plant

John N. Willys, president of the Willys-Overland Co., who returned last week from Europe after a two-months' trip with his wife and daughter, is optimistic regarding conditions abroad. Keen competition is developing between European car manufacturers, he says, and in this connection the retaliatory tariff policies of various countries toward the United States will undoubtedly be a much more important factor in the export of automobiles than most people anticipate.

"The buying power of several European countries," said Willys upon his return, "is unmistakably increasing. There is every indication that keen competition for the European automobile markets is developing among the European manufacturers. The retaliatory tariff policies of the various countries toward the United States is likely to make this competition a much more important factor in the export of automobiles than has generally been anticipated. We are planning to meet this competition with increased production in our English plant at Manchester."

Ollier Enjoying the Alps

L. J. Ollier, former vice-president in charge of export sales of the Studebaker Corp., writes from Luzerne of the very delightful trip through Switzerland that he is now enjoying. Ollier, after long service with Studebaker, resigned July first to take an extended European tour.

Webb Heads G. M. C. Legal Office

Earl W. Webb is now in charge of the Detroit office of the legal department of the General Motors Corp. He succeeds James McEvoy, who now has charge of the patent section.

Akers Resigns as Republic Sales Head

F. H. Akers has resigned as sales manager of the Republic Truck Sales Corp. He will tell of his future plans soon after October 1.

Bassett to Assist Hyatt Sales

A. F. Bassett has been made assistant sales manager of the motor bearings division of the Hyatt Roller Bearing Co., Detroit. Bassett, a graduate of the Yale-Sheffield school, has been connected with other divisions of the Company for several years in sales and engineering capacities. Most recently he was sales engineer for the Detroit territory.

Allen to Supervise B. & D. Sales

W. C. Allen, who has been in charge of the Chicago branch of the Black & Decker Mfg. Co. for the past year, has been appointed sales supervisor. The Chicago branch is to be put in charge of R. S. Mitten, who was formerly sales manager of the Electric Appliance Co. His territory comprises Illinois, Iowa, Wisconsin, Minnesota, North Dakota, and parts of Missouri, Indiana and Michigan.

Robbins Changes Position

A. W. Robbins, for the past few years with the Standard Roller Bearing Co., and the Bearings Service Co., is now associated with the Bearings Company of America. He will travel from the Detroit offices of the Company.

GENERAL MOTORS OFFICIALS GOING ABROAD NEXT WEEK

H. H. Rice and Others Acknowledge a Variety of Objects in Foreign Travel

When the *Olympic* sails for Southampton, September 23, she will carry not less than seven officials of the General Motors Corp. The circumstance is of more importance to the White Star line than to the Corporation, however, it is declared, because the sailing of the seven on the same day and ship is merely a coincidence.

H. H. Rice, president of the Cadillac Motor Car Co., is going abroad to rest, as any president whose company has just broken all records has an absolute right to do. W. O. Kennington, who represents Delco and Remy interests in England, is returning to his home. Some of the following, it is admitted, may visit the automobile shows before returning: D. A. Lang, General Motors Export Corp.; W. S. Gurley, General Motors Acceptance Corp.; E. A. Seaholm, Cadillac company; G. A. DeWater, Buick Motor Co.; Charles R. Short, General Motors Research Corp.

Gilbert to Sell Chicago Chevrolets

N. O. Gilbert has acquired an interest in the Hamlin Motor Sales Co., Chicago, Chevrolet dealer. Gilbert, who takes over general managership, was formerly wholesale manager of the Chevrolet Motor Co. of Illinois. He is well known in the Chicago territory, having been at one time in charge of distribution of Speed Wagons for the Reo branch there, later becoming retail sales manager. He was also with the Oldsmobile Co. of Illinois.

Weaver Withdraws from Star Rubber

O. L. ("Buck") Weaver has retired from active association with the Star Rubber Co. He first left the Company June 1, 1921, due to ill-health but was again drawn into its activities in March, 1922. He has played a prominent part in the affairs of the Company since its reorganization in 1916 having acted first as its secretary and later as vice-president. His future plans are incomplete although it is expected he will remain in the industry.

BARKER FINDS ENGLAND FIGHTING ITS WAY BACK

No Large Market for American Cars at the Present Time, He Believes

English business, big and little, is fighting vigorously and doggedly for a return to better conditions, A. E. Barker, vice-president of the Maxwell Motor Corp., recently returned from Europe, declares. But until the recovery is more complete, he does not believe the British Isles will prove a large market for American cars. On the other hand, when the economic balance is restored, he finds evidence that England will furnish a better demand for our products in the automotive field than ever before.

In France, conditions are prohibitive, Barker declares, to American motor car sales. The same is largely true of the remainder of Europe. The most that can be said is that underneath discouraging surface conditions, there undoubtedly exists a realization on the part of the nations most concerned of the desperate necessity of continuing to struggle toward solution.

Beane Joins Hinckley-Myers

R. S. Beane, formerly operating in the South for the Sparks-Withington Co., has been appointed southern district manager for the Hinckley-Myers Co., Jackson, Mich., manufacturer of automobile tools and equipment. Beane has been connected with the industry since 1907.

Markey Advances with Diamond Chain

H. I. Markey has been placed in charge of the Diamond Chain & Mfg. Co.'s new offices in the Leader-News building, Cleveland, O. Markey in the past five years has been mechanical engineer in the engineering and sales department. The new office will serve Rochester and Pittsburgh in addition to its home territory.

Merrin Back with Detroit Cadillac

J. W. Merrin has gone back with the Detroit Cadillac branch as wholesale manager. He rejoins the staff after a year spent as district representative for Studebaker.

F. W. Earle with Brunswick Tire

Fred W. Earle has been made district manager for the Brunswick-Balke-Collender Co. at Sioux City, Iowa. He was formerly with the U. S. Tire Co.

Mell Leaves Firestone

Tod J. Mell, for the past four years operating superintendent of Plant No. 2 of the Firestone Tire & Rubber Co., has resigned to associate himself with White & Co., Akron sales agents for crude rubber, materials and equipment. Mell will have charge of the machinery and equipment division. He has had 25 years experience in the industry.

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FISHER BODY BUILDS SIX ASSEMBLY PLANTS

Adds Million and a Half Feet of Space to Meet Chevrolet Needs—Can Build a Thousand Closed Jobs a Day—St. Louis Co. a New Subsidiary.

Increasing demands upon the Fisher Body Corp. have literally forced the adoption of an expansion program of tremendous magnitude. It involves the creation of assembling plants at six points, aggregating more than one and a half million square feet of additional floor space. This will be devoted exclusively to the manufacture of closed bodies for the Chevrolet Motor Co.

These new plants will employ upwards of 15,000 people. With their completion by January 1 capacity for upwards of 1,000 Chevrolet closed bodies per day will become available.

The Corporation, through a newly organized subsidiary, the Fisher Body St. Louis Co., has taken over the large General Motors Buick plant, in St. Louis, which will be devoted exclusively to the manufacture of closed bodies for the Chevrolet. This move follows closely upon the acquisition of the O. J. Beaudette Company at Pontiac, as told by AUTOMOBILE TOPICS July 15. The latter pattern plant will be devoted exclusively to the production of open bodies for the Chevrolet. As the greater part of the Cleveland plant is devoted to Chevrolet production, this will make a total of three plants with a joint floor area of over three million square feet devoted to this one line.

In addition to these three manufacturing plants, the six new plants in process of construction are for the sole purpose of assembling, painting and trimming bodies for the Chevrolet models.

These assembly plants will be operated in part by the Fisher Body Ohio Co., of Cleveland, and in part by the Fisher Body St. Louis Co., of St. Louis. The assembly plants to be located at Flint, Buffalo and Cincinnati, are to be under the supervision and operation of Fisher Body Ohio Co. Those at Oakland, Cal., and Janesville, Wis., together with the plant at St. Louis, will be operated as the Fisher Body St. Louis Co.

The announcement, authorized at this time by President Fred J. Fisher personally, is significant of the sweeping advances made by the Chevrolet during the past two years.

It may be added that its official character means that instead of being newly projected the program is new principally in that it has not been previously disclosed. Fisher is the type of executive who does things first and permits them to be talked about afterward. His plans are well under way and are of an extraordinarily comprehensive character. All that he would permit himself to be quoted as saying, however, was the following brief explanation:

"The tremendous growth in the demand for the Chevrolet closed cars has compelled us to open plants adjoining the various Chevrolet assembly plants, in order to give much better service and enable us to turn over our finished product in perfect condition; at the same time availing ourselves of the manufacturing economies that result from such a plan of operation."

Dodge Brothers Steel Sedan $1,195

Dodge Brothers new steel business sedan, disclosed in these columns a week ago, has been priced at $1,195 f. o. b. Detroit. This is a four-door design, very similar in appearance to the present standard sedan of the line, but differing in its steel body construction, Spanish leather upholstery, and convertible rear compartment. The last mentioned feature makes the car equally adaptable to business and social use.

USE THIS WEEK'S TABLE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 451-3 of this issue. It is revised to Sept. 12.

Repeated checking by manufacturers themselves, coupled with authentic news gathering facilities, keeps the Table both accurate and alive to changes of the minute. That's why the trade everywhere is finding it so valuable.

Sales data, conveniently yet compactly recorded, gives every branch of the industry knowledge of what the automobile manufacturers are doing. The latest Table with its latest information is the one to use invariably.

Columbia Prices New Six $1,095

Columbia Motors Co., Detroit, has uncovered a special six phaeton which will retail for $1,095. Some of the features emphasized on the new product are a nickel-plated radiator with thermostatically-controlled shutters, cowl ventilator, barrel-type head and cowl lamps, cord tires and standard units.

Stewart-Warner Retires All Notes

All of the $2,000,000 eight-percent notes of the Stewart-Warner Speedometer Corp., due March 1, 1926, have been retired. Practically the entire amount was converted into stock, 25 shares for each $1,000 bond. Outstanding stock was not increased, however, since the Company purchased the stock in the open market. August sales were 103 per cent greater than for August, 1921, and sales for first eight months are in excess of the total for the entire 1921 year.

General Tires Lower

Effective September 1, prices on General tires were lowered. Representative of the new prices are the 32 x 4 cord, which was reduced $3.90 to $31.05, and the 30 x 3½ clincher cord, formerly $19.70, now $17.55. The 30 x 3½ straight side cord, selling at $19.75, has recently been put on the market.

CADILLAC PLANS FOR LARGER 1923 OUTPUT

Rice Tells Distributers Factory Will Run on Full Time Schedule Throughout Winter—Year Just Closed Greatest in History of Company.

Setting a production rate considerably in advance of that maintained last year, the Cadillac Motor Car Co. is planning to operate the factory at full time throughout the coming Winter. This was the message delivered to Cadillac distributers assembled last week at the plant from all parts of the Country for their annual convention, by H. H. Rice, president of the Company.

"I believe that general business," he said, "in spite of a few disturbances on the surface, is decidedly on the upgrade. I not only believe that people will be able to get coal this Winter but also manufacturing concerns will get enough coal to operate.

"Strikes in any essential line of business are bound to be settled after a short duration. These strikes are too vital to last long. The crops this year are good and I believe the farmers will obtain good prices for them. Factories that have been shut down are gradually opening."

Lynn McNaughton, general sales manager, stated that during the 12 months just concluded the Cadillac organization had exceeded the business of any previous similar period, both in number of cars sold and in volume of business in dollars and cents. McNaughton presided at the first session.

The visiting distributers hied to the Bloomfield Hills Country Club one afternoon to enjoy golf. In the evening a banquet was held at the club house. President H. H. Rice, Lynn McNaughton, general sales manager; Inglis M. Uppercu, New York distributer; P. T. Prather, manager of the San Francisco distributer organization; Roy Munger, Dallas, Texas, distributer; G. M. McWilliams, Toronto distributer; E. R. Clark, Springfield, Mass., distributer, and Dan Nolan, manager of the Cleveland distributer organization, made short talks. Motion pictures concerning Cadillac cars were also shown.

Kelsey to Make Geared Cars, Too

Kelsey Motor Co., Newark, N. J., will add to its line of friction-drive cars, a complete line of conventional geared cars in both four- and six-cylinder types. Touring, roadster, coupe and sedan models will be offered on each chassis. The chassis, incidentally, will be practically identical with the friction-drive chassis except for the substitution of a conventional three-speed-forward-and-reverse gearset and bevel-gear type rear axle.

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PROSPERITY IS HERE, M. A. M. A. IS ASSURED

(*Continued from page 409, second column*)

rendered, and preparations are now under way to increase the amount of space by fifty per cent.

The traffic department since its inception about two years ago, has studied the traffic affairs of member companies, has advised with each individually, and has submitted on behalf of the industry some forty briefs. The results of these are typified in news of reductions on rates for such things as batteries, wheels, and automobile bodies. At present studies are going forward on between sixty and seventy-five more products, and as each develops appropriate action may be expected on it.

As one of the first services to members, and now developed to an extremely high degree of perfection, the Credit Department of the M. A. M. A. was accounted for in a brief talk by Manager C. A. Burrell. Lacking only the volume of reports asked by members in the exciting days of 1919, when new customers were coming into the market over night, the business of the Credit Department in other ways finds that the size of its job has lessened in no whit.

People are asking more intimate questions, and seeking more exhaustive accounts of their customers than ever before. This all heightens the value of the Credit service. The installation of a credit rating service on equipment and accessory jobbers has played its part in this too. How much the value of the Credit Department is appreciated by M. A. M. A. members is suggested in the statement that its letters of inquiry among members for information as to recent transactions on specific accounts brings a better than ninety-per cent response.

Merryle S. Ruckeyser, financial editor of the *New York Tribune*, was the principal speaker of the afternoon. His message was professedly that of the onlooker who is trained to think and react along lines which follow naturally from his contact with banking and financial thought. From this source then, confirmation of many things that the industry already knew about itself was essentially comforting. And some new trains of thought were valuable in their conclusions too.

Comparing the motor industry to that older form of transportation, the railroad, Ruckeyser declared that the automobile has kept itself comparatively free from politics. There may be excise taxes, but there is no domination to the extent of dictating profits allowable. In another way, as compared to some other established lines, and indeed partaking of one accepted definition of preferable business, there is the assured volume of repeat orders.

The automobile is one machine, Ruckeyser pointed out, that broadly speaking has been introduced without concurrently throwing men out of work. The industry has an advantage over such as the garment trades, in which there is repeat business, to be sure, but where anyone with an idea and a few needles can start trade over night. The automobile business has reached a point where it is dependent on at least moderately large units of capital, and where some of its names stand for tremendous sums. This reflects a stabilizing influence both on its policies and its men.

For the future of the business in the next year and the year after, Ruckeyser believes that the present easy market for loans, and the general upward movement of commodity prices which has been noticed since the beginning of the year indicate a sufficient volume of growth. The only possible factor to make this growth appear smaller might be found in whatever portion of 1922 sales has been an effect of the deferred buying of a years ago. Wages, which are relatively larger than they were before the boom of five years ago started them upward, are to be counted on as an influence in assuring the future of the market. At the same time, it must be considered that eventually they may have a positive influence in checking the recent movement of automobile prices downward and initiating an upward swing.

Alfred Reeves, general manager of the National Automobile Chamber of Commerce, speaking before the Credit section, brought messages fresh from the directors.

Reeves sees channels of future growth in the truck field through schools and bus services, and also in the development of railroad short lines and feeder equipment. For passenger cars, the greatest need is in service personnel and policies. The trade needs thousands of trained men now. He also remarked that owners might forget grease in the transmission but never on the seats or steering wheel.

He decried the effects of gossip and asked that it stop. He also deprecated talk of the gradual consolidation of industry into a few hands. So long as the people want special things, and with women influencing the majority of buying this is an important consideration, there will be opportunity to suit many tastes, he declared.

Ezra Clark was the high point of the Ad Managers' Convention. He pointed to the general value of the group as it developed and sketched things far ahead. He finds much growth possible in the bus, railway and motorized grocery fields. The truck has changed rural school methods and those of rural storekeepers, he concluded.

Mergers when dictated by economic reasons have a natural place in the growth of the industry. This suggestive thought was placed before the convention by C. A. Dana in the course of an informative talk on reorganizations and mergers. He traced the development of many present financial structures and gave his personal ideas as to the place mergers shall take in the future.

There are two kinds of mergers, economic and financial, he said. The latter kind is dicated by the needs of a weak firm for the money support or by the union of a group to make an attractive, economic amalgamation. Those in the steel business are exemplary. They asure efficient, quantity operation.

Earlier Dana had traced the growth of creditors' committee operation and reorganization as an improvement over bankruptcy liquidation. These grow out of excessive plant and equipment at high prices worked with inadequate cash and not showing the right return. Dana would have all prices moved up a little to produce a proper return and safeguard investment values.

Dana offered a suggestion, not admitting himself committed to the idea, that encouragement to too many might be unfair and weakening to the strong company's investment and credit position. He would have plenty of companies and competition but not so much as to weaken the economic fabric, he said, for, he continued, "you have got to make money to insure integrity."

In other respects, the meeting was devoted to an analysis of advertising and publicity methods looking to the improvement of quality. Delivered by men who handle publicity on the receiving end and are able to speak from the book, as well as by those conspicuous for ability to devise and put across effective campaigns.

Indications Refute Ford Shut-Down

Information gathered from many sources by a representative of AUTOMOBILE TOPICS tends to refute the threatened Ford shutdown. Optimism is rife at the Detroit plant where the belief is frankly expressed that Ford will get carriers to bring coal there. He has plenty of coal at the mines and the main problem seems to be securing of adequate transportation facilities.

Pierce-Arrow August Sales a Record

Pierce-Arrow Motor Car Co. sales in August were greater than any corresponding month in the Company's history. Compared with August, 1921, business, the gain was 200 per cent. Production on closed cars, which represents 70 per cent of total output, is running behind demand.

N. Y. Orders Trackless Trolleys

Osgood Bradley Car Co., Worcester, Mass., is said to have received an order for 15 trackless trolley cars from the City of New York. Most of the cars, costing $12,000 each, are for Staten Island lines. Motor equipment for the cars will be installed elsewhere, it is understood.

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EUROPE EVENTUALLY LARGE BUYER HERE

A. P. Sloan, Jr., Sees Foreign Leaning Toward American Engine Designs—Demand Favors More Competent Types—Outlook Good.

Europe is seen by Alfred P. Sloan, Jr., operating vice-president of the General Motors Corp., as the ultimate buyer of American automobiles, practically to the exclusion of the products of all other countries. This astonishing view, pronounced after his recent return from abroad, is a studied conclusion based upon contrasts between observations made during this and former visits to Europe.

The influence upon all markets of the vast productive capacity of this Country, acting as a lever to force prices down and correspondingly values up, is of course, apparent to observers at home as well as abroad. A more direct indication is the revulsion against the small engine, once the delight and pride of every engineer and manufacturer in England and on the Continent.

Where effort was almost universally concentrated on small-bore types, even no more than a couple of years ago, today public demand is literally forcing attention to larger and more powerful types. It is no longer possible to offer an extra speed in the gearset as an alternative for power, since additional gearing purchases traction at the expense of speed.

By contrast, American engines have been markedly refined, and at the same time in many instances somewhat reduced as to cylinder dimensions. In accomplishing such refinement, however, the goal always before the designer has been to secure the maximum of high gear operation. This example has knocked the typical small engine of Europe into a cocked hat and given the builders a new direction of effort and one that is utterly foreign to their pet theories.

The General Motors executive went abroad principally for rest, but, by nature incessantly active, he immediately plunged into business thought and action that immediately opened vista after vista of opportunity. "Any man who goes over for only a few weeks and returns with a complete solution of European problems, ready to serve, is crazy," he said. "Nevertheless, from my own observations, I am convinced that the political and business tangle is going to be unraveled in some way. How long it will take, I cannot predict.

"I expect business to be good all over the world. General Motors affairs in England and on the Continent are constantly getting better. Furthermore, they give every evidence of continuing to improve."

Strike Settlement Means Boom

The greatest trade revival ever known is predicted by Secretary of Labor Davis as being in the wake of the rail strike settlement. "American industry," he says, "has overcome the last obstacle in the way of the greatest economic revival the Nation has ever known. With the settlement of the strike of 400,000 railroad shop craftsmen assured, the whole industrial machinery of the Country is ready for a forward movement unprecedented in our economic history."

Dodge Brothers' Plant for Bodies

Dodge Brothers' new factory building, told of in these columns last week, will be devoted largely to steel closed-body construction. It will be an eight-story structure, cost about $1,500,000, and provide 440,000 additional feet of floor space. Many large presses and electrically-heated enameling ovens will be installed, and warehousing space provided.

SHOW SPACE DRAWING SET FOR OCTOBER 5

(Continued from page 409, third column)

The following tabulation shows production by months to date:

	1921	1922
January	51,919	90,481
February	65,218	120,293
March	109,758	171,390
April	156,892	219,294
May	163,667	255,167
June	177,757	289,120
First Half	725,211	1,145,745
July	176,067	244,355
August	178,831	272,640

The factory shipping figures for all manufacturers are:

	Carloads		Driveaways		Boat	
	1922	1921	1922	1921	1922	1921
Jan.	15,357	6,485	7,479	3,185	143	93
Feb.	19,636	9,986	10,173	7,507	180	99
Mar.	27,753	16,287	16,917	9,939	560	75
April	31,334	20,187	22,381	14,197	2,960	1,619
May	33,416	18,608	28,827	15,193	7,406	2,381
June	34,230	20,269	33,857	18,834	7,737	3,947
July	29,116	19,514	28,100	15,533	7,030	3,726
Aug.	32,563	20,758	36,603	15,218	10,034	3,595

Reports received by the directors at their meeting indicate that August business generally was better than in July, as would be indicated by the accompanying tables. Other information conveyed to them might be summarized as follows:

Percentage of closed cars sales in the next six months may be estimated at from 25 to 65 per cent of total disposals, varying with the localities, of course.

Price changes put in effect recently are seen to have stimulated sales only in those lines immediately affected. Effect on the volume of sales as a whole was distinctly adverse, showing actual retardation when considering the entire Country.

Sale of light trucks good; the heavier types not moving so well.

Used car market varying widely in different sections from extremely dull to good.

In general business, fine harvests indicate the farmer as a good potential market for future business. Value of all crops is set by the Department of Agriculture at approximately $1,250,000,000. Corn crop gains $500,000,000; cotton, $400,000,000 over last year.

Since close of coal strike iron and steel production has increased. Raw material prices generally higher.

Bank clearings generally slightly higher though receding 7.6 per cent in New York. Money and credit fairly easy.

Trend of wages higher.

The report of the Fuel Research at the United States Bureau of Standards, the efforts of which are underwritten by the N. A. C. C. and the American Petroleum Institute, shows that present work is about 60 per cent completed. Studies are being made of the effect of change in fuel volatility, consumption on a mile per gallon basis and the effect upon crank case dilution. Tests have been carefully checked by the Society of Automotive Engineers, which reports them more than satisfactory. The committee for the industries will visit Washington, D. C., on September 20, to go over the work.

The Foreign Trade Committee reported that the campaign it is waging abroad along educational lines is having good effect with many inquiries being received from all parts of the world.

Of special interest to truck makers is the report of the committee having that branch of the industry as its province. It reported that the Milk Producers' Federation has manifested a great interest in changing the mode of transportation of milk from rail to the road on the grounds of greater economy. The Federation, which represents about 200,000 milk producers, has been given extensive data on the matter by the Chamber's committee, which estimates that about 10,000 trucks could be employed if the Federation decides to adopt the plan. The committee also reported that the Board of Education of Floyd county, Ga., is investigating the possibilities of employing trucks to carry about 600 school children to and from experimental farm lands in connection with its educational curriculum.

The service department finds encouragement in its drive to spread knowledge of what service associations are for and in their behalf is progressing splendidly. More than 100,000 stickers have been distributed, the Automotive Equipment Assn. alone taking 58,000 for its members. Inquiry is developing throughout the Country and the prospects for the formation of a number of new service associations is excellent. A speakers' bureau has been installed by the Chamber including five general, two specialists and 12 equipment manufacturers in addition to Y. M. C. A. help. Ten films are now available. Mention is made of the "splendid cooperation" of the Society of Automotive Engineers, which will hold a service meeting in Chicago in January. It has advised all its sections to invite service association members to participate in its meetings.

The division of simplified practice has been active throughout the Summer months gathering data on tires, spark plugs, batteries, bearings and brake linings. In cooperation with the Standards Committee of the S. A. E. it is working on reducing the number of sizes. The Rubber Association of America and the Tire & Rim Assn. are cooperating in their departments.

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ANDERSON LOSSES END WITH JULY BUSINESS

Over Four Thousand Light Sixes Ordered by Dealers at Convention Debut —7,000 Planned for Year—July $5,000 Profits Contrast with Year's Deficit.

Optimism for the future of the Anderson Motor Co., Rock Hill, S. C., was prevalent at the annual meeting the latter part of August, details of which were given out this week. It was reported that July operations netted a profit of nearly $5,000, and that August was about as good. This showing of recovery is measured by the deficit for the year ended June 30, 1922, which was $279,323.

The reception accorded the new light six at the dealers' convention when 4,225 cars were ordered, has left factory officials considerably "pepped up," as J. G. Anderson, chairman of the board, expresses it. Expecting at least another thousand orders from dealers who were not present, and a like number from the general public, the Company looks to 7,000 cars for the coming year. This is more than the factory can turn out, Anderson says.

At the annual meeting resolutions were passed by the stockholders expressing confidence in President J. G. Anderson and associate officers, and gratitude for Anderson's services for which he "has never made any charge against the company by way of salary." It was also recommended that the 3,000 stockholders give due consideration to the Anderson car when purchasing automobiles. Purchase of a car by these shareholders, it was pointed out, would assure success of the company and payment of dividends.

Directors elected J. G. Anderson to chairmanship of the board. J. W. Anderson succeeds him as president. W. A. Anderson was elected vice-president; C. J. Henry, treasurer; and E. H. McConnell, secretary. Directors elected in addition to the three Andersons are: W. H. Wood, J. P. Matthews, W. C. Rasor, W. B. Moore, Alexander Long, and T. L. Johnston.

The annual statement for the year ended June 30, 1922, is presented here in condensed form. Losses for the year ended on that date—$64,485 on inventories, and $214,838 on operations—added to the deficit as of July 1, 1921, $296,554, left total deficit $575,877. Total current assets were $1,462,327 as against total notes and accounts payable, $376,017.

ANDERSON MOTOR CO.

Condensed Balance Sheet, June 30, 1922

Assets		
Cash		$124,088
U. S. Liberty bonds		1,130
Notes and accounts receivable		485,516
Inventories		851,593
Treasury stock		27,041
Plant and equipment, etc.		737,957
Good will, patents, etc.		750,000
Discount on common stock sold		342,630
Commissions paid on 3rd issue 1919		96,134
Adv. to salesmen, prepaid insur., etc.		25,198
Deficit:		
Bal. July 1, 1921	296,554	
Loss on inv. $64,485		
Loss on operations 214,838		
Total loss year 6/30/22	279,323	575,877
Total		$4,017,164
Liabilities		
Notes and accounts payable		$376,017
Auto contract deposits, etc.		16,147
Capital Stock:		
Preferred	$2,000,000	
Common	1,625,000	3,625,000
Total		$4,017,164

Delaware Incorporates Forty-Eight

Forty-eight corporations to manufacture and deal in automobiles and parts and conduct various businesses in connection with the automotive industry were incorporated in Delaware in August. Total capitalization was $11,305,000. There were two companies granted charters whose purport is the manufacture of motors, six component manufacturers, 36 automobile sales concerns, including 30 Star companies, two tire concerns and four miscellaneous, including the National Auto Anti-Theft Association.

Flint Motor Shares Offered

Initial offering of Flint Motor Co. of Michigan stock, all common, is being publicly made in that state by the Durant Corporation, Flint office. It is understood that about half of the authorized shares, which would be 250,000 no-par common, are being issued at this time. The Flint six, which this Durant enterprise will produce, is about ready and awaits final approval of W. C. Durant himself before being shown.

DIVIDENDS DECLARED

Chandler Motor Co.—Regular, quarterly dividend of $1.50; payable October 1, 1922, to stockholders of record September 20, 1922.

Electric Storage Battery Co.—Dividend of 75 cents on the new common stock and the new preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Fisher Body Ohio Co.—Regular, quarterly dividend of $2 on the preferred stock; payable October 2, 1922, to stockholders of record September 21, 1922.

B. F. Goodrich Co.—Regular, quarterly dividends of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Jordan Motor Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 30, 1922, to stockholders of record September, 12, 1922.

Kelly-Springfield Tire Co.—Quarterly, dividend of $1.50 on the 6 per cent preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Kelsey Wheel Co.—Regular, quarterly dividend 1½ per cent on the preferred stock; payable October 1, 1922.

Mack Trucks, Inc.—Regular, quarterly dividends of 1¾ per cent on the first and second preferred stocks; payable October 1, 1922, to stockholders of record September 20, 1922.

Reo Motor Car Co.—Quarterly dividend of 1½ per cent, and an extra dividend of 1 per cent; payable October 2, 1922, to stockholders of record September 15, 1922.

Timken Roller Bearing Co.—Initial dividend of 75 cents; payable September 20, 1922, to stockholders of record September 11, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended September 13. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High.	Low.
Advance Rumely	22	20
Ajax Rubber	15¼	11⅝
Allis-Chalmers	59⅛	57⅜
Allis-Chalmers, preferred	103	101
American Bosch Magneto	45	39
Case (J. I.) Plow	6½	6⅜
Chandler Motor	64¾	61
Chicago Pneumatic Tool	89⅜	82
Cleveland Motors	30½	29½
Continental Motors, common	9½	9⅛
Daniels Motor	11½	10¾
Durant Motors	50	44⅞
Durant Motors of Indiana	16	15
Fisher Body	124	113
Fisher Ohio Body, preferred	97½	95
Fisk Rubber, common	13¼	12
General Motors, common	15	14
General Motors, preferred	85½	85
General Motors, 6% deb.	85⅛	84½
General Motors, 7% deb.	100	99¼
B. F. Goodrich, common	36½	34½
B. F. Goodrich, preferred	85½	85
Goodyear, common	10	10
Goodyear, preferred	29½	28½
Grant Motors	50c	46c
Gray & Davis	14¼	13⅜
Hayes Wheel, w. i.	35	34
Hupp Motor Car, common	23⅜	18½
International Harvester, new	114¼	111½
*Kelly-Springfield Tire, common	45⅜	42¼
Kelly-Springfield, preferred	86	85½
Kelsey Wheel	106¾	94½
Keystone Tire	9	8
Lee Rubber	27	24¾
Lincoln Motors	2⅛	2
Mack Trucks, Inc.	61¾	58
Martin-Parry	33¾	30½
Maxwell Motors, Class A	60½	57
Maxwell Motors, Class B	20¼	18¼
Mercer Motors	2⅞	2
Moon Motors	14⅞	14
Mullins Body	24¼	22
Parish & Bingham	12¼	12¼
Pierce-Arrow, common	13½	11⅜
Pierce-Arrow, preferred	37	30
Reo Motors	13¾	13½
Republic Motor Truck	4	3¼
Saxon Motors	4¼	3⅝
Stewart-Warner Speedometer	48½	47½
Stromberg Carburetor	58	55¼
Studebaker, common	133¾	130½
Studebaker, preferred	115½	115
U. S. Light & Heat	1¾	1¼
U. S. Rubber, common	58¼	54¼
U. S. Rubber, 1st preferred	105	101½
Westinghouse Air Brake	104	100
Westinghouse Electric & Mfg.	64½	63
White Motors	54	49
Willys-Overland, common	8	7⅜
Willys-Overland, preferred	47⅜	42

*Par $50.

Prices for automobile securities quoted in Detroit during the week ended September 12 are as follows:

	High.	Low.
Auto Body	5	5
Charcoal Iron, common	2¼	1⅝
Charcoal Iron, preferred	2	2
Columbia Motors	3½	2¼
Commerce Motor	5½	4
Continental Motor	9⅜	9⅛
Edmund & Jones, common	25½	20
Federal Truck	22	22
Ford of Canada	422	408
General Al. & Brass	9½	9½
Motor Products	86	79½
Motor Wheel, common	13½	13
Packard Motor, common	14⅞	14⅜
Packard Motor, preferred	91½	87
Paige-Detroit Motor Car, common	23½	17
Reo Motor (new)	14	13⅜
Timken Axle, common	29	27½
Timken Axle, preferred	88	86
Truscon Steel, common	21	17½
Truscon Steel, preferred	10	9⅞

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CLEVELAND PROFITS NOW OVER A MILLION

Inventory Adjustments and All Other Charges Leave Handsome Earnings—Production 6,600 in First Seven Months—Total May Reach 10,000.

Responding to its first real opportunity to demonstrate its ability and earning power, the Cleveland Automobile Co. has shown in the first seven months of 1922 net earnings well in excess of a million dollars. This news comes from the factory with the information that in the same period 6,600 cars were shipped.

Organized in 1919, the Company experienced a good demand in 1920 but was hampered in its endeavors by difficulty in obtaining parts and by high prices for labor and materials. During the past two months shipments have been at the rate of about 275 cars a week. No large falling off is expected in the current four months' period and it is believed approximately 3,400 cars will be turned out, making a total for the year of about ten thousand.

With inventories thoroughly written down it is not unlikely that Cleveland company will earn another million dollars in the remaining period of the year. This is dependent, of course, on realization of expectations in regard to production. The million already earned is after extensive adjustments of inventories and other charges. There are 280,000 shares of no par value common outstanding.

New Process Gear Earnings High

Earnings of the New Process Gear Co. are reported to be running about $500,000 a year. Business prospects continue good, it is asserted, since, in the sale of the property to T. W. Warner, of Toledo, vice-president of Durant Motors, Inc., it is believed the manufacture of gears for the Durant lines will be continued as in the past. In connection with the auction, at which Warner bid $1,904,000 for the property, as reported in AUTOMOBILE TOPICS under date of September 9, another bidder, unidentified, was unable to be present although he had deposited his check for $50,000. An attorney for this party intimates the District judge who must ratify the sale may be asked to permit the bidding to continue that his client may have opportunity to make an offer.

Ford Production Figures Out

Production of the Ford Motor Co. for the first seven months of this year, exclusive of Canadian company, was 688,028 as against 554,727 in the same month last year. July domestic production was 136,646 cars and trucks, compared with 141,901 in June and 112,185 in July, 1921. Production at six foreign branches during July was 6,539, as against 6,876 in June, 7,170 in May and 6,100 in July a year ago. Tractor output at Rouge was 9,657 in July and 9,333 in June. Cork plant made 220 tractors in July and 298 in June.

Empire Tire Sold to New York Firm

Assets of the Empire Tire & Rubber Co., Trenton, N. J., were sold by receivers at public sale on September 13 to Campbell, Heath & Co., New York, for $1,675,000. W. W. Pepper, a former president of the tire company, is treasurer of the purchasing company. William H. Peck, president Third National Bank, Scranton, Pa., represented the New York firm in the bidding. It is understood that the new owners will organize a company to operate the plant, with C. Edward Murray, Jr., of New York, one of the receivers, as the head of the company.

Automobile Bankers Confer

Reported conferences between the heads of a number of automobile banking concerns are thought to forecast a possible concentration of interests in that quarter. Banking, like every other avenue of human activity, involves a certain amount of non-productive effort which centralized management is capable of avoiding. It is not denied that more particular reasons might lend even greater attractions to a project for bringing together some of the stronger factors in a business which, at its best, is tremendously complicated and often perplexing in its ramifications.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended September 13 are as follows:

	High.	Low.
Firestone	73	70
Fisher, Ohio	45	40
Fisher Body, Ohio, preferred	96	93
Goodyear	10½	9½
Grant	¾	½
Jordan, common	175	125
Jordan, preferred	80	80
Peerless	60	57½
Standard Parts	5	3¾
Standard Parts, preferred	19	16
F. B. Stearns	22¼	21¼
Torbensen Axle	25	24
W-S-M, common	40	34
W-S-M, preferred	72	72
Winton, preferred	40	35

Prices for rubber securities quoted in Akron during the week ended September 11 are as follows:

	High.	Low.
Amazon Rubber	5	5
American R. & T., common	25	15
Firestone, common	72	70
Firestone, 6% preferred	91	90
Firestone, 7% preferred	83½	80
General Tire, common	300	250
General Tire, preferred	100	92
B. F. Goodrich, common	36½	34½
B. F. Goodrich, preferred	87	85
Goodyear, common	10	9¼
Goodyear, preferred	30	28½
India, common	75	75
Marathon, common	3	2¼
Mason, common	12	10¼
Mason, preferred	55	54
Miller Rubber, common	72	68
Miller Rubber, preferred	98	96
Mohawk Rubber	20	10
Mohawk Rubber, preferred	100	75

WILLYS PLANS TO PAY ON APPROVED CLAIMS

Receivers Say Payment May Be Made Next Month—They Have About $15,000,000—Name Bankers' Committee to Effect Reorganization.

Part of the plan for the readjustment of the debt and capital of the Willys Corp., which will seek to lift the final settlement out of expensive judicial processes, was announced this week by F. P. Kennison, one of the receivers. A strong bankers' committee has been named to effect a reorganization through new stock flotation in a new company and it is prophesied that a dividend which may approach 30 per cent may be declared in October on approved claims.

The receivers possess for readjustment of the debt and capitalization approximately $15,000,000, accumulated through the sales of properties and liquid assets. They also hold about 750,000 shares of Willys-Overland common stock, other securities valued at $3,888,800 and $750,000 in 4½ per cent notes given by the Overland company in satisfaction of claims. Against this aggregation of assets is piled $18,000,000 of debts, $10,000,000 of this representing bank obligations, more than $2,000,000 liquidated claims for machinery ordered and about $1,600,000 estimated payable on mechanics' liens.

The assets are not to be liquidated at once, it is explained. The proposed company to take over the assets will float an issue of three-year, $6,000,000, seven per cent notes. In addition 200,000 shares of no par common stock will be issued.

It is proposed to pay off the mechanics' liens and expenses of the receivership in cash. Scrip dividend certificates will be issued on first preferred Willys Corp. stock at face value in purchase of notes or stock in the new proposed company. All other claims proved will be settled by payment of $700 in cash for each $1,000 of claim and either $300 in cash or the same amount in notes at 95 per cent of face value and three shares of common or a portion of cash or notes in the same relation to make up the remainder.

The bankers' committee appointed to effect the reorganization consists of Perry H. Johnston, president, Chemical National; Howard Bayne, vice-president, Columbia Trust Co., and Arthur W. Loasby, vice-president, Equitable Trust Co., all of New York.

Wickwire Meeting Adjourned

Stockholders of the Wickwire-Spencer Steel Corp. met on September 8 and adjourned until September 22. Legal technicalities are said to have been raised making impossible a vote on the proposition to purchase the American Wire Fabrics Co.

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BAUER SKETCHES PLAN TO TRIPLE EXPORTS

Cooperative Financing by Manufacturer and Bank Recipe N. A. C. C. Expert Gives to M. A. M. A.—Dealer's Deposit, Credit Risk Insurance Included.

Tripled automotive exports would result in this phase of the industry's business if stimulated by financing facilities based on collateral value of motor vehicles. These might include, deposits by foreign dealers, insurance of credit risk, and provision for cooperative disposal by bank and manufacturer of any rejected shipments. Briefly, this is the gist of a message delivered by G. F. Bauer, foreign trade secretary of the National Automobile Chamber of Commerce, to the Motor & Accessory Manufacturers Assn., convened in Buffalo, N. Y., September 14. Such a plan is, in fact, now being developed, Bauer said.

Motor vehicles represent definite collateral value, just as much as cotton, grain or securities, Bauer pointed out. Recognition of this collateral value has been taken as far as domestic trade is concerned. A recent indication is the erection in Chicago of a warehouse, where motor vehicles may be stored by a dealer as collateral, on which loans are issued.

In export financing, however, the collateral value of motor vehicles is seldom considered. A draft is discounted only as a firm's standing warrants, regardless of the value that may be represented in the shipment.

This attitude is probably because of too little cooperation between the manufacturer and the bank and a lack of understanding as regards each other's problems. Any improvement is, therefore, possible only in a plan that proves satisfactory to both. To the manufacturer, it must offer protection from undue recourse; to the latter sufficient collateral and guarantee that the goods will not be thrown on hands of banker alone for disposal.

"At present, the N. A. C. C. is cooperating with certain bankers to devise a plan that will prove satisfactory all-around," Bauer said. "Based on cooperation between bank and manufacturer, the plan briefly provides this:

1. Dealer puts up as guarantee of good faith 25 per cent of value of shipment.
2. Manufacturer discounts draft for 80 per cent of face value, leaving other 20 per cent standing until transaction is completed.
3. Bank insures itself again credit risk and charges premium of about 1 per cent for six months to manufacturer.
4. Interest on credit extension is charged to foreign dealer.
5. Control of vehicles as collateral guarantee is retained by bank until payment is effected.
6. Disposal of vehicles, if rejected, is provided for in cooperative arrangement between bank and manufacturer, whereby latter contracts to give preference to returned goods in filling of any export orders on books.
7. Expenses of returning to U. S. of rejected vehicles are amply provided for in guarantee of 25 per cent put up by dealer and forfeited in event of rejection of goods for invalid reasons.

"The advantages from such a cooperative financing plan are manifold. The manufacturer is relieved of recourse. The bank avoids going into automobile merchandising, and if desired, could assume credit risk and also collect premium for its own account.

"The dealer would have chance to sell vehicles before paying draft; but one-quarter of present amount would be required to finance shipment from factory to designation; the credit with his local bank could be conserved for use in intensive sales development or in creating greater turn-over with resultant benefits to all from larger volume of business made possible.

"If then, cooperation will help us all in extending our foreign commerce, why not resort to it generally in advertising, selling, and servicing. It certainly ought to enable us to secure for all times 75 per cent of the world's automotive export trade. The 75 per cent would also then mean more than now, as the basis would represent a volume of export business probably tripled what it is now."

The Traffic Problem

NATIONALIZATION of a code of traffic regulations—a code composed of the few best ordinances that have been evolved throughout the Country—is certain to come about. Perhaps the near future will bring progress along this line. More likely, it will take years.

So absurd on the face of it, traffic laws individual to the multitude of communities and to the several States are not entirely without excuse for being. What is safe practice in a little town with unimproved roads for streets is not adequate in New York city. What is permissible in Chicago is not desirable in San Francisco with its hilly streets.

Yet certain fundamental laws that are really only legal expressions of common sense are practicable for the Nation as a whole. Among these are speeds, traffic direction and rules connected with the streets of cities and the roads of the countryside, as such.

There may be unthinking objection to a national law limiting speed outside corporate limits of towns, villages, cities and hamlets to 35 miles an hour. The only one to object would be the man who cares neither for his own safety or that of others. A speed limit of 20 miles an hour in cities and other communities of a like nature is worthy of Federal application. Why speed in so-called business or congested sections of cities should be limited further is a mystery solvable only in political retorts. No one wants to or really can drive faster than the crowd when he himself is part of it.

A good car with good brakes is safe in the hands of a competent driver at 20 miles an hour. Incompetent drivers must be eliminated eventually, preliminary to any real progress.

To say that these speeds are lawful entails a codicil that is too seldom interpreted. If a driver is arrested because he exceeds the speed limits, the traffic officer who arrests without warrant of fact should be punished.

Traffic direction is fairly national in application. But it is tied up with the matter of one-way streets, boulevards, streets used by trolley cars and other puzzling items that the touring motorist finds on his travels.

It should be a national law that an automobile be brought to a full stop before crossing or entering into a boulevard. This would lower the total of intersection accident crashes, the most prolific sources of injury. One-way streets, as has been said heretofore, are entirely inexcusable unless universal in each instance. Drivers themselves will avoid narrow streets. A stranger turning from a main artery of traffic in a city only to find himself entering a one-way street, so designated by a tiny sign high on an adjacent lamppost, may continue on his way and, if lucky, escape. Otherwise he must listen to the burly cop or the judge's sentence.

These are but a few suggestions. Many, many more might be advanced. The desirable thing is that these may help in the work now going forward to the goal of national traffic laws. And traffic laws in force throughout the United States will result in less discontent with the traffic problem, greater ease and despatch in driving, more expressed desire for ownership and consequent larger sales of automobiles in the future for which now is the time to build.

You Made It—Help Solve It

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McFARLAN INCREASES OUTPUT TO MAXIMUM

Five Hundred Cars Yearly Is Aim—To Sell Stock to Public After 65 Years of Closely Holding Securities—Will Double Body Building Operations.

After mature deliberation, the McFarlan Motor Corp., Connersville, Ind., announces that it has determined to operate its plant at capacity hereafter. This policy, adopted in the belief that the automobile industry faces continued and future prosperity, will involve increasing production by 40 per cent, though this will not mean exceeding the fixed maximum annual output of 500 cars. Manufacture of bodies will be doubled.

For the purpose of properly conducting the business on the new basis, the Corporation is offering an amount of both preferred and common stock for public consumption to create additional working capital. The number of shares available is not announced. The Corporation has an authorized capital of $3,000,000, divided into 225,000 shares of common and 75,000 of preferred, all of a par value of $10 per share. The preferred are seven per cent securities.

Sixty-five years of business, first as carriage makers, and since 1909 automobile builders, has built up a concern, the securities of which have hitherto been held by some 30 residents of the Indiana city in which the plant is located. The business has been prosperous. Net sales for the past six years have risen from $531,000 in 1916 to $1,104,000 in 1921. Its body contracts with other companies embrace deliveries for the present season aggregating $500,000 in value.

On August 1, the Corporation announced prices on a number of custom-built types which, it asserts, have reached the stage of almost standard demand: They are as follows:

Type	Price
Roadster (concealed rear seat)	$6,300
Sport-touring (4-passenger)	6,300
Open touring (7-passenger)	6,300
Town car (5-passenger)	7,500
Close-coupled sedan (4-passenger)	7,500
Touring sedan (7-passenger)	7,500
Suburban sedan (7-passenger)	7,800
Knickerbocker cabriolet (7 passenger)	9,000
Sport sedan (4-passenger)	7,500
Limousine (5-passenger)	7,500
Coupe (2-passenger)	7,500
Touring sedan (4-passenger)	7,500
Continental landaulet (5-passenger)	8,500

Net assets of the Corporation for the five-and-a-half year period to June 30, 1922, show substantial progress. From December 31, 1917, when assets were set at $570,370, the figures grew to $1,024,779 in the same date in 1920. The depression which so affected the industry as a whole was reflected only slightly in that December 31, 1921, assets were set at $959,092. The June 30 figure of this year is $1,017,194. The Corporation predicts net earnings for 1922 will be $350,000. After present financing is completed approximately $46,000 will be absorbed in preferred dividends.

Thirty Stars Incorporate

Thirty Star companies in as many States were incorporated in Delaware in August as sales concerns. Each is given a capitalization of $2,500. This preempts the name for the use of W. C. Durant and his organization in those territories.

PACKARD EMPLOYES FOREGO USUAL VACATION PERIOD

Company Rewards Willingness to Speed-Up Output by Offering Bonus

Annual two weeks' shut down has been eliminated by the Packard Motor Car Co. this year through the willingness of the factory employes to stick on the job and push cars through. It has been customary for those employed by the Company ten years to receive two weeks' vacation with pay and for men employed five years to receive full pay for one week. As a result of volunteering to forego this leave of absence, employes will receive two and one weeks' full pay, respectively, as a bonus in addition to their regular pay.

Every possible effort is being made by the organization to meet the demand for cars from dealers. Although production has been increased as rapidly as possible a shut-down of two weeks would have resulted in a further increase in unfilled orders. At present approximately 8,000 men are employed.

Form Asheville Bus Company

Patrons of the famous resort of Asheville, N. C., will hereafter be enabled to travel between that city and various other adjacent places, such as Biltmore, Forest and West Asheville on a bus line. The Kenilworth Transportation Co. was organized this month to install the service.

Oakland Wins Another Economy Run

An Oakland won both the sweepstakes and class cups in the Sun-Motor Car Dealers economy run from San Diego to El Centro and back, a distance of 246 miles, bettering the record made by another Oakland stock car in the recent Yosemite run. Oakland Motor Car Co. reports for the run: average of 40.39 actual miles to the gallon of gasoline; 59.37 ton-miles per gallon; no oil consumption; but one-half pint water used; 6.09 gallons gasoline used; not a mechanical adjustment made on the hard trip over mountain and desert with the thermometer registering 113 degrees in the California valley.

HAYES DISC WHEELS MADE IN QUANTITIES

Trade Learns of Production for Durant, Chevrolet, Overland, Gardner and Earl—Interchangeable with Wood and Wire Products, as Are Parts.

Hayes Wheel Co. announced to the trade this week that it is now producing in quantities disc wheels for a number of makes of automobiles. Among these are the Durant, Chevrolet, Ford, Overland, Gardner and Earl. Similar products for other companies will be announced from time to time, it is promised.

The new disc wheel is standardized and interchangeable with the Hayes wood and wire products, rims, felloes, bolts and nuts all being freely interchangeable. All wheels made for the several concerns named have been especially designed for the cars in question and lines have been studied with the idea of creating a pleasing appearance.

As is true of all Hayes products, the disc type is demountable and no special carriers are necessary. A valuable feature is the easy accessibility of the valve stem, it being placed on the outside of the wheel. Safety hazards have been carefully and individually studied and the design perfected to eliminate them as far as engineering skill is accountable and good material and workmanship can accomplish.

Tractor Show Holds Crowds

Thirty thousand persons are estimated to have attended the Fordson Industrial Tractor Show held at Charlotte, N. C., last week. Following the exhibitions, which were amplified by the aid of local machinery dealers and manufacturers, a banquet was tendered the officers of the local organization.

Muzzy-Lyon Moves to New Plant

Removal of the Muzzy-Lyon Co., Detroit, to its new plant and foundry has just been completed. The present factory is a modern daylight and fire-proof building covering over 36,000 square feet. Additional new equipment that has been built and purchased makes possible practically doubling the production of bronze back babbitt-lined and die cast babbitt engine bearings, and babbitt alloys.

Rural Counties Want More Trucks

Surveying the needs of rural communities throughout the United States, the County Agricultural Agents report a need for more motor trucks in 650 counties. Georgia has the largest demand with 59 counties and Pennsylvania is second with 43.

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TIRE AND RIM ASSN. IS REINCORPORATED

Provides Complete Representation for Entire Industry—Tires, Rims, Wheels and Related Parts Included—S. P. Thacher Elected President.

Activities of the Tire and Rim Association have been taken over and will be continued by the Tire and Rim Association of America, Inc., organized August 31. The new organization provides for membership from the tire, rim, wheel and related parts industries. It covers the entire field of tire and rim standardization, while continuing the work of rim inspection, which was the first measure of standardization inaugurated by the industry.

Plans of the organization include close cooperation with other bodies engaged in related work, and its immediate goal is the enrollment in its membership of every tire, rim, wheel and related parts manufacturer in the United States and Canada. C. A. Thompson continues in Cleveland as general manager and C. E. Bonnett as chief rim inspector.

The movement culminating in the elaboration of the Tire and Rim association idea sprang from the circumstance that in the early days of the automobile, many tire manufacturers produced their own rims and in several instances tires of other makes would not fit these rims. As the industry grew the manufacture of rims was taken up as a separate enterprise and it soon became evident that standardization was imperative in order to provide complete interchangeability of all makes of tires on all makes of rims.

To accomplish this the Clincher Automobile Tire Manufacturers' Association was formed, and a line of standard rims worked out. Inspectors were placed in every rim plant and the official stamp of the Association became a guarantee that all makes of tires would fit rims of the same nominal size.

The Association was managed by the executive heads of the member companies and minutes of meetings carried the names of such well-known figures as F. A. Seiberling, then president of the Goodyear Tire & Rubber Co., and now president of the Seiberling Rubber Co.; C. J. Butler, president of Morgan & Wright and now also vice-president of the United States Rubber Co.; H. S. Firestone, president of the Firestone Tire and Rubber Co.; John Kelsey, president of the Kelsey Wheel Co., and others.

In 1917 the name was changed to the Tire and Rim Association and its management devolved upon the technical executives of the member companies. During the war the Association rendered valuable assistance to the Government in working out a standardization program to reduce the number of tire sizes and types. The economies resulting from this work were enjoyed by all branches of the related industries and gave a great impetus to the tire standardization movement of today.

The board of directors of the new association is composed of 15 members, seven of these represent tire manufacturers, four rim, three wheel, and one the related parts industries. The election of directors resulted as follows: Tires—J. E. Hale, Firestone Tire & Rubber Co.; J. D. Anderson, Fisk Rubber Co.; W. H. Allen, B. F. Goodrich Co.; B. Darrow, Goodyear Tire & Rubber Co.; E. O. Fritch, Hood Rubber Co.; C. F. Offensend, Miller Rubber Co.; S. P. Thacher, United States Rubber Co.

Rims—J. H. Wagonhorst, Hayes Wheel Co.; W. B. Minch, Jaxon Steel Products Co.; Ford Lawrence, Kelsey Wheel Co.; John Younger, Standard Parts Co.

Wheels—P. Pleiss, Budd Wheel Co.; C. C. Carlton, Motor Wheel Corp.; O. H. Rohde, Wire Wheel Corp., of America. Related Parts—W. J. Kirkpatrick, A. Schrader's Sons, Inc.

Officers elected at the first meeting of the directors include, S. P. Thacher, president; John Younger, vice-president; C. A. Thompson, secretary; H. W. Kranz, treasurer. In addition to the home office of the corporation in Hartford, Conn., the new association will continue to use the offices occupied by the Tire and Rim Association in the News & Leader building, Cleveland.

TIRE MAKERS FINDING BUS TRADE VALUABLE

Growing Use of Big Vehicles Reflected in Akron Factories

That the benefits of the automobile bus business are at length beginning to be felt in the supply field is evidenced by the effect of developments along that line in the Akron tire markets. Rubber factories are now, after many moons of some indecision, segregating bus tire business from that of trucks and passenger cars. A survey made by the Akron Chamber of Commerce shows that 25,000 buses are now in operation in this Country with the prospect of as many more being put into service in another year. In Akron itself, the Northern Ohio Traction & Light Co., which first put on buses several months ago as feeders to its street car system, now finds it hauls 125,000 passengers daily in the gasoline propelled vehicles. Starting with three buses, the fleet now numbers 12 with two in reserve.

Throughout the United States similar reports are available, the Akron Chamber discovers. And it is pointed out that from the standpoint of the tire business it is most profitable, for bus owners cannot afford to use any but the best of casings and tubes or solid tires.

TIRE READJUSTMENT STILL GOES FORWARD

New Lists Put Business on a Firmer Basis—Recovery of Trade Balance a Time-Consuming Process—Financial Undercurrents an Influence.

Readjustment in the tire business continues steadily forward, although at the moment visible evidences of change are lacking. The new price lists have put the business in general on a firmer basis, and it only remains for time to show how good the ultimate effect will be. In the meantime financial undercurrents, setting pretty definitely into established channels, are beginning to be wholesomely influential.

It is recognized that the almost complete abandonment of the price list by dealers produced a condition that time alone can cure. The consumer must be taught all over again that a price is a price, and not the beginning of an argument; many dealers will have to learn by experience that devious practices simply cut into their own margins and never can be relied upon to produce a compensating volume of additional sales.

A further phase, and a more obvious one, requiring time for settlement, is stock in trade. A year ago there was serious overproduction, due to the natural decline in the number of tires bought by the individual consumer, when he swung over from fabric to cord types. More than that, the rapidly growing vogue of the cord tires, arising from superlative qualities in the products of the leading concerns, lured practically the entire field of manufacturers into the building of cords.

Regardless of ability and reputation, cords had to be built in order to satisfy the demand. This immediately devaluated the fabric tire, however excellent, and so led to all manner of subterfuges to move accumulations of such lines already warehoused or stored in dealers' racks.

Finally, the market for cords was tremendously stimulated by the introduction of the lighter cord types under the brands of the larger and more trustworthy concerns. These, selling at prices competitive with fabrics, immediately built up large volumes of business for their makers, but by the same token, produced two classes of effect that were unwholesome for such concerns as were influenced by them.

One effect was to cause manufacturers already having unwieldy stocks of fabrics, literally to throw them overboard. Thus today, in general terms, the market for fabric tires is still absolutely demoralized.

The other effect was to cause unscrupulous manufacturers to jump into

(Continued on page 419, first column)

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RUBBER IMPORTS IN AUGUST 21,764 TONS

Figure Is Somewhat Lower Than July's But Still Evidence of Overproduction —Exceeds All Estimates—Brazilians Show Recovery in Trade.

Importation of crude rubber into the United States during August leaped above estimates by a full 2,000 tons, according to figures released this week by the Rubber Association of America. It had been predicted that 18,000 tons would be the sum on plantations. The actual figure was 20,462.

Total imports from all sources for the month reached the figure of 21,764. This is approximately 4,000 below July's aggregate but the latter month touched a new high mark, although a bit lower than February and March totals. Total importations for the eight months' period ending August 31 were 177,367 tons or 73,000 in excess of the same part of 1921.

Brazilians led in the way of "recovery," there being 1,175 tons brought into this Country as against 861 in June, and 575 in July. Singapore fell off by 3,000 tons to a figure of 9,258. Ceylonese plantations were a bad second with only 1,969 tons. Gums, waste rubbers and miscellaneous items accounted for 750 tons and Africans made up the remainder with 119, a relatively high figure.

TIRE READJUSTMENT STILL GOES FORWARD

(*Continued from page 418, third column*)

the ring with a flood of cheaper cords. Between these distinctly inferior tires and the lighter cords, which afforded the initial excitation, there is a deal of difference. A certain percentage of the consumer class will have to learn this by experience, however, because it is incapable of learning in any other way. Thus, the reputation of the lighter cord is somewhat jeopardized by the cheaper cord, which may sell under the same name.

Figures made public by the United States Department of Commerce this week show that the tire industry is holding up better than most industries in what some newspapers grandiloquently describe as the "strike paralysis." Despite a falling off between June and July, tire manufacturers consumed more raw material, turned out more finished product and shipped a greater volume of goods in July than they did in the corresponding month last year.

This is a natural consequence of the continued growth in the purchase and use of automobiles, and to a considerable extent expresses the normal expansion of the tire business. So far as the figures reflect internal conditions within the rubber trade itself, on the other hand, they bode ill for those concerns that have not demonstrated their right to live.

Such of the latter class as are finding themselves running behind in sales, as a result of buyers' dissatisfaction, or whose stocks are accumulating, are continuing to resort to all manner of sharp practices. These are hurting the business as a whole, rather less because they are successful in moving into retail hands a certain volume of inferior merchandise, than because of their demoralizing influence on the trade as a whole. In other words, without making much headway themselves, some of the lower-grade concerns are contriving to slow up business for everybody. Time will be the principal healing agent, as it was with the general overstocking of last year.

There is a new angle in this instance, however, which was more largely absent then. Many of the smaller and more nearly local concerns, which are now operating along objectionable lines, are driven almost, if not quite, to desperation by the pinch of poverty. To continue indefinitely loans must either be met or renewed, while in some cases past due obligations have forced local banks into practical control of the situation. This is bringing a new sort of business vision to bear on the situation.

The banking fraternity, though widely scattered, is well organized along lines which definitely converge upward toward an apex in the Federal Reserve Board. Furthermore, the banking business, mistakingly regarded by some business men as existing merely for the purpose of lending money, exercises a powerful constructive influence over the Nation's entire business structure.

The banks, taken collectively, are not only the principal creditors of the rubber business, but are large investors in its securities, especially those of its older and sounder institutions. Therefore, they may be said to have a collateral interest in the industry as a whole, as distinguished from a mere wish to collect whatever monies may be coming to them.

This puts the banker into the class of financial advisors to the rubber industry, as well as all other industries. It bespeaks continued support for those enterprises that are conducted in a thoroughly rational manner, absolutely regardless of whether they are large or small. But by the same token it also promises a withdrawal of support from concerns, be they large or small, whose practices are perceived to be contrary to the general good, particularly if their managements are deemed untrustworthy or if they prove indifferent to suggestions meant for their own good.

Chandler Declares Quarterly Dividend

Chandler Motor Car Co., Cleveland, has declared a quarterly dividend of $1.50. Directors were told earnings were more than equalling dividends and that business was holding up better than expected.

CRUDE PRODUCTION IS STILL STRETCHING

Indications Point to No Solution of Big Problem as Yet—This Year Will See Greater Imports Than Ever — Many Interests Seek Varying Solvents.

Extremes to which many are willing to go to relieve a tense situation are well exemplified in connection with the far-flung movement looking to the relief of the overproduction in and glutting of the crude rubber market. The question of what to do with the surplus rubber seems no nearer solution now than it did two years ago when the agitation for restriction began, according to word from authoritative sources.

Many plans are being boosted. These range from the uneconomic theory of destruction of plantation products to the equally absurd idea, really quite prevalent in some parts of the European trade, that every stockholder should put up a shilling for each share he owns in a rubber plantation, the funds thus accumulated to be used to finance carrying the surplus crude out to sea and sinking it. Perhaps the best schemes evolved so far, it is asserted, are making use of crude rubber in roads and making paper with latex, the rubber milk.

Importations of crude rubber into the United States for the first eight months of this year exceeded 177,000 tons, greater by 3,000 tons than 1921 total receipts of 173,975 tons. It is considered certain that imports this year will be in excess of those of any of the past four years, the highest of which was 1920 with 196,972 tons.

Reviewing importations of plantations by months, as set forth in AUTOMOBILE TOPICS in the past and from other sources, the following tabulation is possible, setting up clearly the situation and probable outcome of this year's trade:

	1922	1921	1920	1919	1918
January	20,744	12,819	17,799	4,906	15,201
February	27,270	7,913	29,681	14,079	9,715
March	27,711	12,241	28,533	23,680	14,999
April	13,910	16,861	21,036	24,678	12,703
May	19,485	9,129	24,443	14,856	13,783
June	14,851	12,361	12,911	13,645	21,787
July	24,563	11,140	14,695	17,645	13,659
August	20,462	13,031	12,930	8,231	8,473
September	.....	14,653	10,954	10,143	4,613
October	.....	21,602	8,759	25,483	7,299
November	.....	18,631	5,695	13,049	3,051
December	.....	25,594	9,416	21,885	7,886
Totals	.....	173,975	196,972	192,270	133,169

While during the past year innumerable plans have been put forward looking towards a solution of the problem, the wide diversity of interests in the Far East rubber industry makes it hard to bring about any unanimity in putting into effect a voluntary program of restricted production. Of a total planted of about 3,320,000 acres, 1,150,000, or 34 per cent, is British controlled. Over 785,000 acres, or 23 per cent, is in the hands of Chinese, Japanese, Malayan and Ceylonese interests and the balance of 40 per cent belongs to American, Dutch, French, Belgian, Swiss and other estates.

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SLASH FREIGHT RATES ON PASSENGER BODIES

Both Finished and Unfinished Products to Be Classed as Horse-Drawn Vehicles—Schedule Effective About November 15, M. A. M. A. Reports.

Changes in freight classification rating which will result in reduced charges on automobile passenger bodies, both finished and unfinished, are reported this week by the Motor and Accessory Manufacturers' Assn. This organization has been working on the proposition for some 18 months with the cooperation of the National Automobile Chamber of Commerce and the Automobile Body Builders' Assn., and these have brought the matter to the present agreeable culmination.

The change in rates comes as an announcement by the Consolidated Freight Classification, that body having the making of just freight rates as its province. The new schedule, which will have effect about November 15, reduces charges by amounts ranging from 20 to 66.7 per cent. The matter is summed up by the M. A. M. A. as "the Classification Committee finally concurred in the opinion that automobile passenger bodies should take the same ratings as apply to horse-drawn vehicles."

It is made plain that the urgings of the three trade associations were in nowise made in the thought of combatting the railroads. It is realized that the carriers have their vital part in the conduct of the automotive business and every effort was made to obtain the fullest cooperation of all concerned. This was accomplished and the new rates are said to be satisfactory to the railroads.

The following tabulation most clearly sets out the changes. The rates apply to vehicle parts, automobile parts, passenger bodies, finished or not finished, S. U. or partially K. D., and with one exception, in L. C. L. ratings, the figures being in percentages:

Classification	Official	Southern	Western
In boxes or crates, packages exceeding 54 inches in height, actual weight, but not less than 1,000 lbs. each, L.C.L.	No change	No change	Reduced 20
Packages exceeding 44 inches but not exceeding 54 inches in height, actual weight, but not less than 1,000 lbs. each, L.C.L.	Reduced 25	Reduced 33⅓	Reduced 33⅓
Packages exceeding 36 inches but not exceeding 44 inches in height, L.C.L.	Reduced 50	Reduced 50	Reduced 50
Packages exceeding 34 inches but not exceeding 36 inches in height, L.C.L.	Reduced 33⅓	Reduced 50	Reduced 50
Packages not exceeding 34 inches in height, L.C.L.	Reduced 50	Reduced 66.7	Reduced 66.7
Loose or in packages, C.L., minimum weight 10,000 lbs., subject to Rule 34	Reduced Estimate 20	Reduced Estimate 20	Reduced Estimate 20

Sweden's Imports Grow

Sweden's importation of "foreign" automobiles grew by more than 1,000 during the first six months of 1922, according to the Department of Commerce. The figure for this year is 3,230. The peasants of the country, heretofore scornful of the gasoline driven vehicle, are beginning to take a national pride in their roads and traffic so that at the recent farmers' festival at Kalmar, where until lately ox-carts were the only means of communication, all but one participant attended in an automobile.

Sherman Leaves Ford Branch

George E. Sherman has resigned as manager of the truck department of the Chicago branch of the Ford Motor Co. He has accepted the position of manager of the Wright-Kenderdine Co., also of Chicago, "North Side" Ford and Lincoln dealers.

DROP FORGING MEN TO CONVENE AT DETROIT

Meeting to Be Concurrent with That of Society for Steel Treating

Concurrently with the convention of the American Society for Steel Treating, the annual meeting of the American Drop Forging Institute will be held in the General Motors building, Detroit, from October 2 to 6, inclusive. While the two gatherings will function separately, an interchange of entertainment and other features will be made and it is hoped by the A. D. F. I. that it will further extend its membership roster, which now includes 80 per cent of those engaged in that line of manufacture.

The program is extensive and promises much of interest to the automobile industry which now consumes approximately 90 per cent of the drop forgings made in America. Following the preliminaries, F. A. Ingalls, vice-president of Ingalls-Shepard Div., Wyman-Gordon Co., will speak on the trade as a whole, to be followed by a discussion of business trends in the industry led by Scovell, Wellington & Co., commissioners.

Martin Parry Body Sales Ahead

Martin Parry Corp. sales are about 75 per cent in excess of last year, it is reported this week. In August the number of bodies sold were about double those disposed of in the same month of 1921, and while dollar volume of sales is smaller, totals swell to a point well ahead of 1921 due to increased quantity business. Prospects for the future are held to be particularly bright.

RAILWAY SHIPMENTS IN AUGUST BREAK RECORD

Michigan Central Reports All Past Figures Were Beaten—Total of 55,045 Carloads May Be Compared With 25,724 For Eight Months' Period.

Car loadings of automobiles for shipment by the Michigan Central Railroad from Detroit plants this year have far exceeded all past records, according to comparative figures formulated by E. D. Bronner, vice-president of the road. A total of 55,045 carloads were shipped in the first eight months of 1922 as against 25,724 in the same period of last year. This is an increase of 14 per cent.

August was the banner month with 8,557 loadings. This tops the five preceding months in which totals ran well over 7,000. Even the shopmen's strike failed to halt the outrush of business. During July the increase in carloadings when compared with July, 1921, was 73.37 per cent, the figures being 7,060 and 4,072, respectively. In August the increase was 105.99 per cent.

The growth began in January when 4,058 cars were loaded and sent away from the factories. The comparative figures by months are as follows:

Month	1921	1922	No. cars increase
Jan.	679	4,058	3,379
Feb.	1,740	5,409	3,669
Mar.	2,948	7,246	4,298
Apr.	4,580	7,761	3,181
May	3,914	7,290	3,376
June	3,637	7,665	4,026
July	4,072	7,060	2,988
Aug.	4,154	8,557	4,403

August also proved to be the high record month for the New York Central Lines, taken as a whole. The total loadings of automobiles for the entire system was 15,867, an increase of 498 cars over the previous maximum of June this year.

WILLYS-OVERLAND RADIO CARAVAN STARTS TRIP

Eight Cars, Equipped with Apparatus, to Make Two-Months' Tour

Eight different models of Willys-Knight and Overland passenger and commercial cars, equipped with radio receiving apparatus, have started on a caravan tour through Illinois and Missouri. The trip, to last two months, is in charge of D. W. Crabbs of the St. Louis Willys-Overland branch and began on August 29.

Demonstration of the models will precede the daily radio concert, which will consist of music, market reports, baseball scores and national news, furnished by the St. Louis wireless station. The tour is a new angle in salesmanship and early reports from the caravan indicate that sales made en route will more than repay the expense and outlay.

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CHEMISTS SHOW WORTH TO MOTOR INDUSTRY

Exhibition in New York Proves Big Success—Public Responds Heartily to Interesting Exhibits and Addresses—Work in Fuel Aids Car Makers.

Displays and features at the Eighth National Exposition of the Chemical Industries, held at Grand Central Palace, New York, the week of September 11, tend to emphasize the important position the chemical engineer holds in the automotive industry. In the department of fuel alone he is declared by his brethren to have been largely responsible for the fact that the Country is not now at the end of its gasoline resources.

In the last six years, the chemists point out, the annual demand for gasoline per automobile registered has increased from 400 to 600 gallons. That this huge increase in consumption has not depleted the stores in the United States is largely due to the researches of chemists who have managed to make gasoline more productive of power and have enabled refineries to obtain more in the distillation processes, it is claimed. According to Dr. H. H. McGee, Government chemist, had it not been for chemical research, gasoline consumption would by now have equaled capacity output and the price would be in excess of 40 cents a gallon.

The effect of these hypothetical conditions might well be imagined by the automobile industry. And the exhibits staged at the Palace amply bear out the chemists' assertions. The extent of their work, it is revealed, is only limited by the needs of commerce as a whole. Machines, extracts, processes and the many other displays show effects on materials as widely divergent as perfume and cast iron or hard rubber steam fittings.

Greater public interest than usual is being manifested this year, the management reports. The programme of speakers, including as it does, the renowned men of the trade, motion pictures shown twice daily and depicting all manner of interesting processes, events, manufacturing stages of development and even chemical subjection of fire, meeting with general public enthusiasm.

Packard Enters New Field

Disclosure has been made during the week of the fact that the Packard Motor Car Co. is now building marine motors. With this added activity the Company is engaged at present in producing power plants for land, water and air travel.

Haynes Prices "55" Sport Series

Prices on the Haynes "55" sport models, told of in these columns a week ago, have been set by the Haynes Automobile Co., Kokomo, Ind., as follows: five-passenger sport touring, $1,895; sport roadster, $1,895; sport coupelet, $2,195; and sport sedan, $2,695. The "55" models without sport equipment will be continued.

Ford "Aids" Supply Stores

General public expectation of a shut down of the Ford factories is causing a wave of prosperity among supply stores. People are buying liberally of what they expect to need, thinking that the factory shipments are about to be cut off to supply dealers. This brings them into stores that carry replacement lines of all kinds of goods and literally is cleaning off the shelves.

OLDS GIVES NINE ACRES FOR LANSING POWER PLANT

Automobile Makers Refuse to Accept Money for Desirable Site.

In order to facilitate the growth of Lansing, Mich., the Olds Motor Works has given the municipality nine acres of ground in the heart of the most desirable section, valued at more than $50,000. The site will be used as a location for a suitable power plant for the growing town.

The plot is located along the Grand river, is opposite the public park and in the midst of the terminus of the Grand Trunk railroad. City officials sought for months to obtain a suitable power plant site and finally came to the conclusion that the land owned by the Olds company was the best. They attempted to purchase it but the Company refused their offers, desiring to give the land.

Earl Gives More with Cabriole

Equipment included in the $1,395 list price of the new Earl Cabriole has been enlarged since its introduction by Earl Motors, Inc., Jackson, Mich. Trunk, bumper and Moto-Meter, originally offered at a small additional amount, are now regularly furnished, as well as the other items which have always been included with this model.

Fairs Boost Dort Closed Cars

An influx of closed-car orders from rural communities has resulted from showing Dort closed models at more than 150 State, county and district fairs, reports the Dort Motor Car Co., Flint, Mich. This is cited as further evidence of the growing popularity of this type in country districts.

Motorization of P. O. Progresses

Motorization of the postal department branches is progressing. Seven cities have equipment of more than 100 trucks with Chicago leading with 421. The others, in order, are: New York, 318; Brooklyn, 125; Boston, 193; Philadelphia, 193; Washington, 111, and St. Louis, 108.

GENERAL TIRE PLANS TO DOUBLE CAPACITY

Schedules Production of 4,500 Tires Daily—More Machinery Will Cause $200,000 Outlay—Some Building Will Complete Present Expansion Program.

General Tire & Rubber Co., one of the largest of the so-called "independent" makers, plans to double its capacity between now and the New Year, bringing production up to 4,500 tires daily. The principal item of expense in this connection is said to be the purchase of about $200,000 worth of machinery. Some building will be done as well, it is explained.

Vice-President William O'Neill attributes the constantly increasing business which has led to the expansion, to the Company's policy of exclusive dealership. He asserts that despite the refusal of the Company to allow its dealers to load up in anticipation of the rise in prices two years ago, representatives still held to their contracts.

The balance sheet, soon to appear, will show an increase in surplus account of more than $600,000 in the nine months passed of this year. Nearly $600,000 in cash and securities may be contrasted with no liabilities, except a few thousand of current accounts, and a capitalization, common and preferred, of $2,500,000.

Mitchell "White Streak" Near Home

Mitchell "White Streak" No. 1, which left Chicago on June 4 on a 10,000-mile sealed-hood endurance run, is expected to complete its journey in Chicago on September 18 at 10:30 in the morning. Seals will be publicly broken by a municipal official in Grant Park opposite the Congress Hotel. Thousands of Mitchell owners and technical experts have been invited to witness the ceremony and examine the car. The car, piloted by Frank Zirbes, has covered 31 states and visited over 1,600 cities and larger towns.

Midwest Has Passenger Car Engines

Three engines for passenger car service are now being manufactured by the Midwest Engine Co., Indianapolis. They are model "411" 3⅝ x 5 with thermo-syphon water circulation; model "412," same size but with water pump; and model "410" 3⅜ x 4½ with thermal circulation.

To Experiment with Rubber Streets

Experiments are about to be started by London engineers in using rubber as a material with which to pave streets. Rubber blocks are to be employed, the base of which is a harder rubber composition. After heavy traffic has done its worst for three months a verdict will be rendered on the success of the undertaking.

Know the market in which you're selling. Table with this week's revisions on pages 451-3.

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NEW ENGLAND TOWNS BID FOR MOTOR TRADE

Velie Dealer Reports Communities Seek to Retain Interests of Tourists—Realize Potential Buying Power of Those Who Come to Visit.

Rural communities throughout New England are coming to realize the immense value both in dollars and cents and in prestige inherent in the hordes of automobile tourists that pass through or linger in their environs. This is the opinion of A. J. Shorey, of the New England Velie Co.

"What can our town do to attract motorists? is the question many live communities are asking," he asserts. "To bring to their towns the trade of as many as possible of the thousands of motoring tourists that thread the highways they are casting about for local interests such as sights of nature, architecture or art, or fine camping places that can be featured by news publicity. They are stirring up the hotel men, the merchants and the local officials to put the town on the map, in such a way as to bring the tourists in.

"This applies particularly to the smaller towns. Keene, N. H., is an interesting illustration. That town features to motorists what is said to be the widest cement paved street in the Country. It measures 140 feet from curb to curb. It is made of seven-inch reinforced concrete and the slabs are laid directly on the soil. The city considers the street a paying investment. Keene has a population of 11,500 persons and 5,000 elm trees."

Morrow Takes National in New York

Morrow Motors Corp., New York City, Earl and Templar distributer, has taken over National distribution for southern New York, northern New Jersey, southeastern Connecticut and Long Island. No change will be made in the lines already handled since all three fall in distinct price classes. The National line has been represented for a long time by the Poertner Motor Car Co., which will now devote its entire attention to Durant products.

New York Dealers in New Home

New quarters have been found for the Automobile Merchants' Association of New York. Association rooms and offices of the organization have been established during the week in the Hotel Embassy, 2030 Broadway at Seventieth street.

Wichita Truck Consolidates Offices

Work of dismantling the Oklahoma City assembling plant of the Wichita Truck Co. was begun this week. Within a fortnight the old Midland Motor Co. plant, where Wichita trucks have been assembled, will be vacant. The Oklahoma City organization will be consolidated with the staff at the Company's home plant, Wichita Falls, Tex. The factory sales branch at the Oklahoma metropolis will be continued temporarily, however.

Boston S. A. E. to Meet Sept. 22

Characteristics of present-day automobile electric generators and starting motors are to be described at the New England section meeting of the Society of Automotive Engineers at the Engineers Club, Boston, September 22. L. B. Ehrlich, chief engineer of Gray & Davis, will go over methods of voltage and current regulation, types of winding, and direct attention to care and adjustment of electrical equipment in service.

OHIOANS "ALL SET" FOR SIXTH ANNUAL CONVENTION

Choose December Dates As Most Convenient for Dealers and Distributers

Final arrangements for the sixth annual convention of the Ohio Automotive Trade Assn. have been made. To be held in Toledo on December 6, 7 and 8, the large assembly room of the LaSalle-Koch Co. has been chosen as a meeting place and the Hotel Secor as headquarters.

In lieu of the automotive equipment exhibit heretofore shown, educational displays will be set up in the stores of the local jobbers. A special committee will establish uniformity in what is shown and prevent duplication. Following the convention questionnaires will be sent to all members for the purpose of drawing out opinion on subjects covered during the sessions. E. J. Shover, secretary-manager of the Toledo Automotive Trades Assn., will be active in convention management.

Reo "Family" to Hold Annual Fair

Reo Motor Car Co. will hold its fifth annual fair at Lansing on the three days beginning September 26. Only products raised and grown by the Reo "family" will be exhibited. College officials will act as judges.

Would Organize Motor Club

Initial steps toward organizing a North Carolina Motor Club were taken at a meeting held the first of the month in Greensboro, N. C. Special committees to work in the interest of such a movement were appointed.

North Carolina Awards Road Contracts

Contracts have been awarded by the North Carolina State Highway Commission for 190 miles of additional highway and a large amount of bridge work. Total cost of the new construction is $4,879,035.40. Letting of these contracts close the 1922 program, total for the year amounting to more than 1,100 miles at a cost of $22,000,000.

HULETT STAGES HIS SECOND "DROP" SALE

Chandler-Cleveland Distributer in New York Marks Off $25 a Day on Used-Car Stocks—Sale Lasts Ten Days—Most Disposals Come Early.

Marking $25 a day off the price of used cars was found to be such a good method of moving second-hand cars last Fall that the Hulett Motor Car Co., Inc., New York, Chandler-Cleveland distributer, began its second annual "Drop-Drop" sale on Monday, September 11. For 10 days, beginning on that date, $100,000 worth of "dependable used motor cars" are offered for sale, the price plainly marked and marked down $25 lower every 24 hours.

To begin with, every used car included in the sale was marked down from prices usually asked on cars of similar quality. Some were started in the sale as low as $300. Then at nine o'clock every succeeding morning, the prices are changed. A $300 car, at this rate, if still unsold on the tenth day can be bought for the sum of $50.

Every car so offered has been reconditioned by the Hulett company. All Chandlers and Clevelands in the sale are "overhauled, repainted and guaranteed for ninety days." No trades are accepted during the "Drop-Drop" sale, but terms are given where desired. During these banner ten days the used-car showrooms are kept open from 8:30 in the morning until 9 o'clock at night.

It has been the Hulett company's experience that the chances of the dealer getting the best deal in the "gamble" that the cars will go at the higher prices of the first few days are exceptionally good. Last November when the first "Drop-Drop" sale was staged, two-thirds of the cars were sold in the first three days.

This year has been a repetition of that experience, with the biggest volume of sales recorded during the opening days. Unique though this method is, it has proved that it accomplishes its objective —namely, the rapid moving of used-car stocks.

Sales Good at Indianapolis Show

Large crowds and "heavy" sales were in order at the automobile show held in connection with the state fair at Indianapolis last week. Most of the buying was by out-of-town people.

Glidden Had Good Second Quarter

Glidden Co. reports net income for six months ended June 30, 1922, before depreciation but after interest, as $447,638. Practically the entire amount was earned in the second quarter.

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WESTERN SALES WAIT ON CATTLE AND CROP

Business Continues on a Satisfactory Level—Some Admit New Sales Are Hard to Make—Fall and Spring Seen as Probable Seasons of Big Trade.

Automobile business in the Rocky Mountain States awaits the outcome of the crop harvest and cattle sales. But while technically waiting, trade continues to be satisfactory and retail dealers and distributers in that section report to AUTOMOBILE TOPICS this week that sales continue well over those of this time last year.

T. W. & L. O. Naylor Co., Studebaker distributer at Salt Lake City, advises that it has enjoyed a very prosperous year to date, sales being far in excess of last year. Prospects for future business are held to be bright.

"It is quite true that new business requires a greater effort to find than formerly," T. W. Naylor, president, declares. "Realizing this we are making greater efforts to find it."

At Lander, Wyo., the Lander Auto Co., Dodge Brothers and Buick dealers, find business on a par with 1921's turnover but that the low prices of cattle and farm products in that section have had a bear effect on sales. Better conditions are seen for the Spring than ever before.

At Boise, Idaho, the Bannock Motor Sales Co. are not expecting much business for the balance of 1922 since local crop market conditions are not considered favorable. Sales at this time are but 60 per cent of last season.

S. B. I. Motor Sales Co., Hupmobile distributer at Denver, anticipates a good Fall trade though admitting that the bearing out of that prognostication depends on the upturn of general business and crop conditions. Present rate of sales is about double that of last year and stocks of both new and used cars are normal.

Shows Indianapolis' Truck Use

How trucks are used in Indianapolis has been compiled by the Indiana Transfer & Warehousemen's Assn. Leading products hauled by the trucks and the number of trucks in each case, are: freight transfer, baggage and express, 550 trucks; milk, groceries, laundries, merchandise, etc., 500; coal and ice, 250; sand, gravel and building material, 250; manufacturing and building industry, 175; transfer of household goods, 112; cartage, delivery and distribution of vegetables and fruit products, 85.

Legislation Planned in California

Gasoline tax of two cents a gallon is among changes which the legislature of California will be asked to write into the laws of the State next year. Among others affecting the motorist is a more rigid policing of the State highways, a weight limit of 22,000 pounds for loaded trucks, and a graduated weight tax on all kinds of motor vehicles in addition to the present license fee based on horsepower capacity. This last tax would range, it is reported, from about $1 a year on small makes of automobiles to $100 or more on heavy trucks with solid tires.

Bemb-Robinson Concentrates on Retail

Bemb-Robinson Co., Detroit, long Hudson distributer, is now selling at retail exclusively. State distribution is directed by the Hudson Motor Car Company's Michigan wholesale branch. This change in the local situation, however, does not imply any general change in the Hudson present policy of distribution.

CALIFORNIA AUGUST SALES NEARLY UP TO JUNE HIGH

Mark of 13,893 Exceeds July's Figures by 882 Automobiles

With sales of 13,893 passenger cars in August, California nearly duplicated its record month, June, 1922, when 14,180 was the total rolled up in the 30 days. The August volume exceeded that of July by 882, indicating that the September final results will establish even higher points. Aggregate sales last month were 46 per cent higher than in the same thirty-one days of 1921, the exact increase being 4,398.

Southern California retained its lead with 7,515 passenger cars sold as compared with 6,378 in the northern section. Equally indicative as these figures, recorded by *Motor Registration News*, is the preeminence of Los Angeles and San Francisco counties in the matter of gross sales. Los Angeles sold 5,457 cars thus gaining 42 per cent over its record for August, 1921. San Francisco boosted its business a little more than 50 per cent with a total of 850 sales.

New Home for Wills Sainte Claire

Plans for the erection of a spacious new salesroom and service station in Philadelphia have been completed by the Wills Sainte Claire Co. of Pennsylvania. Showrooms and sales department of the Company will be located at 207-9 North Broad street. This building will be 40 x 100 feet. The service building, located at Thirty-first and Spring Garden streets, will provide 24,000 square feet on the ground floor with provisions for two additional floors. The service station is expected to be ready for occupancy by November 1, and the salesroom by February 1.

Akron to Hold Open Air Show

Akron automobile dealers, through the Motor Vehicle Assn., will stage an open-air show the week of October 7. The exhibit will be confined to closed cars.

CLOSED CAR NOW BULK OF CADILLAC OUTPUT

Production of Enclosed Type Reaches 54 Per Cent of Total—Dealers to Hold Week of Salons—Victoria and Coupe to Be Featured Throughout Nation.

More than one-half the total output of the Cadillac Motor Car Co. is now closed models. This is revealed in production figures released this week by the Company, which finds that in the past eight years the ratio of enclosed types to total output has increased steadily from eight to 54 per cent. The growth has been steady, averaging nearly eight per cent each year. The greatest gain was made between June, 1916, and June, 1917, when the ratio rose to 14 per cent.

Beginning Sunday, September 17, Cadillac dealers and distributers throughout the Country will observe a "National Enclosed Car" week. The New Cadillac victoria and five-passenger coupe will be used as the principal features of novelty at the various exhibition salons.

"In advancing the idea of the national enclosed car week," H. H. Rice, president of the Company, explains, "we indicate our faith in the future which lies ahead of enclosed car sales. Especially at this time of year, with the approach of Winter, and with about one month of the touring season left, the prospective purchaser is naturally inclined to favor an all-season model."

It is pointed out that changes have been made in the victoria, giving an impression of greater length and less height. The body is considerably enlarged, providing more room for the occupants. All seats have been made wider and deeper, and the driver's seat is now so placed as to be directly behind the steering wheel. The victoria auxiliary folding seat, which is beside the driver's seat, is so arranged that it gives more room.

Interior appointments have been enhanced in the use of new pull-to handles on the doors. The five-passenger coupe also has been considerably improved by providing more roominess. One of the outstanding refinements is the use of the folding seat beside the driver's seat. This new arrangement replaces a tilting seat formerly used in the five-passenger coupe model.

More Than One Car for Every Family

Ponca City, Okla., claims its leads all cities in the ratio of cars to population, says the *Oklahoman*. Its 2,500 cars average more than one car for each family.

Charlotte to Stage Show

Although no specific date has been set for the Carolina automobile show, the Charlotte Automotive Trade Association has definitely decided that such a show will be held in Charlotte, N. C., some time during the month of February.

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The New Cadillac Victoria

The new Cadillac Victoria, we believe, embodies refinements which will induce even wider and warmer favor for this popular Cadillac model.

A well-considered change in dimensions causes the car to appear lower and longer and greatly accentuates the atmosphere of distinction always associated with the Victoria.

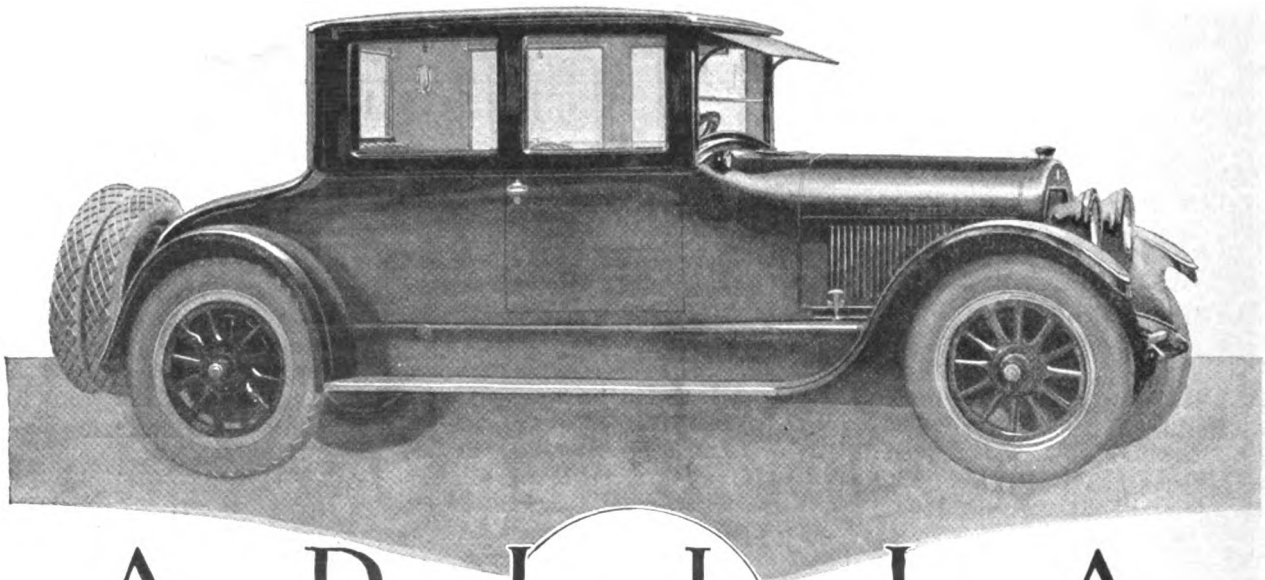
The enlarged interior, with the driver's seat placed directly behind the steering wheel, and all seats lengthened, provides increased spaciousness and comfort for four passengers.

The new model Victoria shares the advanced engineering and careful craftsmanship of Type 61, admittedly the greatest Cadillac ever produced.

Its owner will discover a degree of dependability and riding smoothness that is generally considered unequalled in current automobile manufacture.

Cadillac has developed a finer Victoria, one more artistic, more roomy and more comfortable, which we submit to prospective buyers with full confidence that it will win their delighted approval.

CADILLAC MOTOR CAR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation



C A D I L L A C

Standard of the World

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THE TRADE AUTHORITY

Established 1900

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"Creators of Wealth"

Few shared the visions of the founders of this Country's peerless railroad systems, for deficient as they are and downtrodden as they may be, the railroads of the United States are beyond compare. Few, today, have the power to imagine where the Nation would be were it denied the benefits of abundant transportation.

But automobiles develop the Country intensively, where the railroads abridge its distances. Thus the motor car is productive of economic values in much the same way that the railroads are the foundation of commercial empires. The analogy is perfect, and in giving it terse expression, in his address at Buffalo this week, Alfred Reeves has added an impressive topic to the talking points of this great industry.

More and Better

That people will go on buying automobiles, and ever more automobiles, there is no longer any question. But that they will continue to demand not only more cars but better cars is a sober thought that should be kept ever fresh in mind.

Remember, a man's first automobile generally comes hard. It may go hard, too—in the sense of performing reluctantly those tasks which it should perform lightly—but it is his "car," whether it have two speeds or three; whether it be spic and span or rusted through in spots, sagging at one corner and blousy. He knows its whims. He is used to the backlash in the steering gear; he can shift gears in the dark; he is not afraid to crank it when the battery goes dead. It is a good old boat, but how he longs for a better one!

The joy of buying "another car" must be experienced to be appreciated. It is one of life's greatest sensations; something to be anticipated for years, approached with caution, almost with reverence; fervidly appreciated.

What, then, if the "new" car is not as good as the old? What if the brakes slip, the clutch groans, the gears rage in their sounding box, the steering gear is stiff, the engine balky, and the body chatters and squeaks like a bird store? What will the buyer do then, poor thing?

You, who build them, had better build them better. Else the revulsion of feeling will overwhelm you.

But you, who sell them, had better make the best of your bargain and keep them sold, cost you what it may. It may not be "up to you" to remodel the merchandise you have merely contracted to distribute. But remember this—you are the man whose judgment the buyer trusts. Doesn't that mean something pertinent and personal to you?

Buying Right

Much importance is attached to the idea of buying right, as the phrase is. To the mind of the astute purchasing agent it means the securing of concessions beyond the reach of competitors. To the mind of the executive it may mean speculating in materials. To the mind of the consumer, too often, it means paying less than he thinks a thing is worth, which is dishonestly in embryo.

Buying right, really should mean securing what you want when you want it, and paying no more than is necessary to satisfy that particular need. Right buying may often mean the anticipation of future needs, the judicious application of foresight, the exercise of wit, shrewdness and intelligence of a high order. But that kind of buying that leads to unwanted accumulations, ill-assorted possessions or useless extravagances, had better not be encouraged. Sooner or later it will lead to harm.

"Old Man Overhead"

Reformation of business practices is going a great deal further than it sometimes has in former periods of business contrition. Manufacturers—in not one but many lines—have put their shops in order, rearranged systems of various kinds, keyed up their productive organizations and generally placed themselves in line for more economic operation than they have ever known before. But "Old Man Overhead," still wags his sage old head and believes himself secure as heretofore.

In this he is mistaken, it appears. In more than one great organization, where all other costs have been watched with sedulous care, sundry official expenditures have run unchecked for years, research has been carried to the remote realms of generality, system has been piled on system, until the business was literally all choked up with etiquette. Now, with a clear-eyed gaze toward the future, and ambitions more definite than ever before, some of the wiser chieftains of large undertakings are simplifying things and removing the debris of past extravagances. Many side shows, conducted in the interest of science and invention, are being closed, and not a few cost items entirely wiped out. Sometimes it costs a sigh to do it, but better business will result.

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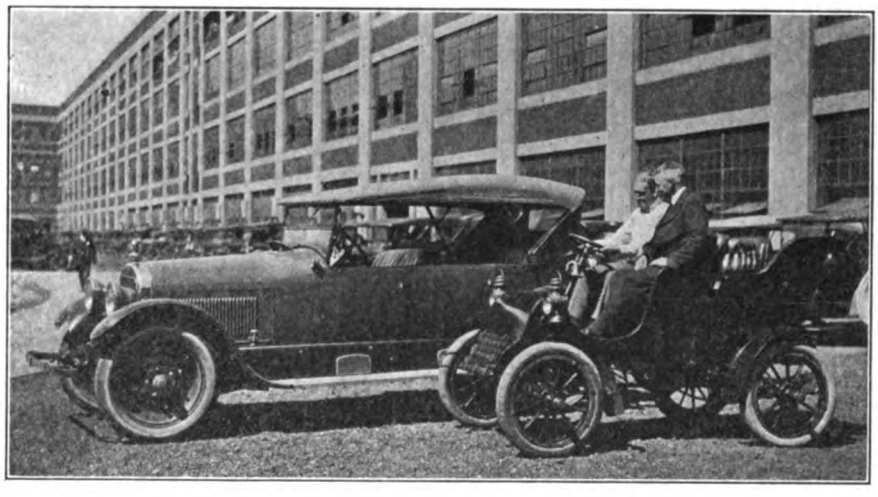
"Get-togethers" in Many Branches of Industry

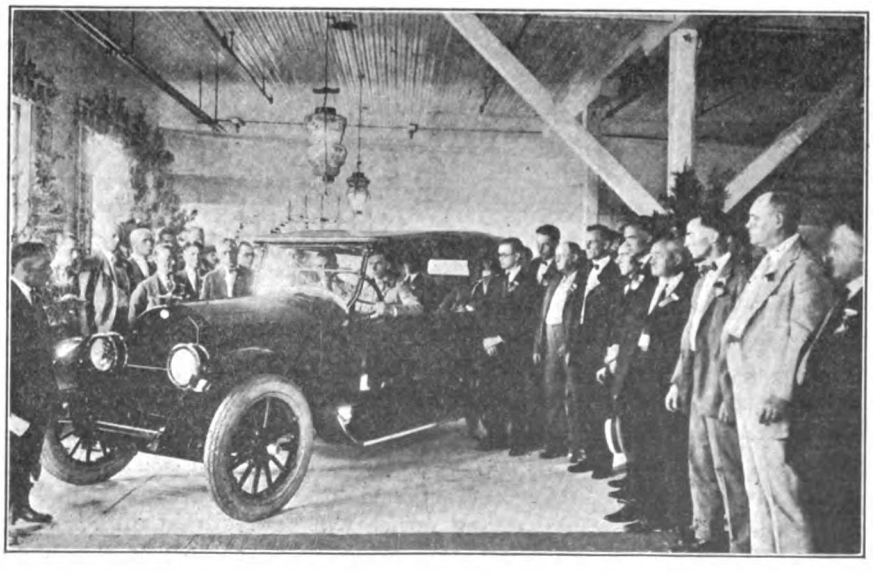
Booster's Picnic; Old and New Cadillacs Meet; Dealers Convene



ACCORDING to the circular issued by the Automobile Dealers' Association, "everybody attends" the annual Booster's outing. This picnic, the twelfth to be staged, was held on September 7 at Wag's Farm at Smithtown, Long Island. In addition to the breakfast and clambake, contests and games were held which lasted all day

CHUG-CHUGGING along at the rate of 30 miles an hour, President H. H. Rice of the Cadillac Motor Car Co. recently tested the old "one-lunger." The company purchased the car in commemoration of its 20th year of producing Cadillacs and its 27th year as an organization. With Rice is Frank Johnson, designer of the first Cadillac built





IN honor of the unveiling of a new light aluminum six, the Anderson Motor Car Co. held a "convention" of its dealers at the factory, Rock Hill, S. C. Although not all the dealers were present, the entire output of the factory for the next year was contracted for. In addition to the celebration of the disclosure of the new model, the meeting was held also as a means of announcing the newly elected officers

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Making the Headlight Laws National

Conference of Commissioners of Ten Eastern States Adopt Resolution—Raise Standards for Tests

WHAT is considered in many quarters as one of the first real steps in the highroad that will eventually lead to nationalization of traffic regulations has been taken by the Conference of Motor Vehicle Administrators. This body, composed of the automobile commissioners of ten eastern States, meeting in Baltimore in July, adopted a resolution calling for a uniform test for all headlighting devices.

Since the use of automobiles has become so national a habit and means of transportation, since traffic jams have become more and more troublous, since the highways and byways of the Land became the breeding places of more and yet more automobiles, the hue and cry for traffic rules, regulations and laws applicable throughout the Nation has become more and more insistent. The matter of headlights, their proper use and proper construction, has been one of the sore spots in the breast of the average motorist. Uncertain from State to State, county to county, city to city, whether his headlights are permissible, certain that he cannot escape undetected if they are wrongly adjusted, yet equally certain that death awaits without proper lighting, he has been in a quandary.

Manufacturers, too, have felt the uncertainty of style. What might have been made for a ready market in one locality loses to a competitor when offered in another. Just what will be the final effect of the adopted regulations in these ten States now engaged in preparing for the test is uncertain. It is safe to state, however, that perhaps some changes will have to be brought about by some makers in their products, while others will find themselves already manufacturing a lens agreeable to the law.

The States involved in the plan are New Jersey, New York, Pennsylvania, Connecticut, Maryland, Massachusetts, Rhode Island, Maine, New Hampshire and Vermont. The resolution was presented by the State of New York on April 6, reported favorably by the executive committee and presented to the Conference on April 21 and finally adopted in July. Under the powers conferred on the several commissioners making up the Conference, it is permissible for each to promulgate rules whereby they may interpret the laws of the State they serve. These resolutions are, therefore, in a manner, extra-legal in that they are these rules adopted in this case by all the commissioners as most clearly and satisfactorily interpreting the laws.

The outstanding features of the resolutions are as follows: The glare limit is made the same in all the States; more candle-power is required in the beam; the beam has been spread laterally; maximum and minimum horizontal, "straight-ahead" and side light is fixed. In regard to the candlepower, it has been raised to 7,200. Formerly the candlepower was set at 1,200 and later was raised to 4,800. The new decision, therefore, brings it up 2,400 units, or in other words to six times the original value.

The horizontal and straight-ahead intensity of the beam has been enlarged thereby considerably. In plain language, the road ahead of the car will be illuminated more clearly and from side to side more completely when the regulations are enforced. More light will also be thrown sidewise, but in no case has any easement been given the "overhead" or glare-producing element.

Massachusetts and Connecticut have already begun the testing of lenses, though nothing has been announced of the results. It is understood, however, that the list of approved lenses is being revised.

The resolution follows closely the report on headlights of the Illuminating Engineering Society of New York, which were adopted in 1919 and 1920 by Connecticut, Maryland and other States. New York State also has used a revised form of these recommendations of the Society. These older rules are and were intended as an interpretation of State laws, the statutes usually having been drawn in very general terms and hardly capable of strict interpretation, it is held.

Automobile manufacturers and lens makers some years ago had an opportunity to standardize their products without the necessity of resorting to laws. The Society of Automotive Engineers had begun an agitation for standardization of headlights, but met with little encouragement apparently, for the matter metaphorically dropped by the wayside until it was taken up with the I. E. S. It did serve, however, as the genesis of the later recommendations of the last named body.

It is required, by the Conference resolution, that no headlighting device will be approved until submitted to a laboratory test made by a "competent and unbiased authority satisfactory to the State authority." Such a body, it is claimed, is the I. E. S., which has already done so

MORE LIGHT—MORE SAFETY

IN adopting a resolution embodying regulatory measures intended to make building and use of headlights standard throughout the ten eastern States they serve, the commissioners forming the Conference of Motor Vehicle Administrators are answering in part the insistent demand of motorists themselves for nationalization of traffic laws. While there can be found some who deprecate efforts looking towards such standards, it is undeniable that the man who drives his automobile through a State, county or city not his native heath, will find much to be thankful for if he knows his equipment complies with local ordinances.

The first specifications for tests of headlighting devices for approval by State authorities are said to have been put forth by the Illuminating Engineering Society as early as 1918. They were admittedly of a very lenient and tentative character. This was but natural since data on the subject was then in embryonic stages. A further revision of these primal suggestions was made in 1919 and 1920 and now comes the decision of men who should know whereof they speak.

AUTOMOBILE TOPICS presents herewith the resolutions in full, believing that in so doing it is of service not only to those it most directly affects, but to the motoring public at large as well. The divisions of the resolution are self-explanatory and readily understandable

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much towards establishment of uniform lighting laws. The following is the resolution in full:

RESOLVED: That the Conference of Motor Vehicle Administrators accept and approve the following specifications for testing and approving of headlight devices:

DEFINITION

By headlight device is meant either the integral and complete headlamp or a device intended to modify in a suitable manner the beam of the ordinary type of headlighting equipment.

REQUIREMENTS FOR APPROVAL

No headlighting device will be approved until it has been submitted to a laboratory test as prescribed in Section 1 through which it is shown to be capable of conforming to the requirements as to production and distribution of illumination. Furthermore it must satisfy the additional conditions which are laid down in Section 11 entitled "Approval." The laboratory test will be made by a competent and unbiased testing authority satisfactory to the State Authority.

1. LABORATORY TESTS

(A) Tests of Devices Used in Pairs

Samples for Test

The samples submitted to the testing authority shall be representative of the device as manufactured and as marketed. They shall be accompanied by printed instructions for their use as issued by the manufacturer of the device. The samples submitted shall include as much of the accessory equipment peculiar to the device (except batteries) as is necessary to operate the device in its normal manner. In the case of front glasses the samples shall be one pair each of 8 5/32- (or Ford size) 8½-, 9-, and 9½ inch in diameter when practicable.

Reflectors and Incandescent Lamps

In the case of devices to be used in connection with standard parabolic reflectors, the reflectors used in making the laboratory tests shall be of standard high grade manufacture of 1.25 inch focal length with clean and highly polished surfaces, and as nearly truly paraboloidal in form as practicable, and as approved for this purpose by the National Bureau of Standards.

The incandescent lamps used in connection with the laboratory test shall be of standard manufacture and as approved for this purpose by the National Bureau of Standards. In the case of devices involving the use of special incandescent lamps, such lamps together with any necessary accessories shall be submitted.

Marks of Identification

Each device submitted must bear a distinctive designation prominently and permanently indicating the name and type of the device. Special incandescent lamps submitted in connection with the devices shall bear the manufacturer's normal, clear bulb rating.

Adjustment of Devices

The testing authority shall adjust the device in accordance with the printed instructions issued by the manufacturer which instructions must be adequate for practical purposes. An exact description of the adjustment made for test shall be given in the report.

Focal Adjustments of Incandescent Lamps

The following designations of the focal adjustments of the incandescent lamp in the parabolic reflector are adopted:

Principal Focus. The beam, with bare reflector or plain front glass, is nearly parallel and of the smallest possible diameter.

Rear Focus. The beam, with bare reflector or plain front glass, diverges as much as possible without having a dark center.

Front Focus. The beam, with bare reflector or plain front glass, converges and crosses near the lamp and then diverges as much as possible without having a dark center.

Special Focus. A special focal adjustment is allowed only when it can be clearly defined and described.

Photometric Tests

The tests shall be as follows:

Test I

A pair of testing reflectors, mounted similarly to the headlamps on a car, shall be set up in a dark room at a distance of not less than 60 feet nor more than 100 feet from a vertical white screen. If a testing distance of 100 feet is taken, the reflectors shall be set 28 inches apart from center to center, and if a shorter testing distance is taken, the distance between reflectors shall be proportionately reduced. The axes of the lamps shall be parallel and horizontal, or tilted in a vertical plane in accordance with manufacturer's adjustment. The intensity of the combined light shall then be measured with each pair of samples in turn, with the reflectors fitted with a pair of incandescent lamps of the gas-filled type 6-8 volts, 21 scp. rating. The lamps shall be such as will give their rated candlepower when operated at their rated efficiency. They shall be operated at their rated candlepower.

Measurements shall be made at the following points at the surface of the screen:

A. In the median vertical plane parallel to the lamp axes, on a level with the lamps.

B. In the median plane one degree of arc below the level of the lamps.

C. In the median plane one degree of arc above the level of the lamps.

D. Four degrees of arc to the left of the median plane and one degree of arc above the level of the lamps.

PL and PR. One and one-half degrees of arc below the level of the lamps and three degrees of arc to the left and to the right respectively of the median plane.

AL and QR. Three degrees of arc below the level of the lamps and six degrees of arc to the left and to the right respectively of the median plane.

All pairs of samples tested under the conditions prescribed above shall conform to the following specifications for observed apparent candlepower:

Point A, not less than 1,800 candlepower nor more than 6,000 candlepower.

Point B, not less than 7,200 candlepower, and there shall not be less than 7,200 candlepower at any point on the horizontal line through B, one degree to the left and to the right of B.

Point C, not over 2,400 candlepower, and not less than 800 candlepower.

Point D, not over 800 candlepower.

Points PL and PR, at each of these points and at every point on the line between them, not less than 5,000 candlepower.

Points QL and QR, at each of these points and at every point on the line between them, not less than 2,000 candlepower.

Note: The above testing directions are drawn specifically to cover the case of devices accessory to parabolic reflectors of 1¼ inch focal length. In the case of other classes of devices where these directions evidently cannot be applied literally, their intent must be adhered to and the testing positions and candlepower limitations shall govern in all cases. Acetylene headlamps as at present constructed do not give a beam distribution of the character covered in these rules.

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Test II

A single pair of samples taken as an average representative of the device as manufactured, shall be submitted to a complete test with the same testing equipment as specified for Test I. This test shall show the light distribution characteristics by actual measurements as are made in accordance with the best laboratory practice.

Distribution of Samples

One pair of the samples submitted shall be retained at the testing laboratory for the purpose of future reference and as samples of construction.

(B) Tests of Devices Used Singly

Motorcycle headlamps are used singly and not in pairs, and have commonly a reflector of smaller diameter and shorter focal length. Hence devices for use in connection with them are not included in the same classification as those for other motor vehicles. For the laboratory tests of such devices two samples of representative sizes shall be submitted. They shall be tested with representative motorcycle headlamp reflectors. The numerical limitations of apparent candlepower for Test I with one lamp only shall be as follows:

Point A, not less than 1,800 candlepower.

Point B, not less than 3,600 candlepower, and there shall not be less than 3,600 candlepower at any point on the horizontal line through B, one degree to the left and to the right of B.

Point C, not more than 2,400 candlepower.

Point D, not more than 800 candlepower.

Points PL and PR, at each of these points and at every point on the line between them, not less than 2,500 candlepower.

Points QL and QR, at each of these points and at every point on the line between them, not less than 1,000 candlepower.

Test 2 shall be conducted with one lamp and not with two.

Other deviations from the details of procedure are obviously made necessary because of the fact that single devices instead of pairs are subjects of test.

Reports

The report of the test shall be rendered in duplicate to the State Authority and shall be signed or initialed not only by the expert making the test, but also by an executive officer of the institution which is making the test.

APPROVAL

No device shall be approved which does not pass the laboratory tests.

No device involving the use of a tilting reflector shall be approved unless it conforms with these specifications in its "tilted up" position and has an extreme tilting range of no more than three degrees.

The State Authority reserves the right to refuse approval of any device which in his opinion is liable for any reason to prove either unsafe or unsatisfactory in practice.

Among the defects which may cause rejection under the above rule are the following:

Unnecessary loss of light due to absorption or diffusion.

Abnormal or unduly complicated adjustment.

Unstable or bad mechanical construction.

Unduly bright or dark areas or excessive contrast in the illuminated field.

Irregular or badly defined cut-off line.

Alterations in Design

In the case that the design or construction of any device is changed in any way which alters the characteristics by which it is ordinarily identified, a new name or type designation must be given and the device may then be submitted for approval on the same basis as a new device.

An alteration in the design of an approved device which does not affect its distinctive appearance, but which is made for the purpose of improving its performance, or to correct for alterations made in the standards of construction of incandescent lamps or reflectors, may be allowed under the original approval of such device, provided that due notice of such alteration is given to the State Authority and verification tests satisfactory to the State Authority are made, which show that the device as altered complies in every way with these specifications.

Verification Tests

As a safeguard against deviations of the design and construction of an approved device from that on which approval was originally based, the State Authority reserves the right to submit from time to time samples of approved devices to the testing authority for a verification of their performance, or to require the submission at suitable intervals of certified copies of reports of such verification tests satisfactory to the State Authority made by a person or an organization fulfilling the requirements of a testing authority. In case copies of verification tests are not submitted as required, or in case the verification test shows failure of any device to conform to the specifications, the State Authority may suspend or withdraw approval of such device.

These regulations, it will be seen, follow exactly, in word as well as in thought and sequence of thought, the suggestions of the I. E. S. It is understood that the rules governing performance on the road will follow equally closely the I. E. S. conclusions though naturally somewhat broadened so as to take in the specifications as to side-lighting.

The I. E. S. suggestions were as follows:

1. Any pair of headlamps under the conditions of use shall produce a light which, when measured on a level surface on which the vehicle stands at a distance of 200 ft. directly in front of the car and at some point between the said level surface and a point on a level with the centers of the lamps, is not less than 4,800 apparent candlepower.

2. Any pair of headlamps under the conditions of use shall produce a light which, when measured at a distance of 100 ft. directly in front of the car, and at a height of 60 in. above the level surface on which the vehicle stands, does not exceed 2,400 apparent candlepower, nor shall this value be exceeded at a greater height than 60 in.

3. Any pair of headlamps under the conditions of use shall produce a light which, when measured at a distance of 100 ft. ahead of the car, and 7 ft. or more to the left of the axis of the same, and at a height 60 in. or more above the level surface, on which the vehicle stands, does not exceed 800 apparent candlepower.

4. Any pair of headlamps under the conditions of use shall produce a light which, when measured on a level surface on which the vehicle stands at a distance of 100 ft. ahead of the car and at some point between the said level surface and a point on a level with the centers of the lamps and 7 ft. to the right of the axis of the car is not less than 1,200 apparent candlepower.

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West Faces Problem in Road Construction

Large Area of Publicly Owned Lands Proves a Handicap

By G. W. APPERSON, Field Engineer, The Standard Oil Company of California

(From an address before the convention, American Association of Engineers)

IT has been recently stated by Highways Information Service, New York, that there is now available in the United States $1,360,000,000 for street and highway construction. This sum, large as it is, represents an increase over the highway revenues of 1914 of only 150 per cent, while highway traffic has increased about 450 per cent.

There are now about 2,500,000 miles of highways in the United States, of which only an approximate 100,000 miles are improved modern hard surfaced pavements. You will readily grasp the immensity of the task of improving our highways. Particularly in our large western states is the job a difficult one because of the large area of publicly owned lands and the sparse population in many localities.

The Standard Oil Companies, realizing certain distinct advantages in the asphalt type of construction, have made a comprehensive study of pavement types and design, and our study has brought to us the conviction that the asphaltic concrete base and surface pavement meets, in every sense, the requirements of the modern roadway surface.

You are more or less familiar with asphaltic concrete base and surface pavements. You perhaps know the type as "black base." The base is a coarse graded aggregate, asphaltic concrete, composed of a mechanical mixture of asphalt with broken stone, or gravel, and sand. It is generally laid to a thickness of from two and one-half inches to four inches, dependent upon subgrade conditions and weight and volume of traffic.

Upon this base may be placed a surface, of asphaltic concrete, fine or coarse aggregate type. Fine aggregate surface is best exemplified by Topeka—the coarse by Warranite. The surface is laid from one and one-half to two inches in thickness.

This type of construction should not be confused with asphalt macadam, which is constructed by the penetration method, spraying hot asphalt into rock that has been placed upon the subgrade of a road and compressed with a roller.

In the construction of asphaltic concrete pavements the rock, or gravel, and sand and asphalt are heated, combined in definite proportions and mixed at a central plant—one plant only being required for both base and surface.

THE load carrying capacity of any type or design of highway must, of necessity, be influenced by the support afforded the pavement from below. Such support is furnished by that portion of the earth directly below the pavement, known as the subgrade. With very few exceptions, any well compacted soil will, of itself, support the heaviest traffic if its moisture content is properly controlled and if it is protected by a structure which prevents the displacement of surface particles. The protective structure termed "the pavement" will then need to be only of sufficient thickness to afford such protection, and, at the same time, itself withstand the various destructive agencies of traffic. For a given traffic this thickness will depend largely upon the type of pavement used.

It is evident that in many cases it will cost far more to increase the thickness of a pavement to such an extent that it will distribute the load sufficiently to enable a poor subgrade to support it, than it would cost to change natural subgrade conditions so as to create a high supporting value for a relatively thin pavement.

A comprehensive census recently compiled by the Standard Oil Company shows that to April the first, of this year, there had been laid or contracted for in the five western states of Washington, Oregon, California, Nevada and Arizona, 101,550,140 square feet of asphaltic concrete base and surface pavement—this area being the equivalent of 1,070 miles of 18-foot roadway.

Of this total, 86,247,613 square feet or 84.9 per cent, is five inches or under in thickness, demonstrating in no uncertain terms that the prevailing tendency is to construct this type to a total thickness of five inches or less. Pavements of this type were constructed five inches and under in thickness from fifteen to twenty years ago, and the fact that these pavements are giving satisfactory service under present traffic conditions lends us assurance that the thickness will be adequate for traffic needs of the future.

This belief is strengthened by a study of the problem from an engineering standpoint. As previously stated, any well compacted subgrade in which the moisture content is properly controlled will, of itself, support the heaviest dead weight. By placing on this subgrade an asphaltic concrete pavement impervious to water, that will, from its resilient cushioning effect, withstand the pounding action of moving traffic, a successful pavement will be secured.

The census referred to previously showed that the first asphaltic concrete base and surface pavement was laid on the West Coast in 1894. This pavement is on the main street of Visalia, California, and after 27 years of service, without a cent of maintenance cost, is in excellent condition.

A large street paving program is being carried out in Visalia this year and the type of construction is asphaltic concrete.

THE California Highway Commission has recently called for bids for paving the Black Point Cutoff, in Marin County. Five-inch asphaltic concrete was placed in competition with five-inch reinforced cement concrete. The results of the bid have not yet been received. It is a fact worthy of note that the California Highway Commission is calling for bids on asphaltic concrete pavements.

The type is also being largely used in Oregon—the City of Portland alone having 770,000 yards of the type laid since 1910. Standard construction in the Oregon State Highway system is five inches of asphaltic concrete. In this system approximately 250 miles of this type have been laid or contracted for.

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SELLING GOODS AT RETAIL

HERE'S a suggestion for the dealer the next rainy day that happens along. It is easily followed and promises to reveal much.

Absent yourself from the salesroom for an hour or so. When you feel it will be least expected, make a quick entrance.

One of two pictures may reveal themselves before you.

First: A group of salesmen in one corner wholly preoccupied in "swapping" stories. One or two, entertaining the telephone operator. Still another arranging his necktie before the mirror.

Or: Every telephone wire busy with follow-up calls. Every stenographer taking dictation or getting out sales letters. Every salesman busy at his desk.

Which is it?

* * *

INTERIOR decoration of closed cars is being given more serious consideration by car makers and dealers alike. And rightfully so.

There is a growing tendency on the part of the woman involved to choose the upholstery for her car with the same care that she selects fabrics for her home. She wants it to reflect her taste. She wants it to offer the proper background for her activities.

She is discriminating. Her desire for harmony of colors and quality of material has proven a sufficiently important factor to be acknowledged by the trade at large. This is manifest by the increasing demand for motor car fabrics of distinction.

* * *

GET rid of the bums; if you don't the sheriff will." Such is the slogan that has been coined by a salesman for a jobbing house.

But this man has done more than merely coin an expression. He's carrying it out in his work with accessory dealers.

One dealer whose store had been little more than a loafing room was lately made to see the value of it. With the result that the crowd has ceased to gather about the counter. The place has been thoroughly renovated.

From practically nothing to $1,000 a week may sound like a fairy tale. But in this instance it's true. Just another example of what "Ask 'Em to Buy" is accomplishing.

* * *

WHEN is a sales letter not a sales letter? The answer is easy. When it ceases to sell.

AS "SID" SNYDER SAYS

NO use expectin' to reap a harvest from seed that's been sown in poor soil. Might as well save your strength—and the seed.

* * *

That's what one salesman discovered. There was three prospects he was sure of. So he sat down and wrote the boss of his success. In a few days he got an answer. "We ain't makin' gifts this year," it read. "And we got all the bad debts we need. But we're still lookin' for business"

So many sales letters fail of their purpose that space is being devoted in the following pages to analyzing some of the reasons for such failures. For surely something is wrong when the only discernible results of a mail campaign are appreciably higher postage costs.

General appearance of the letter is an important factor in its success. In overlooking certain fundamentals of correct form and dress the dealer, unconsciously perhaps, is establishing a resistance that he finds difficult to explain.

* * *

READING carefully one reliable newspaper each day is just as essential to the welfare of the modern business man as eating a morning meal. That's the way a prominent financier once put it.

This policy is being carried out by one automobile dealer at least, who makes a point of going over the list of marriage certificates and social notes daily. What is more he sees that every one of his salesmen follows his example.

The result is that seldom does the name of a prospect escape the attention of that organization.

As Seen by Night in Syracuse



It is the Syracuse Motor Car Co. which thus makes liberal use of electricity to disclose the high spots of the Maxwell-Chalmers line

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What Is Wrong with That Sales Letter?

May Be One of Many Things, Dealer Discovers—So He Seeks to Minimize Risks in World's Greatest Gamble

THE greatest gamble in the world." Such is the term frequently used in reference to sales letters by those who profess to have had all sorts of experience.

Granted that this be true, is there no way in which the dealer can minimize the risk he assumes every time he signs himself "yours truly"? Can he not protect himself to a certain degree from unnecessarily heavy mailing costs? Experience has proven that he can and must, if he is to get full benefit from his mail campaigns.

To answer the question "What was wrong with that letter?" it is necessary first to consider the matter of dress. For, after all, it is the first impression that counts.

It may here be stated as a general principle that the sales letter which carries with it the greatest appeal is that which embodies a personal touch. This effect may be gained through proper attention to dress and form, as well as to wording. Of primary importance is eliminating all traces of the stereotyped, or form appeal.

Were it possible to make a detailed analysis of the sales letters that are sent through the mails, there is little doubt that the great percentage of failures could be ascribed to a lack of individuality. The merchandiser who persists in attacking regularly those whose names appear on his lists with a bombardment of messages addressed obviously to the multitude rather than the individual is setting himself a hopeless task. Sooner or later he will learn, to his extreme discouragement no doubt, that one look was sufficient to cause their being relegated to the nearest waste basket.

There are several things to be considered in dressing the letter so that it will win an interested audience. First, it is essential that some method of reproduction be employed that will insure a neat-looking message. This is something that should be carefully investigated.

The ideal form is one which presents to all appearances a specially typewritten appeal. The name appearing at the top is filled in so perfectly that no difference can be distinguished between it and the body of the letter. Such work has been developed to the point where a perfect job is now assured. All that is necessary is that the dealer convince himself before assigning the job, that the results are the best obtainable.

There next comes up for consideration the matter of the signature. The one-time popular rubber stamp has now become a thing of the past, so far as proper dress in sales letters is concerned.

In its place now appears what closely resembles a hand-penned name. This is obtainable with little trouble and little added expense.

One organization which makes a specialty of getting out form letters of a highly individualized character has among its clerks one or two who are proficient in imitating signatures. An order for five or six thousand letters comes in. When the time comes for affixing the signature, these girls practice copying it a few times. By the time they have signed fifty or more of the letters they have the writing down to a point where it is difficult to detect the difference between the genuine and the imitation.

Nor does this require any particular gift. Any signature that is not too intricate to follow, may, with a certain amount of practice, be reproduced with good effect by someone whose time can be spared for such work.

Manner of spacing the body of the letter is largely a matter of taste. Of late years there has been a tendency on the part of many organizations who make a specialty of letter "form" to block the paragraphs. This brings each paragraph out even with the name and address at the top of the page. In this way a certain uniformity is obtained which adds to the general effect. However, the more common form of indenting each paragraph still remains good style.

Following out the individual element, which is so important a factor, the formal address has been dropped in many instances and in its place is found the more personal "Dear Mr. Brown." This serves to attract the attention of the reader the very first thing, arousing his curiosity to the point where he feels compelled to glance down the page. This is true, even though he realizes that he is stopping to read some sort of advertisement.

This more informal type of address leads up to the body of the letter, which should be made as appealing as possible. The more personal its tone, the more attention it will attract.

First of all in considering the text itself is the matter of length. The greatest temptation which faces the writer of sales letters is to say too much. Even though it be thoroughly appreciated that the average reader is not going to wade through several long paragraphs, it is frequently difficult to cut to a reasonable length.

The long letter is doomed from the very start. One look at it and the recipient becomes discouraged. He feels that it will take too much time. Whereupon, it becomes sidetracked for the time being at least, if not thrown away.

Therefore, what must be considered above all else is serving the message in just as condensed form as possible. To attain this end the writer had best make a first draft in which he says everything he has on his mind. Going over this a second time, he will undoubtedly find much that can be blue-penciled. A third revision will likewise reveal many words and phrases that can be eliminated. Let him even go over it a fourth time and a fifth—as many times as may be necessary to reduce it to a minimum.

When he has finished he will not

LOCATING THE TROUBLE

WHAT was wrong with that sales letter?" the dealer asks himself as he patiently waits for some reaction. Here are four leading questions which may guide him in locating the trouble.

1—Was it neatly typewritten?
2—Was it personal in its appeal?
3—Was it readable?
4—Was it accurately addressed?

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only have a shorter and more readable appeal, but the chances are also he will have one that is considerably stronger by reason of the processes of elimination which it has undergone. The meat of his message will still be there. All else is superfluous.

Arrangement of paragraphs is another point which must be given due attention. The shorter the first paragraph, the better. Whereas the second may be somewhat longer than the first, it also should be just as short as possible. The same way with those following. Adhering to this plan breaks up the page and makes for easier reading.

Three examples of good form in sales letters are shown below. The first of these best exemplifies what has been alluded to as the personal element. It will be noted that the familiar form of address is well carried out in the message which is here reproduced.

"If I was going to buy a car," this reads, "I would get as much information as possible on cars in the class I could afford to own and operate.

"I would not depend on my judgment alone or that of my friends, but would make my decision on the way the public at large is buying.

"If one car was experiencing three times as many sales as any other car, in this class, I would be sure of its value.

"The Company is building and selling today five times as many Chevrolets as in 1920 and 1921.

"There must be good reasons for such an increase."

It will be noted that each paragraph consists of but one sentence and that each of these sentences is short—the longest not more than two and a half lines and the shortest not quite one line. As a result, it makes for easy reading.

And the effect of the message is in no way injured by being thus broken up.

A more formal style of address is used in the third example shown below. This form, however, fits in with the dignified and sincere tone of the letter.

"We will appreciate it" this reads "if you will write and tell us how you like your Chevrolet—whether it has always given you the satisfaction that we want every car we sell to give each one of our customers. This is why we are interested—and deeply interested in what you tell us.

"You know the more an organization grows, the harder it is to keep in touch with all of its customers as it should. What we would like to do is to call on you often and find out how your car is working.

"We are making an honest effort to give you the most economical, satisfactory transportation on the market. You can tell us how well we are succeeding.

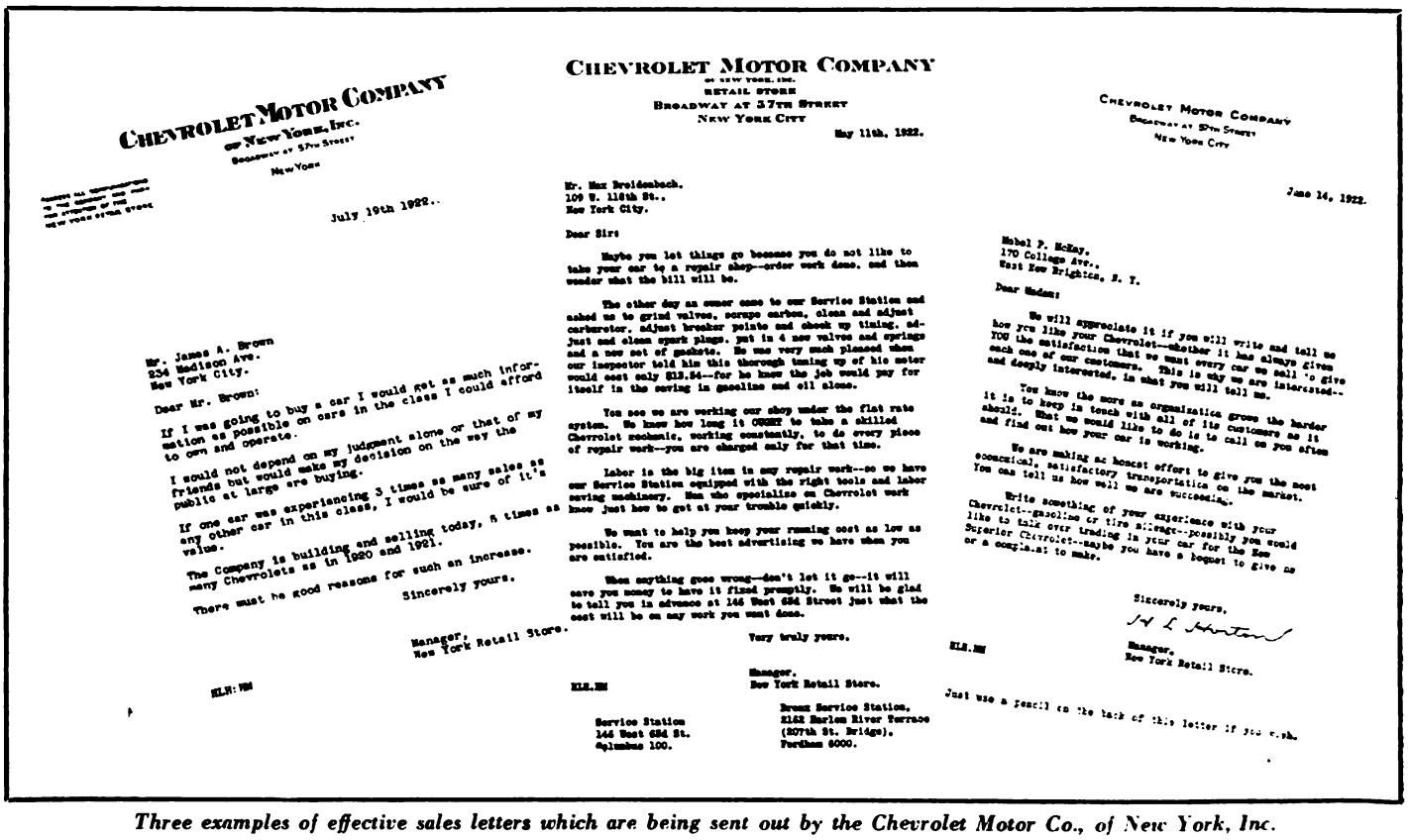
"Write something of your experience with your Chevrolet—gasoline or tire mileage—possibly you would like to talk over trading in your car for the new Superior Chevrolet—maybe you have a boquet to give us or a complaint to make."

It will be noticed that a line is added at the bottom of the letter which serves to emphasize the request that has been made. "Just use a pencil on the back of this letter if you wish" it reads.

Whereas space will not permit discussing in detail other important phases of the sales letter campaign, such as the mailing list, emphasis should be laid upon the importance of accuracy in address, initials and spelling of names.

Errors of this kind are typical of the common form appeal. They put the recipient immediately on his guard. He looks at the envelope. That tells the story. And another letter finds its way into the scrap basket.

It may be true that the sales letter is a gamble. Granted that such is the case, however, there is all the more reason for giving it careful study to eliminate all unnecessary risks. This can be done, as has been shown, by observing certain rules which tend to make of the public an interested reader.



CHEVROLET MOTOR COMPANY
OF NEW YORK, INC.
Broadway at 57th Street
New York

July 19th 1922..

Mr. James A. Brown
234 Madison Ave.
New York City.

Dear Mr. Brown:

If I was going to buy a car I would get as much information as possible on cars in the class I could afford to own and operate.

I would not depend on my judgment alone or that of my friends but would make my decision on the way the public at large are buying.

If one car was experiencing 3 times as many sales as any other car in this class, I would be sure of it's value.

The Company is building and selling today, 5 times as many Chevrolets as in 1920 and 1921.

There must be good reasons for such an increase.

Sincerely yours.

Manager,
New York Retail Store.

KLH:MM

CHEVROLET MOTOR COMPANY
OF NEW YORK, INC.
RETAIL STORES
Broadway at 57th Street
New York City

May 11th, 1922.

Mr. Max Breidenbach.
109 W. 118th St.,
New York City.

Dear Sir:

Maybe you let things go because you do not like to take your car to a repair shop—order work done, and then wonder what the bill will be.

The other day an owner came to our Service Station and asked us to grind valves, scrape carbon, clean and adjust carburetor, adjust breaker points and check up timing, adjust and clean spark plugs, put in 4 new valves and springs and a new set of gaskets. He was very much pleased when our inspector told him this thorough tuning up of his motor would cost only $13.54--for he knew the job would pay for itself in the saving in gasoline and oil alone.

You see we are working our shop under the flat rate system. We know how long it OUGHT to take a skilled Chevrolet mechanic, working constantly, to do every piece of repair work--you are charged only for that time.

Labor is the big item in any repair work--so we have our Service Station equipped with the right tools and labor saving machinery. Men who specialize on Chevrolet work know just how to get at your trouble quickly.

We want to help you keep your running cost as low as possible. You are the best advertising we have when you are satisfied.

When anything goes wrong--don't let it go--it will save you money to have it fixed promptly. We will be glad to tell you in advance at 146 West 62d Street just what the cost will be on any work you want done.

Very truly yours.

Manager,
New York Retail Store.

KLH.MM

Service Station
146 West 62d St.
Columbus 100.

Bronx Service Station,
2162 Harlem River Terrace
(207th St. Bridge).
Fordham 6000.

CHEVROLET MOTOR COMPANY
Broadway at 57th Street
New York City

June 14, 1922.

Mabel P. McKay,
170 College Ave.,
West New Brighton, S. I.

Dear Madam:

We will appreciate it if you will write and tell us how you like your Chevrolet--whether it has always given YOU the satisfaction that we want every car we sell to give each one of our customers. This is why we are interested--and deeply interested, in what you will tell us.

You know the more an organization grows the harder it is to keep in touch with all of its customers as it should. What we would like to do is to call on you often and find out how your car is working.

We are making an honest effort to give you the most economical, satisfactory transportation on the market. You can tell us how well we are succeeding.

Write something of your experience with your Chevrolet--gasoline or tire mileage--possibly you would like to talk over trading in your car for the new Superior Chevrolet--maybe you have a boquet to give us or a complaint to make.

Sincerely yours,
H. L. Johnston
Manager,
New York Retail Store.

KLH.MM

Just use a pencil on the back of this letter if you wish.

Three examples of effective sales letters which are being sent out by the Chevrolet Motor Co., of New York, Inc.

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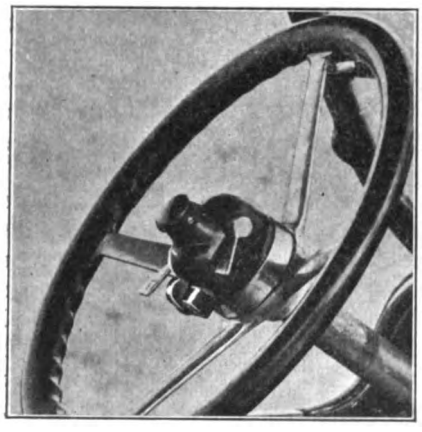
NEW CARS THAT WILL STIMULATE SALES

New Oakland Has Interesting Developments

Housing on Steering Wheel Includes New Wire Spark and Throttle Controls and Light Dimming Device—Carburetion Improved

TWO developments that are attracting considerable attention on the 1923 Oakland series are the novel controls mounted on the steering wheel and the improved carburetion system. The spark and throttle controls are of an original design and the thumb-controlled headlight dimming device is the first of its kind to be used on a low-priced car.

The dimmer switch and controls are



Oakland steering wheel controls

placed in a Bakelite housing, mounted in the center of the steering wheel at the top of the column. The switch, which controls dimming of the headlamps, is simply an electric switch mounted in the housing and connected across the resistance coil on the ignition and lighting switch, the latter being mounted on the instrument board.

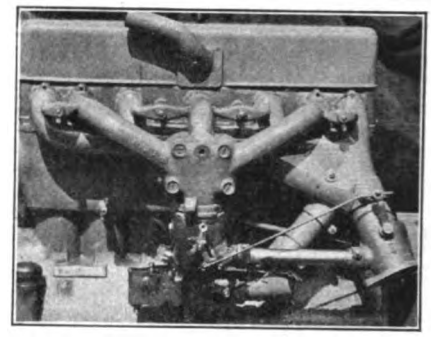
Wiring connecting this switch is concealed in a stationary tube in the center of the steering column. This device makes it possible to dim the headlights without any change of position on the part of the driver and without removing either hand from the wheel.

Spark and throttle control is of the Bowden wire type. Levers which respectively control spark and throttle are connected internally to small grooved pulleys, to which are attached flexible braided wires. These wires lead down through the center of the steering column and through flexible metal tubes to the distributor and carbureter respectively.

Advancing of spark and opening of throttle are accomplished by the pull of the Bowden wires when the levers on the steering column control housing are moved in the proper direction. Retarding of spark and closing of throttle are accomplished by return springs, provided in the automatic take-up jackets which are attached to the ends of the flexible tubes in which the wires are concealed. Horn button, as formerly, is on top of the steering column.

To give automatic control of heat applied to the intake system, intake manifold and carbureter have been redesigned. Exhaust gas is led into a jacket around the hot-spot in the intake manifold, and from there directly into a jacket around the carbureter body. From this jacket, the gas is conducted back into the exhaust pipe.

Rate of heat flow into intake system is automatically controlled to give proper amounts required at various loads. This control is effected by a damper in the



Improved Oakland carburetion system

exhaust pipe at a point just above where the gas by-passed through the jacket returns to the exhaust pipe, and another where gases leave carbureter jacket.

Position of these dampers is controlled by linkage connected to carbureter throttle. There are two positions for hooking up this linkage, one for Summer and one for Winter operation.

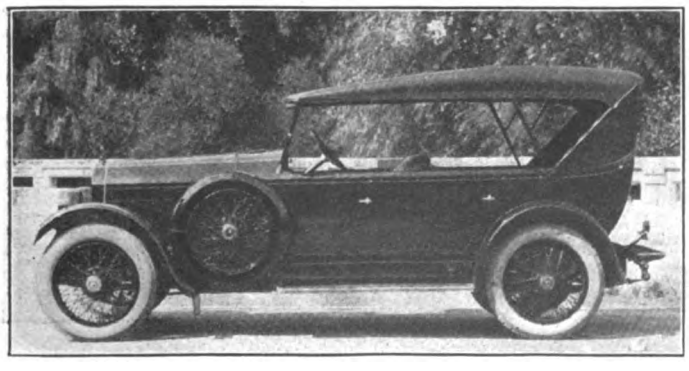
Heat passages are of ample size to prevent being clogged with carbon. Exhaust gas transfer from intake manifold jacket to carbureter is made directly through carbureter flange without use of an elbow or flexible tube.

There is also a hot air stove in the exhaust manifold which heats carbureter intake air. This can be turned on or off.

New Cole "Eight Ninety" an Improved Car

New Frame, Hydro-Cushion Spring Action and an Envelope Manifold Principal Developments—Body Lines Are Refined by Molding

EIGHTY-ONE refinements have been incorporated in the new Cole "Eight Ninety" series, according to the Cole Motor Car Co., Indianapolis. Principal developments are the new Ultramite frame, what is styled the Etruscan body, hydro-cushion spring action and envelope manifold. These have been embodied in the chassis which Cole has been developing constantly during the past six years.



ROUNDED molding at lower edge of bevel, with striping just below it, are characteristic of new Cole series. Note wheel mountings and three-quarter running boards now used

Particular emphasis is placed upon the new frame. It is made of pressed steel, 6 inches deep and 2½ inches wide, with five cross members and two tie bars. On the rear cross member there is a heavy gusset plate which increases rigidity. This new frame, according to the manufacturer, keeps the entire car in perfect alignment, giving freedom from body squeaks and rattles, and gives long life to the chassis, reducing replacement costs to a minimum.

Retaining characteristic Cole lines, the body has been enhanced in appearance by a black rounded molding at the lower edge of the bevel at the top of the body

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lines. This molding extends from the radiator the full length of the car. Running parallel with the molding, about one inch below, is a thin white striping. The standard color is blue with black sheet metal parts and chassis.

A ventilator is built into the cowl. New 12-inch diameter drum-type headlights, with adjustable brackets and tie tube, are black enameled and mounted to fenders by a heavy tie bar. On all models, spare wheels are mounted on the sides, this mounting giving the car better balance.

Full three-quarter running boards of aluminum, covered with a rubber mat, are used. These are mounted directly to the frame to form a strong support to fenders. Fenders, twice as thick as formerly used, are of 18 gauge metal, mounted to the frame by two irons to prevent their ever becoming loose.

Aside from minor refinements, the only new point on the eight-cylinder Northway engine is the envelope manifold which uses exhaust heat to assist in volatilization of the gas. This is done by completely surrounding the intake manifold with the exhaust manifold.

Hydro-cushion spring action is said to greatly increase riding quality by coordination of spring action with hydraulic rebound absorption. Lovejoy hydraulic shock absorbers are standard equipment. Springs are semi-elliptic, 57½ inches in rear and 39 inches front. These are longer than formerly used and lighter to get greater flexibility. Rubber spring bumpers prevent metal clashes on extreme rebounds, these bumpers being of hard rubber and mounted on the frame.

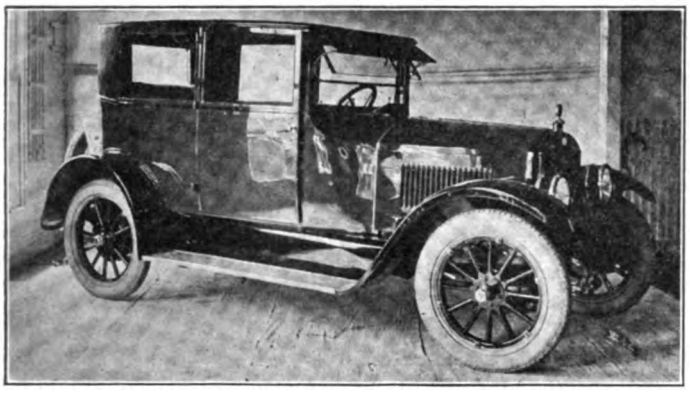
New Gemmer "M" steering gear with all-wood walnut steering wheel and friction type control has been adopted. Spark and throttle levers have been replaced by the newest type short levers on top of the steering column. Trunk rack and body guard rails are of aluminum, the rack being anchored directly to the frame, serving as additional support. New Johnson "R" swing valve type carbureter is used. Wood, wire or disc wheels are optional.

Nine body types are included in the new series. These all carry what is styled ultra equipment, in view of which the new series is priced higher than the old, the open models, for example, being $200 higher. The line includes: roadster, four-passenger sportster and seven-passenger tourster, $2,685; two-passenger coupe, $2,885; four-passenger coupe, $3,385; seven-passenger toursedan, $3,285; five-passenger suburban and seven-passenger sedan, $3,685; and berline, $3,885, all f. o. b. Indianapolis.

Anderson Shows Coach on Light Six Chassis

Second Body Type for New Line Is Four-Passenger Closed Job—To List at $1,450—Body of All-Aluminum Laid Over Ash Frame

MAKING the second body type on the Anderson light six chassis, introduced a little over a month ago, a four-passenger coach to sell at $1,450 is now shown for the first time by the Anderson Motor Co., Rock Hill, S. C. The body is all-aluminum laid over an ash frame, and its sponsor offers it as the only car of its price class having such a body.



FOUR-PASSENGER coach offered on the Anderson light six chassis at $1,450 has all-aluminum body. Trunk of distinctive shape is carried at the rear. Upper rear quarter of body is covered with black fabric

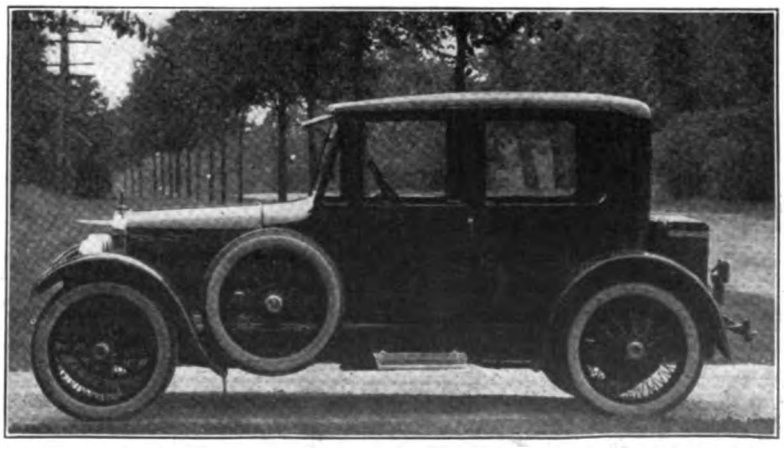
Body frame is made entirely from hardwood, cut from Anderson's own timberlands. Greatest care is used in selecting and preparing this wood, it is pointed out. Trees are cut only in the Fall and Winter, when the sap is lowest and the wood hardest. The lumber is then air-dried for six months or more, and finally cut to shape, not bent. Pieces are laminated, glued and screwed together, making practically a one-piece frame.

The body between belt line and fenders is finished in a medium light blue. Above the belt line the body is black, as are also the fenders and running gear. The upper rear quarter is covered with a weather-proof fabric. Upholstery is blue.

Included in the equipment is a trunk, mounted at the rear. This trunk differs in shape from those customarily used, the back fitting flush with the body panel and the front slanting outward, making it considerably wider at the top than at the bottom. Other equipment, most of which is standard on all the Anderson light six models, too, includes Moto-Meter, Gabriel snubbers, electric carbureter primer, heater, foot-operated headlight dimmer, Alemite chassis lubrication, cowl ventilator, and sun visor.

H. C. S. Offers Closed Car for Touring

FOUR-PASSENGER closed car for touring is offered by the H. C. S. Motor Car Co. in its new series "IV." It is styled the sport-sedan, is listed at $3,250, and takes the place of the coupe of the former series. Body is solid aluminum over heavy wood frame. Upholstery is in mohair and broadcloth. Front seats are individual, tilting type. Equipment includes two extra wheels, carried at sides, and a two-suitcase trunk



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IDEAS THAT LEAD TO GREATER SALES

Where Two Heads Are Better Than One

TWO heads are better than one. This is being proved daily in those accessory stores where the dealer is making the most of the co-operation offered him by the manufacturer. He is finding that it pays to work hand-in-hand with the makers whose lines he handles. It pays because it enables him to present their goods more intelligently, running up his profits in proportion.

Manufacturers, for the most part, view things from much the same angle. To insure proper distribution of their goods they find they must cooperate to the utmost with their retailers.

An example of the possibilities that lie in the way of such cooperation has been revealed lately in steps taken by the Metal Stamping Co., Long Island City, N. Y. This organization is constantly studying ways and means of getting the sales message connected with Lyon bumpers across to the motoring public.

It realizes, too, that the success of its endeavors rests in the hands of those who come in direct contact with the car owner. Accordingly, it proceeds to lend every aid to the retailer in popularizing its product.

One method lately employed to attract attention to the dealer's show windows, and from there to the stock which lines his walls, is here illustrated. The picture tells the story. It is all summed up in an effective window exhibit offered the retailer.

First, it may be said that the Metal Stamping Co. is a firm believer in attractive window displays. It is fully cognizant of the fact that much depends upon the force of the invitation extended by the accessory dealer to the passer-by, through the exterior appearance of his place of business. Therefore, it proceeds to show the dealer how he can stage an effective display at practically no expense.

Lithographs used are furnished free to all dealers of Lyon bumpers. By following the general layout as shown in the illustration, it is a comparatively simple matter to have an exhibit that is well balanced and dignified.

Of particular aid to the dealer is such a display right now when the post-summer slack is setting in. The very reason that he may be experiencing a falling-off in volume of business makes it all the more necessary that some special effort be employed to boost trade during the Fall season.

With the time not far off when bad weather will prove a handicap to the motorist in icy streets and difficult driving conditions generally, it is logical to expect that the greatest amount of interest will be aroused in those products which contribute to safer traveling. From this it will be seen that timeliness enters into the plan of the Metal Stamping Co.

Such a display as that outlined also leads up to a point worthy of emphasis in discussing window decoration. The temptation frequently is to crowd too many and too varied devices into a small space. Bearing this in mind, the dealer might well consider the advantages of concentrating his show space on one particular product, even though he change the exhibit more frequently.

This method of arrangement offers opportunity for giving the public a clear idea of what the device actually is and how it functions. Use of printed matter shown in conjunction with the article itself enables the whole story to be laid before the eyes of those who pass.

Aside from the help which the manufacturer is offering his retailers in making their window displays more compelling, there are various other aids he is rendering in the way of sales literature. To what extent such printed matter is used depends in large part the success of the merchandiser.

It is all summed up in the remark made by an automotive merchandiser of long experience to one of his assistants. "Remember," he said, "we're all here to help each other, and in helping each other to help ourselves. The closer we work with every maker we represent—the better we guard his interests—the greater will be our success. In helping him we help ourselves."



TO broadcast the value of effective window displays throughout its selling organization, the Metal Stamping Co., Long Island City, N. Y., offers this suggestion for exhibiting Lyon bumpers. The layout is simple yet effective, and can be duplicated by the retailer at little cost. Lithographs used are furnished by the Company to its dealers free of charge. The rest of the exhibit is composed principally of three bumpers

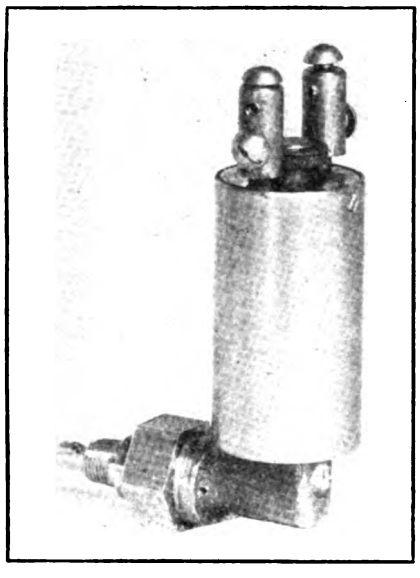
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IN THE FIELD OF ACCESSORIES

"DOO-HICK-EE" IS AUTOMATIC AIR REGULATOR

Of interest to motorists who are seeking engine efficiency and economy is the automatic electric air regulator that has been placed on the market by the Detroit Motor Casting Co., Detroit, Mich., under the trade-name "Doo-Hick-Ee." This may be installed on any machine and has been designed to govern properly the mixture of air and gas at all driving speeds.

It is a small cylindrical device containing a coil which actuates an air valve. Attachment is made to the intake manifold, connection being made with the ground wire leading from the generator.



"Doo-Hick-Ee"

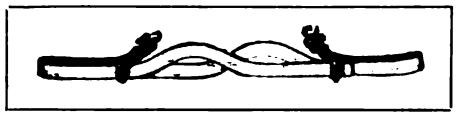
In use it operates similarly to the generator cut-out switch.

When the engine is throttled down or idled, the "Doo-Hick-Ee" reduces the air intake, thereby providing a rich mixture. As the engine speed is increased, volume of air admitted is automatically increased, thus producing a thin mixture. In addition to reducing gasoline consumption appreciably, it is also claimed to be a factor in eliminating carbon deposit.

LYON CONVEX BUMPERS HAVE BROAD BUMPING SURFACE

Distinctive in design and constructed in such a way as to withstand shocks successfully through use of a broad bumping surface, the Lyon convex front and rear bumpers produced by the Metal Stamping Co., Long Island City, N. Y., have established themselves firmly in public favor. They are built of best spring steel, heat treated and oil tempered throughout.

Attaching arms are integral parts of the bumper and have absolute spring action under collision impact. The front bumper has an upwardly extending broadened bumping surface which affords protection to the lamps and radiator. It



Lyon convex front bumper

may be obtained with either Three-Way or New-Way fittings. It weighs only 39 pounds.

The rear bumper is made with broad bumping surface extending downward instead of upward, completely shielding the gasoline tank. It is made with frame clamp fitting only.

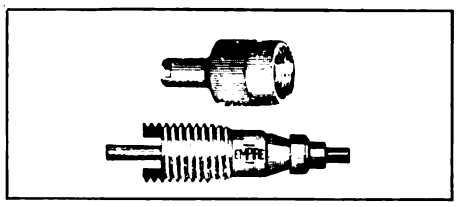
Finish is in black with nickel clips, and nickel with black clips. A guarantee is made that these bumpers will withstand the shock of bumping at 15 miles an hour without damage to either the car or bumper.

EMPIRE TIRE VALVE AND CAP ARE STRONGLY BUILT

A tire valve which will fit any make of tube is being manufactured by the Empire Sales Co., 90 Silliman avenue, Bridgeport, Conn. This product together with an air-tight valve cap which the Company has also placed on the market is sold under the trade-name "Empire."

Body of the Empire valve is of brass, constructed in one piece. Valve stem being encased in the body is thoroughly protected from injury. Seat cup is made from solid brass rod, insuring precision, and the seat itself is made from specially prepared material which will withstand high or low air pressure. Outside packing ring fits the taper neck in body, thus insuring an absolutely air tight joint.

The Empire air-tight valve cap is made



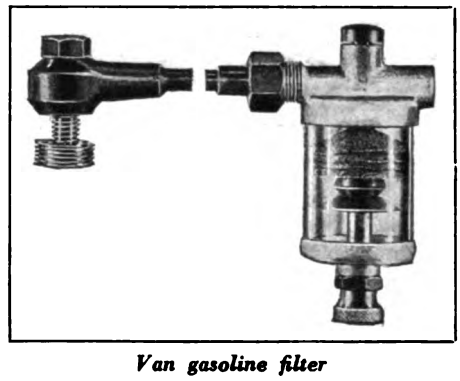
Empire tire valve and cap

from solid brass rod heavily knurled on the outside in order to make it easy to tighten on the valve stem. The rubber cushion on the inside of the cap is constructed of material specially prepared and which seals the air in the tube. Emphasis is also laid on the fact that the ears will not break off when inserting or removing valve inside.

VAN GASOLINE FILTER IS NEW VISIBLE PURIFIER

Automobiles with both pressure and gravity system of feed may be furnished with the Van gasoline filter which is being manufactured by the Anderson Motor Corp., Waltham, Mass., and distributed by the Harris Co., Inc., 89 State street, Boston, Mass. This device has been designed to stop trouble caused by dirt or water getting into the vacuum tank and carbureter. It also furnishes a convenient supply of gasoline for priming the engine, cleaning the spark plugs and so on.

Gasoline is drawn first into the filter chamber, filling this completely. It passes through several strainers located near the top and then into the tank. This filling operation continues about eight to ten seconds usually. Between fillings the gas in the chamber stands about two-



Van gasoline filter

thirds the height of the glass and is at rest, allowing the water, sand and all foreign matter to settle. This rest period is usually one to two seconds in duration when the engine is idling.

Dirt and water are drained off easily by removing the knurled cap at the bottom of filter. Strainers can be cleaned without removing, by squirting gasoline on them.

Installation is simple and emphasis is laid upon the fact that there is nothing in the construction of the device to get out of order. Price, complete, is $3.

Paul Rubber Gets Tirometer Valve

Output of the Tirometer Valve Co., Charlestown, W. Va., has been taken over by the Paul Rubber Co., Salisbury, N. C. Pending the erection of a new plant at Salisbury, the Tirometer valve will be manufactured at Charlestown. The valve is designed to show the exact amount of air pumped into the tire or

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while the tire is in service. M. W. McConnell is president, and R. B. Tracy, sales manager, of the Paul Rubber Co.

LETERAIN KEEPS WINDSHIELD FREE FROM RAIN

To overcome the difficulty and danger of driving a machine with a rain-blurred windshield, the B. J. S. Products Corp., 95 Liberty street, New York city, is producing Leterain. This is a fabric mit impregnated with a combination of chemicals which, when wiped over glass will prevent rain from adhering in the form of drops. The moisture runs off in thin



Leterain

transparent sheets which do not mar the vision.

Composition is such that it may be used before a rain when the windshield is dry or applied when the motorist is caught in the midst of a downpour. Moreover, one application is said to last 12 hours. Leterain comes in an all-metal box which protects it from grease and dirt until the occasion arises for its use.

GELLMAN END WRENCH IS QUICKLY ADJUSTED

To provide an end wrench that will adjust instantly and stay so until the nut is loosened or tightened has been the purpose of the Gellman Wrench Corp., Chamber of Commerce building, Chicago, in placing on the market the Gellman wrench. This tool is drop forged of the highest grade steel, permitting a carbonized hardening process which enables it to be used under several hundred pounds' pressure. Yet it is light in weight and thin enough to work in cramped places.

The screw is eliminated from this wrench, thereby tending to do away with any bulkiness in the head. As the illustration shows, the handle member forms the lower jaw and is notched at right angles to the gripping face. The movable upper jaw is also notched and can be moved up or down when the notches are pulled out of engagement. Simply by pressing with the thumb on the corrugated part of the movable jaw and disengaging, the upper jaw will move



Gellman wrench

instantly up or down to the adjustment desired.

This wrench is manufactured in sizes of 6, 9 and 12 inches, weighing 4, 10 and 20 ounces, respectively. It can be used in any direction desired and there are no parts to get out of order.

Mitchel Gas Is Scientific Blend

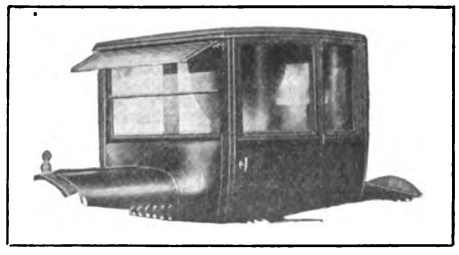
A scientific blend of benzol and gasoline is being produced by the Mitchel Oil Company, Inc., 926 Harrison avenue, Kearny, N. J., under the trade name of Mitchel Gas. This is said to insure a smoother running engine with greatly increased power.

"SUNBEAM JUNIOR" IS QUALITY VISOR FOR FORDS

A high-grade visor for Ford cars has been placed on the market by Thoma & Son, Inc., Fairfield, Iowa, in the form of the "Sunbeam Junior." This device is intended to fill the demand of Ford owners for a product that will stand up under service and represent quality in every respect.

Particular interest in the "Sunbeam Junior" lies in the fact that it is made of high-grade colored rib glass. It is easily installed on the machine, and designed for both open and closed models.

Every care has been taken to assure dependability and at the same time to offer a visor that will add to the appearance of the automobile. Price of the



Sunbeam Junior visor

"Sunbeam Junior" is $8; west of the Rockies, $10.

Introduces Gibson Oil Gauge

An oil gauge adapted to use on Fords is being produced by the Gibson Gauge Co., 2304 Seventh avenue, Moline, Ill. This consists of a metal float similar to the float of the carbureter inside a cast aluminum float chamber and attached by a steel plug to the drain hole of the crankcase. A special high-grade dental shaft attached to the float passes through the float chamber cap, then through the sheath to the gauge head where the shaft carries a ball indicator. It is plainly visible to the driver at all times.

HUSKEE GASOLARM SOUNDS WARNING SIGNAL

A device that replaces the cap in the gasoline tank and gives a warning signal when the gasoline reaches the depth for which it is set, is being offered the car owner by the HusKee Tool Manufacturing Co., 586 Public street, Providence, R. I. The HusKee Gasolarm is available at the present time for use on Fords and Chevrolets.



HusKee Gasolarm

Application of the device is simple. It is merely wound up and dropped in the gasoline tank. The first alarm is sounded when the machine turns a corner, caused by the gasoline flowing towards the end of the tank.

When the car returns to the straight road the alarm ceases until another turn is made. This is repeated several times until the alarm finally sounds its last call on the straight road.

The bell inside the tank gives a louder signal than if on the outside as the tank being almost empty vibrates and magnifies until there is little chance of missing the alarm. Design is such that the alarm can be set so that anywhere from one to five gallons may be in the tank when it sounds. Price of the HusKee Gasolarm is $2.50.

Globe Stamping Handles Ford Lock

Sales of the Ford lock produced by the Packard Engineering Co., Cleveland, under the trade-name Motoright lock, have been taken over by the Globe Machine & Stamping Co., also of that city. This device, when locked, covers the hub of the steering wheel and grips all four spokes.

Spee-Dee Offered in Handy Tube

Spee-Dee, a hand cleaner, which is being produced by the States Chemical Co., 656-660 West Austin street, Chicago, is now being offered in collapsible tube form. This new container can be easily carried in the side pockets of automobiles.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

MASSACHUSETTS—PITTSFIELD.—Distribution of the Gray for this territory has been taken over by John B. Lyerly, who also handles the Rickenbacker.—Jack Rose Motor Service has taken on the agency for distribution of the Stromberg carbureter for Berkshire county.

SPRINGFIELD. — Agency for the Rickenbacker has been awarded the O. L. Hunting Co., who will operate as a branch of Clarke & Stevens, Boston.

NEW YORK—NEW YORK.—William J. Beamish has sold to Robert J. Steedman the two-story garage at 206 West 102nd street. The building is 20.1 x 100.11.—A two-story garage, 25 x 100, located at 107 West 51st street, has been sold by Elliot F. Shepard.—Plans have been completed for the construction of a one-story garage, 134 x 169, which will be erected at 347 Twelfth avenue at a cost of $50,000.

PENNSYLVANIA — PHILADELPHIA.—George C. Brownlee and George B. Albrecht have formed the Tioga Automobile Co., with quarters at the corner of Broad and Tioga streets, handling Overland and Willys-Overland cars. Brownlee is secretary and treasurer of the new firm and Albrecht is manager.

SOUTH

VIRGINIA — RICHMOND. — An agency handling the Lee tire has been established here with Frank G. Fickling as manager.—Mack truck distribution for this city has been granted the Mack-International Motor Truck Corp.—Marvin Swithey, Thomas S. Curtis and Russel D. Council have formed the Stewart-Warner Products Service Station, Inc., to distribute Stewart products in this district. Swithey will act as president of the concern; Curtis as vice-president and general manager, and Council as secretary and treasurer.

NORTH CAROLINA — CHARLOTTE.—Sehorn & Hipp, a partnership distributing the Chevrolet in this territory, has been dissolved, Louis M. Hipp having sold his interest to S. E. Sehorn.

RALEIGH.—Oldsmobile Sales & Service Co., comprised of C. E. Hanbury and R. E. Winstead, has been formed to distribute the Oldsmobile in this section. The new organization will take over the Norwood Garage, the business of which it will continue to operate in conjunction with the Oldsmobile agency.

GEORGIA—ATLANTA.—A branch of the Templar Motor Sales Co. of Cleveland recently has been established here and James Joyner appointed manager.

TENNESSEE—MEMPHIS. — Abernathy-Riddick Auto Co. has been organized to distribute the Chevrolet and Stutz cars in this district. George Abernathy is president of the firm and J. Burke Riddick, secretary and treasurer.—Columbia agency has been taken on by the Franklin-Bender Motor Co.

KENTUCKY—LOUISVILLE.—R. D. Heman and Gerald Baker have opened a salesroom and service station, handling Firestone tires. They will conduct the business under the name of the R. D. Heman Co.—Buchanan Motors Corp. has been established with J. A. Kauffman in active charge. Kauffman was formerly employed by the Cumerland & Manchester Railroad at Barbourville, Ky., in the capacity of superintendent.

MIDDLE WEST

INDIANA — INDIANAPOLIS. — Franklin-Indianapolis Co., comprised of H. H. Alexander and E. J. Erber, has purchased the Franklin agency from Diddell Brothers, located on North Meridian street. The new firm will occupy salesrooms at 1112-1114 North Meridian street. C. F. Dillenbeck has been put in charge of the service department. Alexander was formerly general manager of the Losey-Nash Co. Previous to that he was associated with the William Small Co. and at one time was wholesale manager of the Indianapolis branch of the Buick Motor Co.

ILLINOIS — DANVILLE. — Daubs-Vishniski Motor Car Co., formed by F. C. Daubs and H. F. Vishniski, has obtained the Buick agency.

OAK PARK.—Oak Park Franklin Motors Co. has been formed by Charles Renfer, W. F. Schmuck and E. T. Marquardt to distribute the Franklin car and conduct a general repair and service business.

MICHIGAN — GRAND RAPIDS. — Upon the completion of the garage now under erection at Jefferson avenue, S. E., and Maple street it will be occupied by the F. W. Kramer Motor Co. The building will be constructed at an approximate cost of $21,000. It will be 100 x 108 feet, one story high and of brick construction.

WISCONSIN — APPLETON. — Fox River Motor Co. has purchased the business of the Automotive Service Co.

(Continued on page 440, first column)

ACTIVITIES OF THE WHOLESALERS

Rowe-Woolfolk Automobile Co., state distributer of Packard and Nash cars and trucks, with headquarters at Little Rock, Ark., has employed Link Lewis and David Cluis as salesmen.

Lifsey-Smith-Hill Co., Atlanta, has been appointed distributer for the Peerless line of cars throughout Georgia.

Ward Motor Co., St. Louis, Mo., Maxwell and Chalmers distributer, has added to its floor space which formerly comprised only the two-story structure at 3016-3018 Locust street. The addition is located on the ground floor in the building at 3027-3029 Olive street, directly across from the Locust street headquarters of the company, and will be restricted to used car sales while the old premises will be used as a service station and new car salesroom. William Schriber has been placed in charge of the used car department.

Houston Motor Car Co., Houston, Texas, has been appointed distributer for the Cleveland. The company will operate from quarters at Preston and Carolina.

Columbia-Westcott Co., Charlotte, N. C., of which J. A. Cave is president, will distribute Columbia and Westcott cars in both North and South Carolina.

Howard Automobile Co., Portland, Ore., plans to have a four-story building erected at Thirteenth and Burnside streets at an approximate cost of $100,000. The structure will be built of reinforced concrete, covering 125 x 100 feet, and will provide 55,000 square feet of floor space.

Joseph G. Blount, Georgia distributer of Maxwell and Chalmers cars, has secured the services, as sales manager, of Cecil C. Robertson, for some time manager of the Savannah branch of the Blun-Dimmitt Co., and for the past two years general manager of the G. M. Robinson Motor Co., Jacksonville, Fla.

Morris M. McCoy has contracted to distribute the Elgin in the Dayton, Ohio, territory.

Hathaway Motor Co., Kansas City, Mo., of which C. E. Hathaway is president, has secured the services of F. G. W. Sudrow as general sales manager.

Oregon Motors, Inc., Portland, Ore., has secured the agency for the distribution of the Cleveland car.

Marshall A. Moody, Phœnix, Ariz., has taken over the distribution of the Gill battery for Maricopa, Gila, Pinal and Graham counties.

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IN THE TRADE

(Continued from page 439, second column)

CLINTONVILLE.—A new garage will soon be built here for the E. H. Ramm Ford agency.

EAST ELLSWORTH.—George Harris has sold his tire and battery station to Lambert & Quinn.

JANESVILLE.—J. E. Whitmore has established a garage and service station at 903 St. Marys avenue.

NEKOOSA.—Walter Gunderman has opened the Nekoosa tire shop at this place.

PRAIRIE DU CHIEN.—J. P. Check has taken possession of the Cornelius building where he will conduct a service shop for L. D. Haskins.

IOWA—DYSART.—A garage will be erected here for Orett Smith.

MISSOURI — ELDORADO SPRINGS.—Highway Garage has moved from its old location to the Churchill building on North Main street. H. L. Brannan is proprietor.

FARBER.—Fire completely destroyed the Farber Garage which is operated by John Miller.

KING CITY.—Larger quarters have been obtained by Frank Lawson in the Thomas Callow building.

MONETT.—Walter Shipley, of Oklahoma, has opened a garage in the old Goldsborough stand on Marshall Hill.

PILOT GROVE.—Joseph Kraus has sold his interest in the garage, operated by him and Edward Oerly, to his partner.

RENICK.—Barton Hooper has purchased the garage conducted by Orpha Tipton.

ST. JAMES.—Jesse Pruitt has purchased the interest of Edward Lenox in the Electric Shop, a battery repairing and recharging business.

ST. LOUIS.—Southern Auto Repair Co. has opened its shop and service station at 3033 Olive street, with F. D. Johnson and Ralph A. Johnson, Jr., as managers. Delhi Battery and Supply Co., Prest-O-Lite battery dealer, which has been located in the building at the southwest corner of Beaumont and Locust streets for several years, has moved into its new location at 2317 Pine street. The company's new building, which is one-story in height, occupies part of a lot 88 x 109, the balance of which is to be used as an open-air service department.

SEDALIA.—Mason Kellerman Motor Co., Hupmobile representative, has located at 221-223 South Osage avenue with W. L. Mason and O. J. Kellerman as managers.

SMITHVILLE.—C. C. Kindred has obtained the agency for the Chevrolet which he will distribute in addition to the Studebaker and Nash lines.

SPICKARD. — Glen Hamilton has moved his repair equipment for batteries and tires to the garage occupied by Logan & Schooler.

UNIONVILLE.—Asa Barnes has purchased the battery, oil and gasoline station from U. G. Busbee.

KANSAS—EUREKA.—Bunker Motor Co., of Wichita, has opened a Nash sales and service station with Charles H. Weiser, Jr., in charge. The station and business office is in the Samples Garage on West Second street.—James M. Lane has purchased the Umphrey Tire Service, which he will conduct under the new name of the Lane Tire Service.

HAVEN.—A new battery charging machine has been installed in the garage operated by Otto Tonn.

HUGOTON.—Peck Prine has sold his interest in the Santa Fé Garage to Earl Hamby, who is now sole owner.

KANORADO.—A garage has been opened here by Chester Issitt.

LAWRENCE.—George Dabney and J. J. Gies have established a branch of the Rent-a-Ford Co. at this place.

NORTH TOPEKA.—Irwin Auto Supply Co. will soon occupy the new Irwin building located at 927 Kansas avenue.

OSAGE CITY.—Quarters have been obtained by the Ericson Motor Service Co. in the garage formerly occupied by the Youngeberg Machine Shop. Carl Ericson is the proprietor of the Motor Service company.

PLAINVILLE.—A partnership has been formed by Frank Smith and J. W. Cox to conduct a garage and repair shop. A location has been secured in the building opposite the *Times* office.

TOPEKA.—Capper Auto Supply Co. has purchased the stock and equipment of the Shelton Tire Co., which is situated at 919 Kansas avenue.

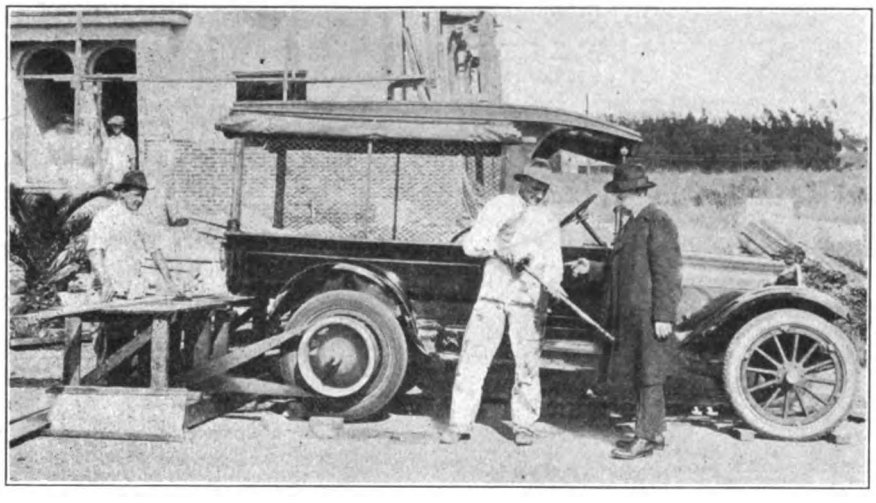
WINFIELD.—Walter Richmond has opened an automobile repair shop in the Caton Block at 316 East Ninth.

NEBRASKA—ASHLAND. — Herman Mattison will occupy one of the two buildings purchased from the Wahoo Construction Co. as a garage.

BLADEN.—Laughran has sold the South Garage to John Jenkinson.

COOK.—Clarence Norton has purchased an interest in the garage operated by Harold Anderson. The business will

Dodge Brothers Truck Supplants Four Workmen



AFTER making minor changes on his Dodge Brothers commercial car, a Los Angeles building contractor was able to make use of it in a new role of sawing machine. The car is run at a speed equivalent to 17 miles an hour and averages about thirty miles of sawing, so to speak, to the gallon of gasoline. Unlike the four men which it replaced, the contrivance is indifferent to union problems and an eight-hour day

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A REDUCTION in the price of tires means, to some dealers, a good deal of explaining that no change in quality is implied.

To the U. S. Tire Dealer it means a new degree of *confidence.* His business is founded on the public knowledge that U. S. quality *does not fluctuate.*

United States Tires are good tires.

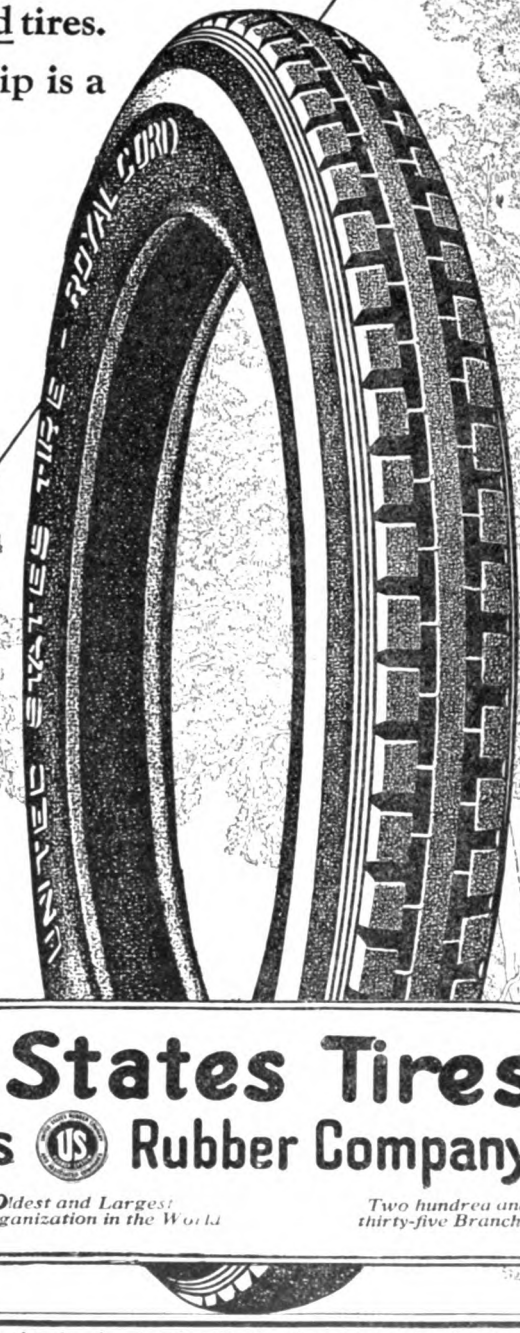
The U. S. Sales Relationship is a good relationship.

The U. S. Sales Relationship brings to the dealer's store the most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

Isn't this the kind of Franchise the tire dealer needs?



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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hereafter be conducted under the name of Anderson & Norton.

CRETE.—Harry Mallory has moved the Mallory Garage to a location formerly occupied by the V. J. Sebek Garage.

ELKHORN.—Charles Parkening has reopened the garage in the building south of Schuldt's store.

MEADOW GROVE.—J. R. Burch, who has been conducting an automobile repair shop at Battle Creek, has moved his business to this city.

ST. PAUL.—Thomas & Triplett have purchased the Oakland Garage.

YORK.—A new automobile repair shop has been opened on East Fifth street by Thomas Frederick and Myron Larkin.

SOUTHWEST

ARKANSAS—BENTONVILLE. — A petition in bankruptcy has been filed by the Ozark Tire & Battery Co. The assets of the firm are listed at $9,700 and the liabilities at $14,000. E. E. Page, formerly connected with the company, has opened a battery station in the Peel Motor Co.

OKLAHOMA — ATOKA.—C. O. D. Garage has moved to the building formerly occupied by the F. A. Russell hardware store. E. Skillern is proprietor of the garage business.

SHAWNEE. — D. E. Harman and Knight have opened a battery station in the building at the rear of the store occupied by J. C. Lee.

TULSA.—A retail tire and accessory store has been opened by the Southern Tire & Supply Co. at 903 South Main street by L. J. Walters and N. D. Delamater.

WAURIKA.—Coleman & Lewis will proceed with the work on the construction of their garage building, the first story of which has already been completed. The lower story will be used as a garage.

TEXAS—KINGSVILLE. — Work on the new Ford Garage for the Gulf Coast Motor Co. is nearing completion.

NORTHWEST

MONTANA—HAMILTON. — Smith Auto Co. has purchased the Nicol Garage whose location it will use as the headquarters of the consolidated businesses.

LEWISTON.—Robert Terry, former owner of the Atlas Garage, has purchased the Corner Garage with the Van Dinter Motor Co.

ROCKY MOUNTAINS

IDAHO—MOSCOW. — Hugo Motor Co., located on South Main street, has purchased the Lange Brothers Garage, including the accessory store. The newly acquired business is situated on Third and Jackson streets.

NEVADA—BATTLE MOUNTAIN. —D. F. Shovelin, owner of the Overland Trail Garage, will soon erect a modernly equipped machine shop.

RENO.—H. C. Heidtmann has taken on the Buick agency formerly controlled by the Duncan-Buick Co. Heidtmann is located in the Dorris Garage on Chestnut street.

PACIFIC COAST

WASHINGTON — ABERDEEN. — Leslie and George Thomson have purchased the Annex, located at Broadway and Hume street, from Gray's Harbor Motors, Inc. They will operate the business under the name of Thomson's Service Garage.

CHEHALIS.—Bert Moore, operating Moore's Service Garage, has moved into his new building with Dan Russell as manager.

CHENEY.—G. A. Zay has opened Zay's Garage in the first brick garage to be erected at this place.

EVERSON.—Miller & Leek have sold their garage business to the O. K. Garage, of Sumas, retaining the Dodge Brothers agency.

LYNDEN.—Walter Baldwin and Charles O. Bechtel have purchased the Axlund Service Station from Benj. Axlund.

MONROE.—Mills Auto Co., formerly operated by A. B. and A. J. Mills, has been sold to E. F. Carryer and Ira M. Henkel.

MONTESANO.—Paige and Jewett distribution for this territory has been taken over by Theo. Disch, owner of the Auto Repair Co.

OAKVILLE.—An electric and battery recharging department has been added to the Harvey & Stevens vulcanizing shop.

PULLMAN.—Ferris Carr Repair Garage and the Willard Battery Station have leased quarters in the M. D. Henry Block, recently erected.

RAYMOND.—Mrs. Ora Schooley has taken on the agency for the Durant car. She is the first woman in the Country to distribute that car.

RENTON.—V. Armstrong and his son, Wayne, have purchased the Renton Garage, formerly operated by John Martin who recently died.

SEATTLE.—An automobile paint shop has been opened by C. W. Pressley and J. L. Merritt. They will conduct the business under the name of Pressley & Merritt with a location at 1401 Dexter avenue.

VADER.—As soon as work is completed on his new building, W. S. Sherman will open Sherman's Garage.

WALLA WALLA.—Arthur S. Foster and A. C. Thomas, former vice-president of the Universal Auto Co., Spokane, have purchased the interests of Dahlen Brothers, Ford and Lincoln dealers here.

YAKIMA.—Jess Melbourne and Harry E. Connor have purchased the Tourist Garage on Race street.

OREGON — CORVALLIS. — J. R. Coopey has taken on the Nash agency with a location in the Al Stevens building on Washington street.—E. Nordenson has been awarded the agency for Oldsmobile cars and trucks which was formerly handled by Whiteside & Locke.

EUGENE.—H. J. Bringle has established a Paige and Jewett agency in the Howard Garage on Ninth avenue.

NORTH BEND.—As soon as work is completed on the remodeling of the building on waterfront road formerly occupied by the Charles Thomas Brewery, Carl Golder, of the City Garage, will occupy it as a garage and repair shop.

CALIFORNIA—ARCATA.—Starks & Brelle Garage has purchased the vulcanizing business of Parton & Ross.

DALY CITY. — George Rossi and Joseph Alberti have established the California Automobile Repair Shop on the state highway.

DELANO. — Fred. Fairservice and George Murray have purchased the Sperry Service Garage from Fred. Sperry.

DOS PALOS.—Ernesto Ceccarelli will conduct an automobile machine shop in a new garage to be erected on South Dos Palos avenue. The new building will be 36 x 40.—George McIntyre has purchased the interest of his partner, Noah Van Hook, in the Mc & Van Service Station.

EUREKA.—A branch of the Western Auto Supply Co. has been established at Fourth and E streets.

FRESNO.—R. C. Bigelow has leased a $20,000 garage building to be erected at Stanislaus and N streets. The new structure will be two stories, 75 x 100.

HANFORD.—Norman De Spain has bought the vulcanizing department of Seventh Street Garage and will conduct it as an independent concern.—J. B. Bowden, of the Northwest Service Station, has taken the Overland tire agency.

HEALDSBURG.—Ray Velps, Exide battery agent, has moved to larger quarters in the Speedway Garage.—George C. Schelling has taken on Studebaker distribution, locating in the Speedway Garage on North West street.

LODI.—A fireproof building, 104 x 32, will soon be constructed on South Sacramento street, for Rice & Johnson, of the Lodi Motor Co., Durant agency.—A garage and machine shop, 36 x 66, will be erected for J. H. Walters on Central avenue. It will be the new location for his repair business.

LOS ANGELES.—L. M. Ogle has sold his interest in the Ogle-Harrison Motor Co., located at 1680 N. Western avenue, to A. H. Munroe.—A new home has been opened at 1649 El Centro street by the Buick Automobile Shop, formerly located at 1516 S. Flower street.—I. H. Weaver and S. R. Walters have purchased the Selma Ave. Garage, located at 6450 Selma avenue.

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Record of One EARL Distributor—72 Dealers in Seven Months

By C. A. Earl

RED-LETTER days come to every man. I had one quite recently when a new Earl distributor forwarded to me the answer which Mr. E. A. Myers, Earl distributor in Western Pennsylvania, had made to his request for an opinion on the Earl's selling possibilities. The letter, he knew, would give me a thrill. It did. Let me quote part of it:

"We have handled a number of cars with varying degrees of success," Mr. Myers wrote, "but when I tell you that we think so much of the Earl line, the organization back of it and their manner of handling the business, that we have given up everything else for this particular line, you will realize that we see something in it.

"As a matter of fact, we have never handled any car, regardless of price, which has given such universal satisfaction or has stood up so well and given such splendid service. With the wonderfully economical operation of the car, you will realize what this means from the standpoint of selling.

"We were obliged to build up almost a complete dealer organization on this Earl line. When we tell you that we now have seventy-two dealers, you will appreciate that we have a wonderfully good selling proposition or that we have done some real work in selling. We have worked, of course, but when we tell you that we have done more with this car in seven months' time than we were able to do in the last six years with all other lines combined, it will give you a better idea of the Earl's selling value to the dealer and distributor.

"Cars in our territory get the hardest kind of service. 5,000 miles here means more than 10,000 to 15,000 miles in level country. Some of our cars have a mileage of 12,000 miles or more and have had such hard usage that we do not need to do any guess work about their standing up. If there is a car in the Pittsburgh district standing up better or looking better than the Earl after many months of hard service, we have not been able to find it.

"In our business, we have learned to our sorrow that it takes something more than a good car to enable us to make a success—and that is the kind of a factory behind it. Personally, I would not touch the best car built in America today, unless it had a factory back of it controlled by men who know how to treat the dealer and the owner and are willing at all times to consider the interests of these people as well as their own. If you take on the line and do not get all this from Earl Motors, it will be completely at variance with our experience.

"If you are in a position to handle a good line of cars, you surely can make no mistake on the Earl line."

Such a letter needs no postscript except my thanks and the thanks of the whole Earl organization to Mr. Myers.



President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Bang Service Stations, Manhattan, N. Y., has increased its capital from $350,000 to $500,000.—Billings Garage, Manhattan, N. Y. Capital $10,000. Incorporators: G. Boyd, A. L. Boyd and G. M. Boyd.—Burbock Non-Skid Tire Corp., Manhattan, N. Y., has increased its capital from $250,000 to $500,000.

Fort Orange Auto Club, Manhattan, N. Y. To operate garages. Capital $50,000. Incorporators: G. E. Gorman, C. Webb, G. A. Taylor.—Heims Motor Sales, Manhattan, N. Y. Capital $10,000. Incorporators: D. Schneer, B. Moses, A. A. Warsnop.—Joseph Van Blerck Engine Corp., Manhattan, N. Y. To engage in a motor engineering business. Capital $75,000. Incorporators: J. Van Blerck, F. B. Sexton, B. Pollack.

Curleys Yellow Taxi Co., Brooklyn, N. Y. Capital $20,000. Incorporators: L. Kabrofsky, L. Perch, N. Wysolseky.—S. & M. Sales Corp., Brooklyn, N. Y. To deal in automobile robes. Capital $5,000. Incorporators: A. Morris, G. V. Reilly, A. W. Britton.

H. and G. Auto Supplies Co., Brooklyn, N. Y. Capital $10,000. Incorporators: J. Heinbinder, J. and J. Gold.—906 Union St., Brooklyn, N. Y. To manufacture motors and automobiles. Capital $30,000. Incorporators: M. R. Krooph, H. Roth, L. Frankel.

Brooklyn Motor Service, Brooklyn, N. Y. Capital $50,000. Incorporators: M. Klein, R. C. Kotz.

Taylor-Nielsen, Buffalo, N. Y. To deal in automobiles. Capital $50,000. Incorporators: M. Taylor, H. S. Nielsen, C. E. Taylor.

Clinton-Bowen Garage, Elma, N. Y. Capital $10,000. Incorporators: J. C. Klump, F. Garby, N. E. Klump.

People's Garage Co., Ogdensburg, N. Y. Capital $10,000. Incorporators: F. D. Vallance, D. Peaster.

Monroe Storage Battery Corp., Rochester, N. Y. Capital $6,000. Incorporators: D. H. McConnell, C. Harster, R. W. Matson.

Watertown Parts Corp., Watertown, N. Y. To deal in machinery and automobile equipment. Capital $10,000. Incorporators: M. A. Gilligan, A. Morris, T. Laidlaw.

NEW JERSEY.—Automobile Accessories Distributors, Inc., Newark, N. J. To deal in automobile accessories. Capital $1,000,000.—Foley Chevrolet Motor Sales Co., Newark, N. J. To engage in a general automobile business. Capital $200,000.

Hudson Auto Supply Co., Paterson, N. J. Capital $50,000. Incorporators: Harry Pappaport, Joseph Pappaport, Isadore Greenbaum.

PENNSYLVANIA. — Standard Tire Co., Pittsburgh, Pa. To deal in tires. Capital $20,000. Incorporators: L. W. Bossard, P. B. Welsh, E. F. Grimm, J. L. Stahlnecker, D. C. Ulrich.

Pennsylvania Motor & Implement Co., New Wilmington, Pa. Capital $100,000.

DELAWARE.—Penn Valley Motors Corp., Dover, Del. Capital $50,000. Incorporators: J. G. Boegeman, T. A. Sheehan, J. L. Stuart.

Pacific Wheel and Rim Corp., Wilmington, Del. To manufacture rims for automobiles. Capital $600,000.—Universal Motor Owners Association. Wilmington, Del. No capital stock.—United Motor Service Stations, Wilmington, Del. Capital $500,000.

NORTH CAROLINA.—Lefler Motor Car Co., Concord, N. C. To establish an automobile agency. Capital $50,000. Incorporators: S. W. Lefler, H. C. Ridenhour, S. K. Patterson.

SOUTH CAROLINA.—Courtney and Cannon, Inc., York, S. C. To engage in a general automobile, truck and tractor business. Capital $20,000. Incorporators: S. L. Courtney, J. R. Cannon.

GEORGIA.—American Wheel & Rim Co., Atlanta, Ga. To manufacture automobile wheels and rims. Capital $650,000. Incorporators: James W. Cordell and others.

KENTUCKY. — Embry - Weir Motors Co., Louisville, Ky., has changed its name to the Weir Motor Co.—Rayner Auto Safe Lock Co., Louisville, Ky. Capital $25,000. Incorporators: H. L. Rayner, H. G. Walker, Bernard O. Kearney.

OHIO.—Patterson Battery Co., Cleveland, O. Capital $15,000. Incorporators: S. L. Patterson, W. F. Patterson.

States Tire & Service Co., Toledo, O. Capital $10,000. Incorporators: B. Keenan, William J. Moffitt.

H. W. Pfaus Reo Co., Wooster, O. Capital $20,000. Incorporators: H. W. Pfaus, J. W. Predmore, L. A. Careins, C. A. Moog, Rhoda J. Pfaus.

INDIANA —Teetor Manufacturing Co., Indianapolis, Ind., has changed its name to the General Piston Ring Co.

Service Manufacturing Co., Elkhart, Ind. To manufacture automobile accessories. Incorporators: H. M. and P. Smith, W. A. and D. Reichert.

Byron Toney Motor Co., Princeton, Ind. To engage in a wholesale and retail motor vehicle business. Capital $50,000. Incorporators: Marsh T. Lewis, W. Blair, M. P. Hollingsworth, J. A. Mauck, W. P. Anthony, Byron Toney.

Richmond Automotive Equipment Co., Richmond, Ind. Capital $10,000. Incorporators: Walker E. Land, Raymond B. Mather, George W. Rohe.

ILLINOIS.—K. & K. Tire & Accessory Co., Chicago, Ill. To deal in automobiles, accessories, etc. Capital $3,000. Incorporators: A. H. Brown, A. J. W. Appel, Lawrence A. Rice.—Chicago Automotive Institute, Chicago, Ill. To conduct correspondence courses in motor mechanics, driving, caring for and conducting garages, etc. Incorporators: J. Baystom, H. J. Moynihan, J. E. Furtner.

Sharp Sales and Service Co., Springfield, Ohio. To sell Reo cars and speed trucks in Clark, Champaign and Logan counties. Capital $25,000. Incorporators: Charles F. Sharp, George Sharp, and others.

Motors Service, Inc., Wilmette, Ill. To operate a public garage and deal in automobiles, accessories, etc. Capital $10,000. Incorporators: A. S. Van Deuser, J. C. Sloan, A. S. Van Deuser.

WISCONSIN.—Manley Oil Co., Eau Claire, Wis. To conduct a filling and service station. Capital $20,000. Incorporators: A. R. Manley, E. Dagenhardt, C. T. Lewison.

Germantown Comet Oil Co., South Germantown, Wis. Capital $15,000. Incorporators: John Schaetzel, H. F. Kaul, L. Gooding.

MONTANA.—Havre Motor Company, Havre, Mont. To handle Ford products and conduct a general wholesale and retail accessory business. Capital $100,000. Incorporators: W. C. Lange, William Kendig.

OKLAHOMA.—Auto Cylinder Works, Bartlesville, Okla. Capital $10,000. Incorporators: H. E. Gibbs, E. L. Davis, J. E. Jenkins.

TEXAS.—Central Texas Motor Co., Austin, Tex. Capital $10,000. Incorporators: H. C. Smith, W. C. Arnett, J. A. Pierce.

Dallas Automobile Club, Dallas, Tex. No capital stock. Incorporators: R. Angell, F. G. Jester, F. E. McLarty, and others.

Fort Worth Battery Co., Fort Worth, Tex. Capital $10,000. Incorporators: C. R. Hickman, E. H. Hickman, S. C. Hickman.

Yantis-Herpel Motor Co., San Antonio, Tex. Capital $200,000. Incorporators: R. S. Yantis, E. H. Herpel, G. G. Ivers, and others.

Diamond Auto Products Manufacturing Co., Waco, Tex. Capital $15,000. Incorporators: W. G. Wiley, L. L. Ballard, E. B. Speer.

NEW MEXICO.—White Garage, Albuquerque, N. M., has changed its name to the Albuquerque Motor Co.

OREGON.—General Tire Co., Portland, Ore. To buy and sell automobile tires. Capital $25,000.

CALIFORNIA.—Robert P. Fite, Inc., Los Angeles, Cal., has increased its capital to $500,000. — Four Wheel Hydraulic Brake Co., Los Angeles, Cal., has increased its capital from $250,000 to $500,000.

Briley Battery Corp., Oakland, Cal. Capital $250,000. Incorporators: Louis Briley, A. J. Sloan, Edward L. Kirk.

Eight Wheel Motor Vehicle Co., San Francisco, Cal. To manufacture eight-wheel motor vehicles. Capital $200,000. Incorporators: Emery Winship, R. B. Bonn, B. H. Beecher, and others.

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REO

Watch for the New Models

Very shortly two new closed models will be added to the Reo line. This will give a double line of Reo passenger cars, made to a single standard—the Reo Standard of Excellence.

Two open models—7-passenger Touring; and the New 5-passenger Phaeton, just announced.

4-passenger Coupe, and 5-passenger Sedan, in all-steel construction, representing all that can be desired in comfort; and a Coupe and Sedan of same seating capacities as above, in Full Aluminum, and the last word in luxurious appointments.

To describe the differences—and all the reasons why—in this small space were impossible.

Anyway you will have to see them yourself to fully understand and appreciate.

Prices are startling, but price alone is no measure of value. It's the quality at the price, that makes each Reo in its class, "The Gold Standard of Values."

With that Mighty Speed Wagon, and the Reo-Cab (a "taxi" model) the Reo line is the most complete line of motor vehicles ever made by one concern.

Changes in dealer representation occur occasionally. A letter to the Sales Department will put you in line should one be imminent in your territory.

Reo Motor Car Company, Lansing, Michigan

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CALENDAR

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Toledo, Ohio, September.—Annual Convention of the Ohio Automotive Trades Assn.

Sioux City, Iowa, Sept. 15-19.—Automobile Exhibit, to be held in connection with the Interstate Fair, auspices of the Motor Trades Bureau, Interstate Fair Grounds; Milton E. Duggan, manager.

The Hague, Netherlands, Sept. 15-20.—Annual Automobile Show.

Rome, Italy, Sept. 18-23.—Second Annual Meeting of the International Chamber of Commerce.

Cleveland, O., Sept. 18-28.—Exhibition of Closed Cars during the Merchants and Manufacturers' Exposition, auspices of the Cleveland Automobile Manufacturers' & Dealers' Assn.; Herbert Buckman, manager.

Cleveland, O., Sept. 19.—Society of Automotive Engineers, meeting of Lighting Division, Standards Committee.

Cleveland, O., Sept. 20.—Society of Automotive Engineers, joint meeting of Axle and Wheels and Ball and Roller Bearings Divisions, Standards Committee.

Cleveland, O., Sept. 21.—Society of Automotive Engineers, meeting of Lubricants Division, Standards Committee.

Detroit, Mich., Sept. 22.—Society of Automotive Engineers, meeting of Truck Division, Standards Committee.

New York, N. Y., Sept. 23-30.—Closed Car Show, auspices of Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

Detroit, Mich., Sept. 25.—Society of Automotive Engineers, meeting of Frames Division, Standards Committee.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of German Automobile Manufacturers' Assn., Kaiserdamm Hall.

New York, N. Y., Sept. 28.—Society of Automotive Engineers, meeting of Motorboat Division, Standards Committee.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Rochester, N. Y., Oct. 2.—Society of Automotive Engineers, joint meeting of Electrical Equipment Division, Standards Committee, with Automotive Electric Assn.

Ventura, Cal., Oct. 4-8.—Automobile Show, in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson, manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, manager.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, National Automobile Chamber of Commerce, Drake Hotel.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Boston, Mass., March 10-17.—Passenger Car, Truck, and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

HOUSE ORGAN KEYNOTES

Opportunities are all about us. As long as one's mind is unimpaired and he has possession of the greater part of his faculties it is not "too late."

Sometimes it is necessary that we cast aside many of our pre-conceived ideas of our associates. Ofttimes we must frankly admit that we do not know as much as we thought we did.

Ofttimes we must change our "focus," then we will see opportunities that we stumbled over and did not see before.

Opportunities, yes, there are millions of them waiting for you, for all of us. If you don't believe it just give yourself, your methods, your viewpoint, a careful, honest-to-goodness survey and see if you can't see them.

Probably at no period in the world's history were there so many opportunities for salesmen, for the truck owner, for the prospective owner, for the employer, for the employee, as right now.

Opportunities for amassing money, for making new friends, for doing someone a needed service, for improving one's mind and adding to the store of knowledge, for good, and for evil. Opportunities, why, they cluster about us, big ones, little ones, medium sized ones. Pages of history are full of true stories of men and women who daily passed by opportunity until the Great Divide was just a little ways ahead, then grasped it firmly and the rest of the journey was made in a blaze of glory.—*Acme Angles.*

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AJAX TIRES
With New Features

Their performance records have proved the truth of their maker's claims — mileage, good looks, non-skid security.

More and more manufacturers of leading motor cars are using the famous black tread Ajax Cord tires as original equipment. Thousands and thousands of new customers are being made, therefore, for Ajax dealers.

Ajax Tires are in big demand among car owners. Therefore they offer an exceptional profit opportunity to dealers.

AJAX RUBBER COMPANY, INC.

General Offices, New York City
Branches in Principal Cities

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PUBLISHER'S OBSERVATIONS

CARRYING COALS TO NEWCASTLE

CABBAGES, 65 carloads of them, shipped from Texas to the markets of Boston, Chicago, Indianapolis, and Pittsburgh, from February to April, 1921, have been historically embalmed in the records of Congress and there form a suggestive and odorous exhibit. Every dollar's worth of value attributable to them as laid down at those consuming centers was distributed somewhat as follows: To the farmer, 12 cents; to the railroads, 75 cents; to the Government, in transportation taxes, 10 cents; to the distributer, 3 cents.

¶ For months, a joint committee, representing the National League of Commission Merchants, the Western Fruit Jobbers' Assn. and the International Apple Shippers' Assn. has been gathering facts to dispute the assertion that the middlemen whom they represent are among the outstanding profiteers of the times. Business of passing the buck to the railroads has resulted, and statistics purporting to establish the infamy of the latter have been filed with the Joint Agricultural Committee of Congress.

That is how the cabbage exhibit got into the *Congressional Record*, along with many other rare, costly and quaint specimens in the Government's literary garret. Happening to be spread upon the record at a time when the railroads are under fire, it is all the more interesting.

Curiously enough, however, it is recalled to a mind not above the contemplation of cabbage that in the Fall of 1920, Long Island production in respect to the constant companion of corned beef was way above par. At Riverhead, which is an important outpost of the New York market, cabbage was worth one cent a head. Farmers were letting their crops rot in the ground because it wouldn't pay to harvest them. Probably the same was true in the other markets which, the next Spring, bought the Texas product eagerly.

It may be true, as the joint committee charges, that in these and other instances the railroads reap six times as much benefit from the farmer's effort as the farmer does himself, and that the railroads profit 27 times as much as the middleman. It is convenient, safe and popular to pound the railroads. But the principle of the thing is of infinitely greater importance.

¶ The American public has a marked propensity for the attainment of the remote and difficult. It glories in earning, and it glories even more in spending. Thus it is not only an enormous producer but a prodigious consumer. Its consumption of what are literally foreign products, whether they be manufactures from abroad or out-of-season foodstuffs, has become a habit. So that it almost might be said that what is indigenous is often thought negligible. The prophet is without honor in his own country. So is the onion.

But, some ways, this has gone too far. It is beginning to play a significant part in the cost of living. Reformers would say it must stop; shrewd business advisors would counsel some sort of a counter proposition. It is easy to see what this might involve, and a constant surprise that it is not done.

¶ Texas cabbages, Aroostook County potatoes, Hood River apples—a good many such products might be named that have been developed way beyond their natural markets until the demand for them has become the basis of an industry. Reformers would say that this is wrong, but economists would point out, in return, that it evidences enterprise of the highest order, —especially when a branded apple can cross the Continent and practically drive out of the market the local product—and that such enterprise is deserving of its reward.

Transportation charges consume more than half of the wholesale cost of many products because the service is there; time and distance are involved. Even if railroad rates were ridiculously low on perishables, the charge would still seem disproportionate. Reforming the carriers would not modify acquired tastes.

The middlemen, to get their three per cents, have done more than bring produce long distances; they have cultivated the market to the point where it is possible actually to boost the price of local products by bringing in foreign products to compete with them. They have succeeded very largely in depopularizing the home-grown crop.

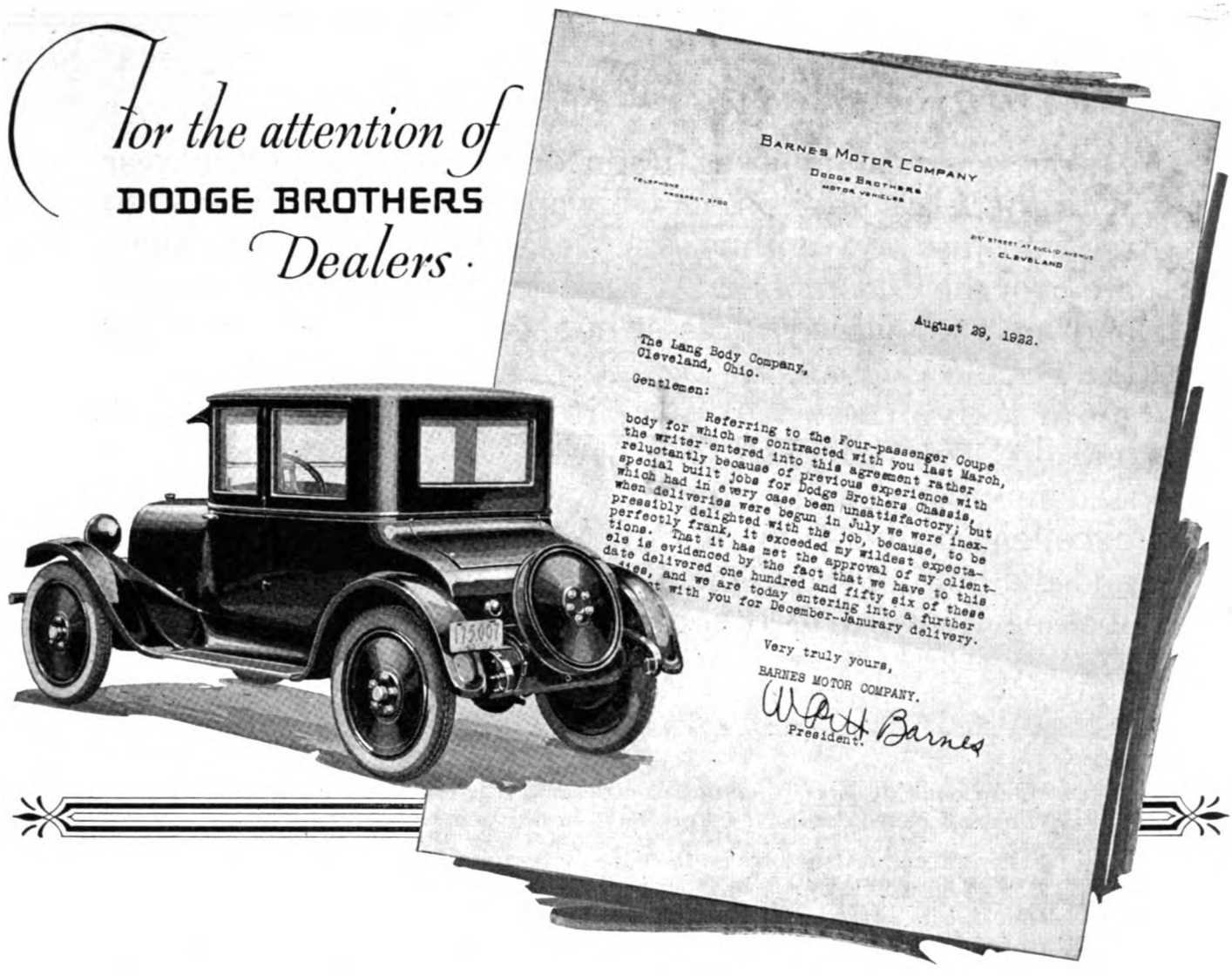
If the railroads are taking, out of food and other commodities and products, too high a tax, there is but one efficient remedy. That is to develop local growers' and producers' associations, which will create and advertise their own brands, regulate quality and control prices, pack the surplus, take care of the by-products and generally do what the successful producing groups in other lines, and in the same lines elsewhere, already have done.

¶ The main trouble with this Country's freight bill is that so much of it is paid for carrying coals to Newcastle. While experts are studying the balance of foreign commerce, no one stops to investigate the balance of inter-state commerce, but it is distinctly unfavorable to many states, and it would pay to give it constructive attention. If local producers could only be aroused, direct shipment by motor truck would replace a good deal of the present long haul business, not only on perishables, but on manufactures as well.

The average producer is too eager for a wide market. Let him cultivate more assiduously the possible demand within the limited radius of direct distribution and he will be a great deal better off. That goes for West as well as East.

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For the attention of
DODGE BROTHERS
Dealers.



Mr. W. Pitt Barnes, Cleveland dealer for Dodge Brothers, finds that he can lend a new tone to his entire display by showing one of the de-luxe 4-passenger Coupes which we will soon be prepared to supply to Dodge Brothers Dealers generally.

He finds that it readily attracts its own select group of admirers, establishing its market with a precision that insures a steady turnover and a substantial profit.

His sale of 156 of these Coupes in the short space of three months affords some idea of the unusual opportunity it gives dealers for extra business of a highly desirable character.

The remarkable success which Mr. Barnes and other prominent dealers have enjoyed in the sale of the de-luxe 4-passenger Coupe, influenced us to decide on a material increase in production.

It is now evident, however, that we shall be unable to supply dealers who do not contract in advance for their fall and winter requirements. If you are interested in profiting by the example of Mr. Barnes, we suggest that you get in touch with us today.

The **LANG BODY COMPANY**
CLEVELAND, OHIO

Automotive Bodies

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In Pueblo, Colorado—

"As we are now entering upon our fifth consecutive year with the Oldsmobile line we want to take this occasion to tell you just how enthusiastic we, and all of our customers, are over the Oldsmobile. We see dealers in other cars come and go with varied success, but we are proud to say that the Pueblo Oldsmobile organization is to-day stronger and more active then ever, in spite of our staggering flood and fire losses of 1921. We have always been proud of our Oldsmobile franchise, and now, with the new models, the excellent cooperation of our distributor and the factory, and the help of the General Motors financing plan, we are looking forward to the biggest business in our history."

PUEBLO OLDSMOBILE CO.
E. J. BEATTY, Manager

Oldsmobile dealers are enthusiastic dealers, whether you find them in Pueblo, Colorado, or in New York City—in Stockton, Kansas, or in Chicago.

They are enthusiastic because they are successful—and successful because their Oldsmobile franchise provides them with a high grade, easy-selling line of cars, backed by the prestige of a respected name, and endorsed by thousands of loyal Oldsmobile owners, who in themselves constitute a perpetual prospect list.

Every Oldsmobile dealer enjoys the advantages of the strong General Motors financing plan, which is unequalled in the industry.

If your present arrangements are not satisfactory, why not follow the example of the Pueblo dealer, whose letter is quoted above? The right territory may be available to you right now!

A telegram, a 'phone call, or a letter will bring you full particulars at once.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation



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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter-Dem.Wheels	3¾x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3⅛x4¼	Con	L	H	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5	.....	490	2	.....	760§	4	.....	.....	.....	3⅝x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5	.....	510	2	.....	680§	2	860	5	C.....	3½x4	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	550	5	.....	550	2	.....	850	2	895	5	.....	3⅜x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P.....	850	2	C, P.....	980§	2	1,440	5	C, K, N, P.....	3⅞x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P.....	865	2	B, D, P.....	1,175	3	1,395	5	B, D, P.....	3¾x4¾	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5	.....	865	2	.....	1,325	3	1,395	5	.....	3½x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2	.....	1,095‡	5	1,385	5	B.....	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P.....	885	2	C, K, P.....	1,235	4	1,335	5	C, D, K, P, T.....	3⅝x4½	Own	L	H	T	...	.....	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z.....	890	2	P, Z.....	1,365	4	1,365	5	C, P, V.....	3⅞x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D H.....	895	2	C, D, H.....	1,095§	2	1,345	5	C, D, H.....	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5	.....	915	2	.....	1,275§	5	1,545	5	.....	3⅜x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5	.....	985	2	.....	1,400	3	1,450	5	.....	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Dixie Flyer	995	5	D, G, O.....	1,095	4	D, E, G, O.....	1,395	3	1,395	5	D, G, N, O, V.....	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Crow-Elkhart "L-55"	1,095	5	B.....	1,145	4	.....	.....	.....	.....	.....	.....	3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow Elkhart "L-55"
Earl	1,095	5	C, D, E, H.....	1,485	2	C, E, H, J, M, Z...	1,395§	4	1,795	5	C, E, H, N, T, V..	3⅛x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b....	1,095	2	C, D, H, O, P, b...	1,345	3	.....	.....	C,D,H,N,O,P,T,U,b	3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5	B, D, H.....	.....	.....	.....	1,295‡	5	.....	.....	.....	3½x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Halladay	1,095	5	.....	1,095	2	.....	1,990	3	2,085	5	.....	3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5	.....	1,225	4	C, D, M, P, Z.....	1,425§	5	1,745	5	P, V.....	3⅛x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P.....	1,150	2	C, P.....	1,335	2	1,785	5	C, O, N, P, V.....	3¼x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5	.....	1,295	4	.....	1,795	4	1,795	5	.....	3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,375	5	B.....	1,350	2	B.....	1,875	4	2,095	5	B.....	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
R & V Knight	1,665	5	.....	.....	.....	.....	2,385	4	2,475	5	A, B, G, O.....	3¾x5	Own	S	C	T	...	Sts	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	G, I.....	2,175	4	.....	2,650	4	2,765	5	A, H, I, N, V.....	3⅜x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q.....	2,000	2	C, F, H, Q.....	.....	.....	2,750	4	.....	3½x5½	Own	H	C	T	...	.....	Del	Del	.....	Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5	.....	2,250	2	.....	3,150	4	3,450	5	.....	3⅜x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M.....	2,475	2	D, 2J, M, Y.....	3,250	4	3,475	5	C, 2J, L, O, U, V.	3⅝x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S	.....	32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q.	2,790	4	B, D, H, J, L, O, Q, X	3,490	4	.....	.....	B, D, H, J, L, O, U.	4¾x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,370	7	D, G, J, K.....	.....	.....	.....	3,450	4	3,450	7	D, G, J, K, O.....	4¼x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H.....	3,000	2	.....	3,600	.....	4,000	.....	.....	3½x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z....	3,985	2	A, D, G, J, L, Z...	.....	.....	4,650	4	.....	4¼x6	Dus	T	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L.....	3,950	4	B, G, 2I, L.....	4,850	4	5,250	7	B, G, 2I, L.....	3¾x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G.....	5,000	2	.....	.....	.....	7,000	5	G.....	4x5½	Own	S	C	P	...	Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D, K¹.....	975	2	B, D, K¹.....	1,225	3	1,550	5	B, D, C, G, K¹...	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K.....	985	2	H, J, K.....	1,295	3	1,395	5	H, J, K, V.....	3¼x4¼	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	.....	31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P.....	.....	.....	.....	.....	.....	.....	.....	.....	3¼x4¼	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B.....	995	3	B.....	1,445	4	1,465	5	B, V.....	3¼x5	Own	L	H	P	...	Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P.....	1,165	4	C D H K P T V W Z	1,135‡	2	1,545	5	C, N, O, T, V.....	2¼x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5	.....	1,260	5	C D E H J L T W X Z	1,495	4	1,585	5	.....	3⅛x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5	.....	1,095	2	.....	1,750	3	1,825	5	.....	3½x4¼	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P.....	1,185	2	C, K, P.....	1,595	4	.....	.....	.....	3¼x4½	Own	L	C	T	...	Str	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P....	.....	.....	.....	.....	.....	.....	.....	.....	3¼x4¼	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C D, P.....	1,175	3	B, C, D, P.....	1,935	5	1,985	5	B, C, D, G, P, T, V	3½x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5	.....	.....	.....	.....	1,995	4	1,995	5	.....	3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R.....	1,395	4	R.....	.....	.....	2,040	5	D, R, V.....	3¼x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, K¹.....	1,250	2	B, C, D, G, K¹...	1,875	4	2,050	5	B, D, G, K¹, S....	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P.....	1,275	2	D, H, P.....	1,795	5	1,795	5	D, H, N, P, V.....	3¼x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	3¼x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z.....	.....	.....	.....	.....	.....	1,795*	5	E, O.....	3¼x4¼	Con	L	C	P	...	Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Elgin "K-1"	1,295	5	C, D.....	1,345	4	C, D, H, K, Z.....	1,695	4	1,695	5	C, H, N.....	3⅛x4¼	Fal	H	H	T	...	Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Moon "6-40"	$1,295	5							$1,695	5		3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	$1,895	4	1,945	5	C D E H I N O P T V ab	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3¼x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Liberty	1,395	5		1,575	5	C, D, G, H, K, O, T, Z	1,695§	2	2,095	5	C, D, H, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, O	1,895	4	D, E, G, J, K, O, W	2,275	4	2,345	5	D, O	3⅜x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3⅜x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	G, K	1,685	4		2,935	4	2,935	5		3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G [illegible] T U W Z b	2,355	4	2,435	5	B, G	3¼x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,385	4	1,935	5		3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O, P	1,545	2	D, G, H, K¹, O, I	2,095§	3	2,395	5	D, G, H, K¹, O, P, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3½x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Mitchell	1,595	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Davis "61"	1,595	5		1,695	4		2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		[illegible]x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	2,550	7	A	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2		2,645	5				3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	[illegible]	War	Tim	S	5.0	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, K¹, O, S	1,785	4	2[illegible], X, Y, F, K, 2	2,275	4	2,47[illegible]	7	B, C, D, G, K¹, O, S	[illegible]x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K¹, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Hudson	1,695	7	B, D, H	1,645	4	B, D, H	1,745§	5	2,295	7	B, D, H, U, V	[illegible]x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y	2,145§	5	2,54[illegible]	5	U	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	[illegible]x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-48"	1,785	5	B	1,785	2		2,785	4	2,785	5		3¼x4½	Con	L	H	P		Ray	Del	Del	B&B	B-L	Tim	S	4.66	32x4	122	Moon "6-48"
Moon "6-58"	1,785	7										3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S		32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,350	4	2,690	5	A, D, H, N, P, V, b	[illegible]x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,785	5	2,785	5	B, D, Z	3⅜x4½	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										[illegible]x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Y b	1,895	2	F H 2I 2J K R T V W X Y	2,195	3	2,695	5	F H 2I 2J K R T V X Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3½x5¾	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5							2,985	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3⅜x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4	3,825	7		3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	[illegible]x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5[illegible]	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	4,250	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"
Packard Single-Six	2,685	7	C, G, O, M						3,525	7		3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3⅜x5	Own	S	C	P		Ray	A-E	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X	.....	...	$3,795	4	A C F G H J K O P T X	3½x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5	.....	2,975	2	.....	.....	...	4,500	5	.....	3½x5½	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5½	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6	.....	3,100	4	.....	.....	...	5,500	5	.....	3½x5½	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, G	3,100	4	A, B, G	4,300	4	5,100	7	A, B, G	3½x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	35x5	132	Winton "40"
Ogren	3,750	5	.....	3,750	4	.....	4,500	4	4,800	5	.....	3½x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	.....	3,800	4	.....	4,600	4	4,800	7	.....	3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z	.....	...	.....	4,900	3	4,900	5	A C D G H J M O T Z	3½x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y	.....	...	6,500	5	A, G, H, O	3½x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5	.....	.....	...	.....	.....	...	6,825	7	.....	3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M O Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4	.....	.....	...	8,900	7	.....	4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X	.....	...	11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	...	B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	.....	...	.....	.....	...	.....	..	.....	4½x4¼	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
												EIGHT-CYLINDER PASSENGER CARS																
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	2,145	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P	.....	...	2,635	7	G, N, O, P	2⅞x4¼	Own	L	H	P	...	B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, V, Z	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Standard	2,500	7	A, D, G	2,500	4	A, D, G	2,750	4	3,200	7	A, D, G	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Apperson	2,645	7	A, G	2,620	4	.....	3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A, B, G, M, N, O, X	2,685	4	A, B, G, M, N, O, X	3,385	4	3,685	7	A, B, G, M, N, O, X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3¼x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C G, O, T, U, a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2	.....	5,350	...	6,000	...	.....	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O X Z	5,800	4	A B E G H I J M O X Z	7,150	4	7,850	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	.....	6,500	4	.....	7,800	4	7,800	7	.....	2⅞x5	Own	H	V	P	...	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
												TWELVE-CYLINDER PASSENGER CARS																
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

† TWO-DOOR CLOSED TYPE: Regular coupe listed except where low-priced two-door closed model is included in line. Latter is distinguishable by symbol §. ‡ **Four-Door.**

ENGINE: **Ans**—Ansted; **Con**—Continental; **Due**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Conneticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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Milestones of The Automotive Era—

Age of Go

At the early automobile shows the exhibits were taken out and operated to prove to doubting spectators that they would actually run. During this early period the proof of the ability of an automobile to serve as a vehicle of transportation was the principal selling argument.

Age of Comfort

The introduction of the pneumatic tire and development of springs, suspension and cushions, marked an era when it was necessary, in order to overcome sales resistance, to reduce the shocks of the road so as to make automobile riding more comfortable.

Age of Convenience

The adaptation of a complete electrical system to the automobile with its electric lights, horn and starter, marked that period when greater convenience in car operation was demanded.

Age of Production

There was a time following the World War when demand exceeded the supply and about the only sales argument necessary was that you could deliver a car.

Age of Beauty

The lines and appearance of all automobiles improved greatly during the period immediately following the War and 1922, the year of recovery, stands out as a year when appearance had a predominating influence in the selection of a car.

Today

The inventive genius and the manufacturing and marketing ability of the men engaged in the automotive industry have resulted in the embodiment into practically every make of car all of these desirable qualifications, the introduction of which charts the course of automotive history. All cars run—their riding qualities are wonderful; indeed, considering many of our roads, marvelous—they embody the Convenience of an army of slaves —Production is in keeping with Demand and the cars of today are beautiful beyond the power of words to express—*and everybody in the country wants one.*

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Tomorrow

Not everybody that wants an automobile will be able to buy one. Ability to purchase, not desire, is the factor which will ultimately determine that much talked of point of saturation. We face, today, the inevitable fact that the indebtedness caused by the World War must be liquidated—that for years to come all industry must meet with strenuous competition from impoverished Europe—that the American People are going to find it necessary to be more conservative in their expenditures than ever before in the history of this Country. Not alone the first cost of an automobile, but the cost of upkeep and operation and the rate of depreciation will have an absolutely vital bearing on its purchase in the majority of cases.

From every indication the governing thought in the mind of the car buyer in the future should be—*a maximum life of usefulness—a minimum of expense for upkeep and operation—and a resale value commensurate with a reasonable rate of depreciation on the investment.* In other words, Economy and Long Life.

The lives of cars and their economical operation are in direct ratio to the quality of material, parts and workmanship that go into them. Furthermore, and of no less importance, the buyer's opinion as to quality is very largely formed by his opinion of the units which go to make up any particular car.

In view of the present outlook in the Automotive Industry can any manufacturer afford to overlook in his sales effort any real selling power embodied in his car by virtue of the selection of specialized units which have won their way to leadership thru real proven service to the industry?—That have been uniformly maintained at the highest standard and have come to typify unquestioned reliability to the automotive trade at large?

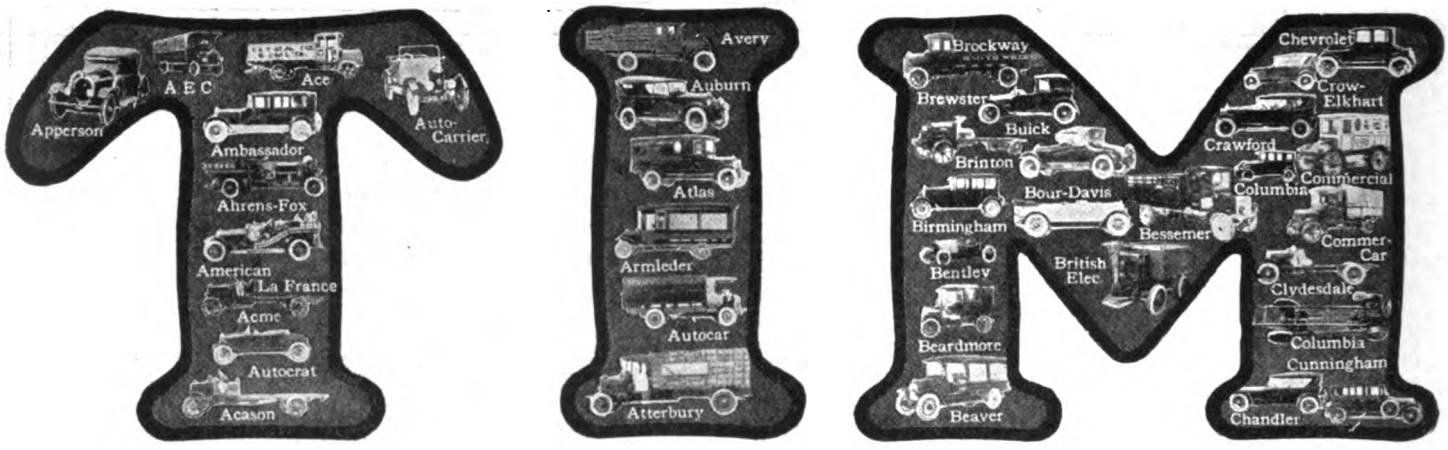
WE believe that this point will not be intentionally overlooked. Furthermore, we subscribe to the principle that the automotive parts manufacturer owes to his industry a co-operative effort which will insofar as possible assist the manufacturer, who eventually sells those same parts to the ultimate consumer, in taking the fullest advantage of their selling power. We have set aside a substantial portion of our advertising appropriation for this co-operative work. Our plans are complete subject to changes which may increase their effectiveness.

To those manufacturers who insure the long life and satisfactory operation of their lighting, starting and ignition systems by the use of *Packard Cable,* we offer our co-operative service which includes—a series of educational leaflets for use of the car salesmen—addresses at sales conferences and a comprehensive Trade Journal and direct mail advertising campaign carried aggressively to the entire automotive industry.

The Packard Electric Company

Warren, - - - Ohio

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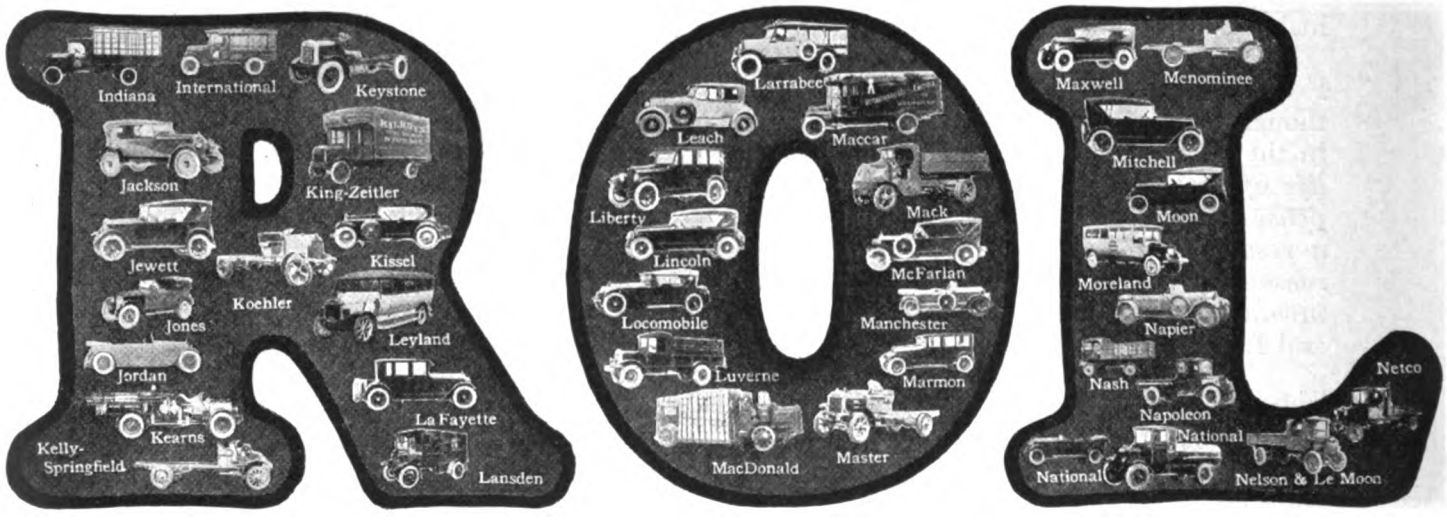


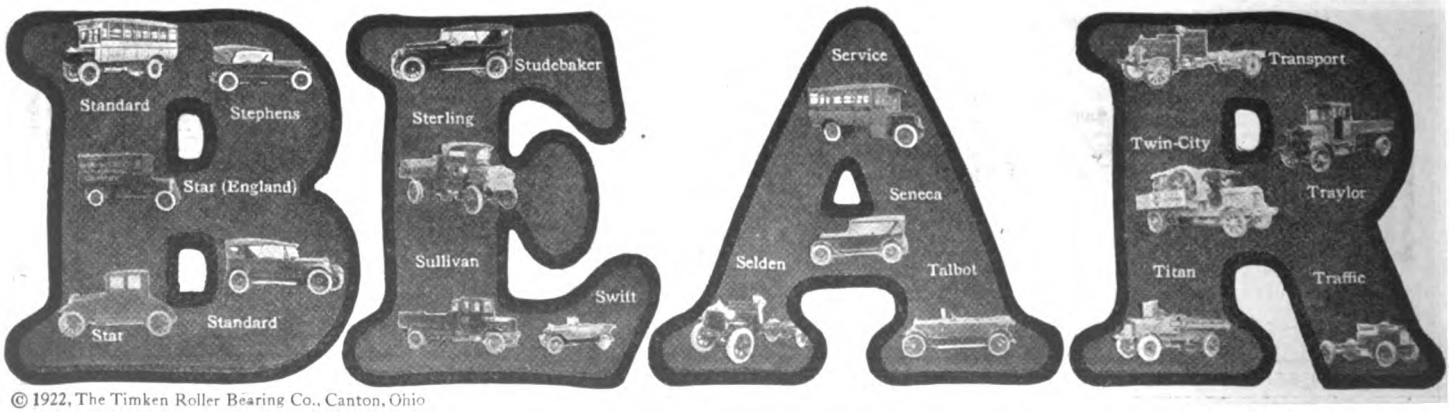
Timken Tapered Roller Bearings

— In Transmissions
and on Pinions & Worms
and in Rear Wheels
and in Steering Pivots
and in Front Wheels
and on Differentials

The Timken Roller Bearing Co
CANTON, OHIO

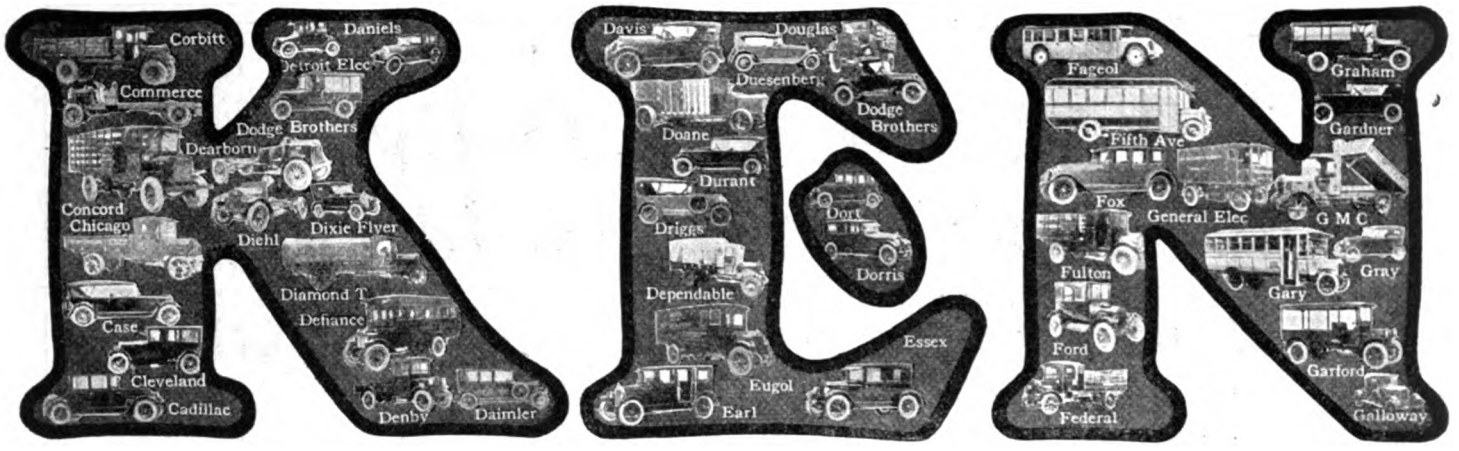


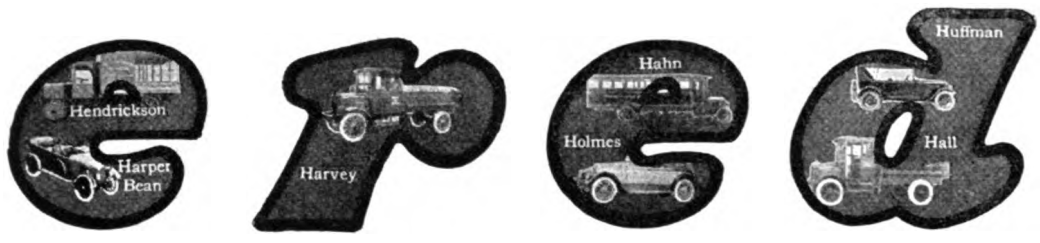




© 1922, The Timken Roller Bearing Co., Canton, Ohio

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We are more than proud of this photographic list of part of the American and European users, year after year, of Timken Tapered Roller Bearings.

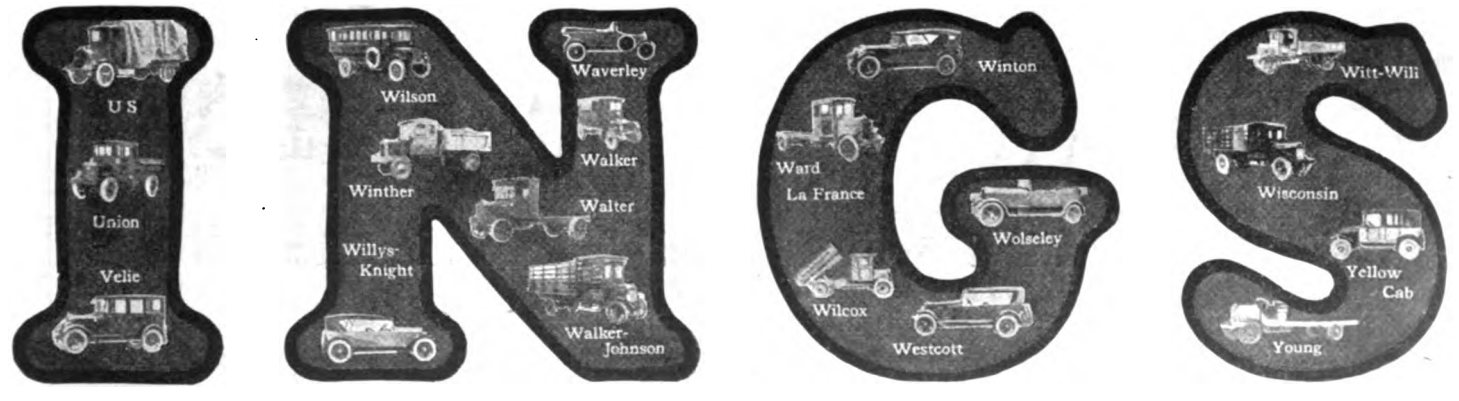
For where Timken Bearings serve so faithfully is in the *vitals* of these vehicles.

Such leadership is maintained, year after year, through merit.

Your car should have the leading bearings—and you should know where.

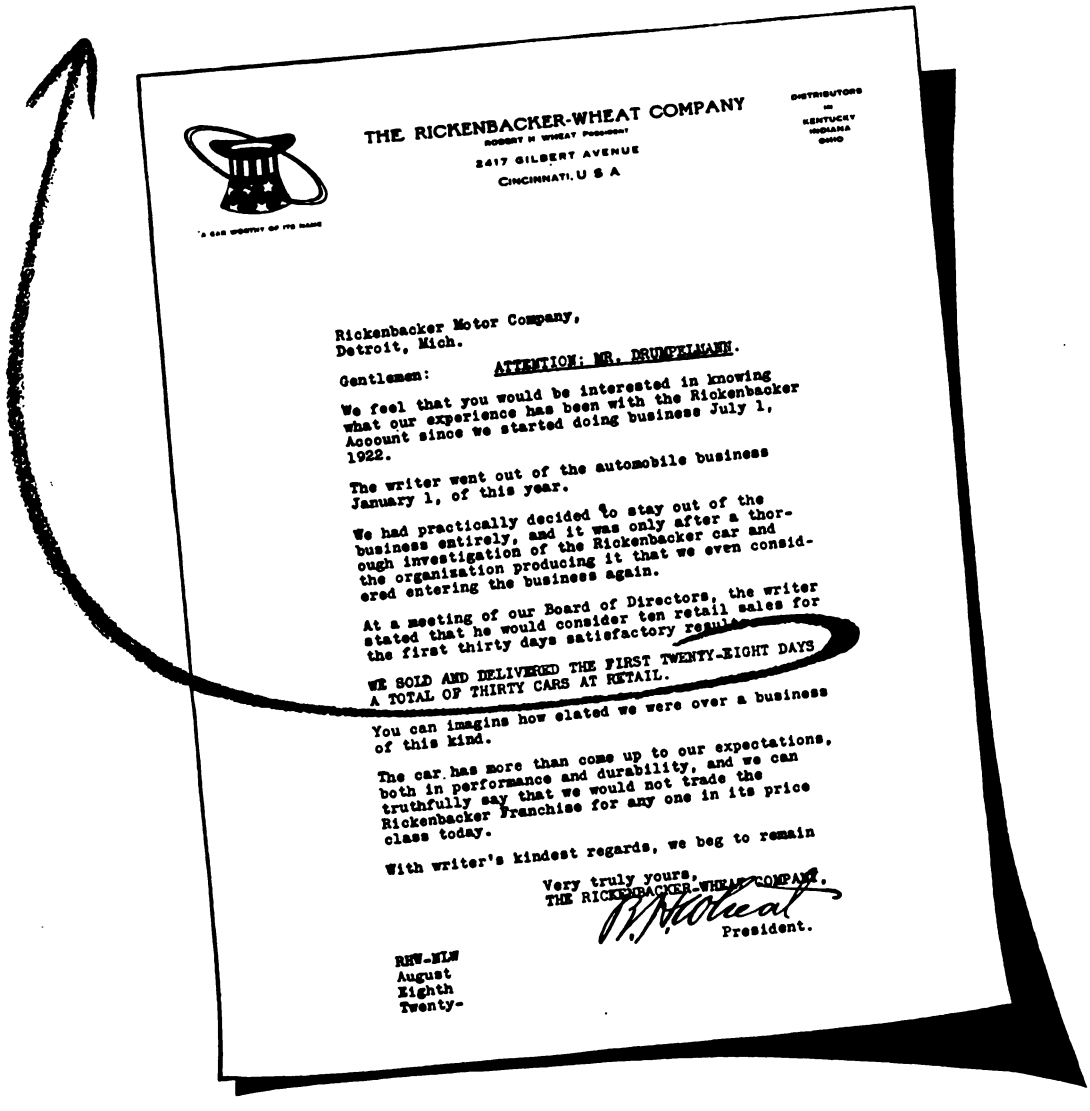
The Timken Roller Bearing Co
CANTON, OHIO





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"We Sold and Delivered the First Twenty Eight Days a Total of 30 Cars at Retail"



THE RICKENBACKER-WHEAT COMPANY
ROBERT H. WHEAT, President
2417 GILBERT AVENUE
CINCINNATI, U. S. A.

DISTRIBUTORS IN KENTUCKY INDIANA OHIO

A CAR WORTHY OF ITS NAME

Rickenbacker Motor Company,
Detroit, Mich.

Gentlemen: ATTENTION: MR. DRUMPELMANN.

We feel that you would be interested in knowing what our experience has been with the Rickenbacker Account since we started doing business July 1, 1922.

The writer went out of the automobile business January 1, of this year.

We had practically decided to stay out of the business entirely, and it was only after a thorough investigation of the Rickenbacker car and the organization producing it that we even considered entering the business again.

At a meeting of our Board of Directors, the writer stated that he would consider ten retail sales for the first thirty days satisfactory results.

WE SOLD AND DELIVERED THE FIRST TWENTY-EIGHT DAYS A TOTAL OF THIRTY CARS AT RETAIL.

You can imagine how elated we were over a business of this kind.

The car has more than come up to our expectations, both in performance and durability, and we can truthfully say that we would not trade the Rickenbacker franchise for any one in its price class today.

With writer's kindest regards, we beg to remain

Very truly yours,
THE RICKENBACKER-WHEAT COMPANY,
R. H. Wheat
President.

RHW-MLW
August
Eighth
Twenty-

Rickenbacker
A · CAR · WORTHY · OF · ITS · NAME

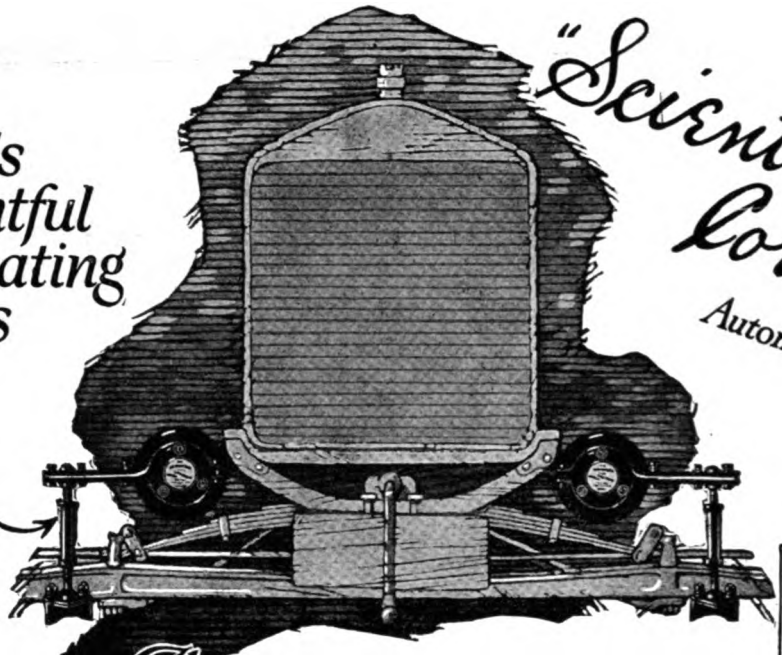
Let us hear from other dealers! Let us show you how you can do likewise with the fastest selling quality car in America

Rickenbacker Motor Company, Detroit, Michigan

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Used by thousands of thoughtful discriminating motorists

"Scientifically Correct" Automotive Engineers



The Positive Double Acting Link



Adding Springs to Springs naturally increases the REBOUND

The Compensated Resistance to Shock

makes the difference between Blackmore Shock and Roll Preventers and ordinary shock absorbers. The difference it makes in the action of the car can hardly be realized. One of the most conspicuous things about the Blackmore is the fact that when a car travels the boulevard that ease of action given by all good springs under ideal road conditions is not interfered with.

When the wheel strikes a bump and the spring is suddenly depressed the Blackmore with its powerful, invisible hand checks the violent *compression* of the spring exactly in proportion to its distance from its normal position or, in other words, acts in exact proportion to the size of the bump. But the Blackmore not only acts as the spring depresses and again as the spring returns but it is double acting above center as well as below, making the only truly compensated double friction action yet designed for motor car spring control.

These principles absolutely prevent the side roll of Ford cars due to their cross-spring construction. Blackmores elongate the spring-base from a few inches to several feet

Automotive engineers have placed their seal of approval on this remarkable device by declaring it to be "scientifically correct" and "practically perfect."

It has taken many years and hundreds of thousands of miles of driving to bring Blackmore to its present high state of perfection, but it is now so mysteriously wonderful in its performance that it almost defies words to explain its operation, although a child detects the surprising difference in the behavior of the car. If you would ride with the smooth gliding movement of a railway parlor car, have a demonstration in any Blackmore equipped car.

This device is now ready and being marketed by distributors and automobile dealers throughout the country for Fords, Dodges, Chevrolets and other light cars. If your dealer is not ready to equip your car with Blackmores drop us a post card and we will arrange at once for your supply.



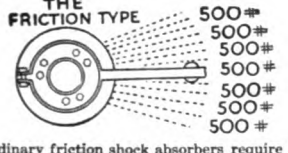
The HOUDAILLE CO.
1440 West Avenue
Buffalo, N. Y.



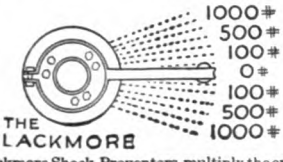
When a Cow puts her foot in the MUD

A cow's foot is built to expand in the mud, thereby furnishing a *compensated resistance* to the weight of the cow. There is no reaction. In other words, the mud does not attempt to spring the foot up again. The Blackmore is the only friction shock preventer furnishing *compensated* resistance, double acting, up and down, both above and below normal center

A Simple Basis for comparison



Ordinary friction shock absorbers require a fixed energy to move them at all positions, on center when only slight resistance is wanted as well as when the spring is farthest deflected from its normal center and has stored in it an enormous reaction energy.



Blackmore Shock Preventers multiply the energy necessary for movement as they move away from center—hence they multiply the resistance to spring overaction and spring reaction in direct proportion to the deflection from center both ways—upward and downward, both above and below normal center.

SHOCK PREVENTERS **BLACKMORE**

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Building Permanent Value Into Your Motor Car Business

The motor car business—both selling and making alike—has gone a long way beyond the stage of quick turns and sudden profits.

The progressive motor car merchant today is as keenly interested in the ten-year future of his enterprise as in his balance sheet for 1922 and his individual outlook for 1923.

Without quality, performance and reasonable price in his car, he knows, no great volume of sales is now possible. And the value of his investment and his community good will, he realizes, is equally dependent on the maintenance of this winning balance indefinitely.

The character of the factory organization behind your car, therefore, is doubly important. Stability and experience, a sound financial position and adequate production facilities are essential both to your present profits and your future prosperity.

On this basis, the Stephens organization invites you to make an immediate and searching study of its motor cars, its three great factories, its efficient production methods and exceptionally strong financial situation.

Stability has marked Stephens policies from the first. In design, the current models are developments of the models which have gone before. No radical changes have been made; only improvements have been made in quality. Back of every important decision has been the authority of fifty-five years of experience in making and merchandising articles of utility and character.

You cannot conceive the dependable worth of the Stephens Six and the permanent value of the Stephens franchise until you have seen the Stephens plants and watched Stephens men building Stephens cars with a care and fine craftsmanship only a few high-grade automobiles now receive. Write for our contract terms and catalogue of body types. And plan an early visit to Moline.

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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Cold Days are Coming—

and a greater demand for the comfort Perfection Heaters bring to motor car owners.

This year the Perfection line is more attractive than ever to live dealers. The new multiple-size valve makes installation easy. The quality has been improved wherever possible and greatly increased production permits an average reduction of 25% on former prices.

Write now for more information.

The PERFECTION HEATER & MANUFACTURING Co.
6545 CARNEGIE AVENUE ∴ CLEVELAND, OHIO

PERFECTION
MOTOR CAR
HEATERS

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Delco

STARTING LIGHTING AND IGNITION SYSTEM

MOTOR NASH CARS

You would naturally expect that so thoroughly good an automobile as the Nash would be equipped with Delco Starting, Lighting and Ignition.

Delco equipment was dictated by the Nash Standard of quality, and by the fact that Delco is everywhere considered the finest electrical service for motor cars that modern science has produced.

THE DAYTON ENGINEERING LABORATORIES COMPANY
DAYTON, OHIO, U. S. A.

THE DAYTON ENGINEERING LABORATORIES CO. STARTING DELCO LIGHTING IGNITION DAYTON, OHIO

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Retail Price, complete outfit (Oil Shooter—with holster and 42 fittings)

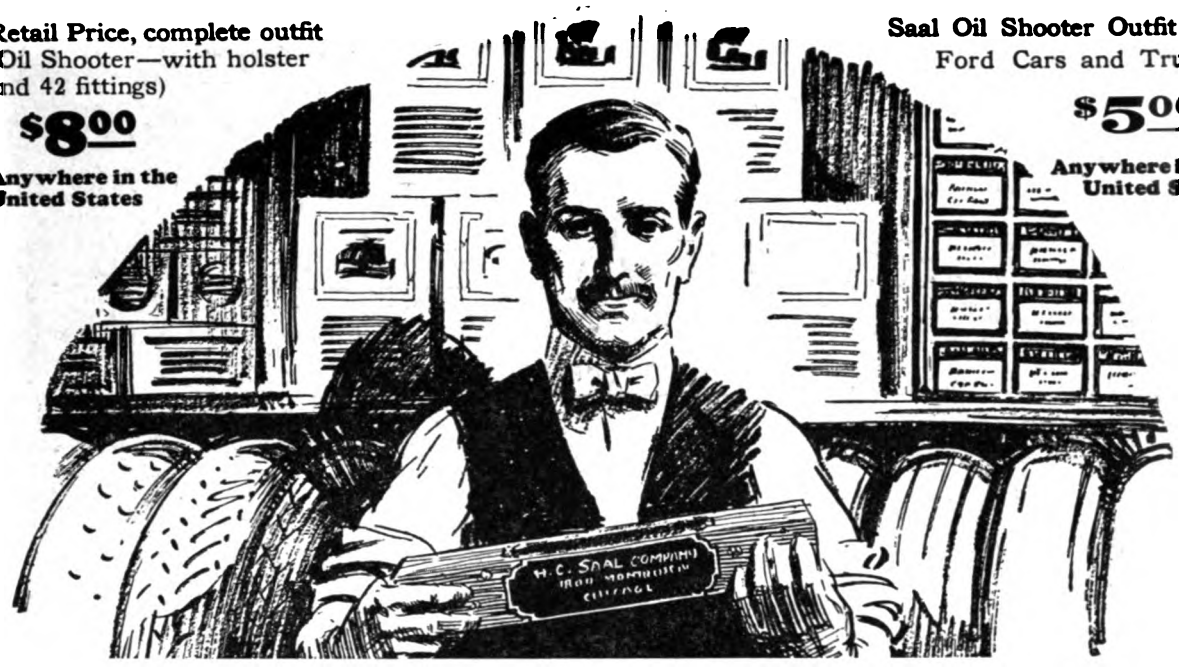
$8.00

Anywhere in the United States

Saal Oil Shooter Outfit for Ford Cars and Trucks

$5.00

Anywhere in the United States



Your Customer Spends Money for What—?

For just two things—goods and service. That's all. The Saal Oil Shooter delivers both. It is well made—newer, better, and yet not high priced. Your customer will spend his money for it.

Oil is the logical chassis lubricant. Hence the introduction of the Saal *Oil* Shooter to the motor-car public. This better oil pressure chassis lubrication system comes to you from your jobber in *package* form. It is complete.

Newspaper and magazine advertising is selling the use—the need—of this tool to your customers. Will you sell the Oil Shooter to them?

SAAL OIL SHOOTER

—has no flexible tube or other delicate parts.

—is fool-proof.

—is simple and clean to operate.

—exerts 2000 pounds pressure when forcing oil into bearings.

—will operate effectively in other contact fittings.

—retails at $8.00. Saal Oil Shooter Outfit for Ford cars and trucks, $5.00 The Shooter, with holster, retails at $3.50.

—eliminates order picking and installation sheets for you.

—assures you of a full margin of profit.

—is worth having in stock.

Ask Your Jobber for the Details

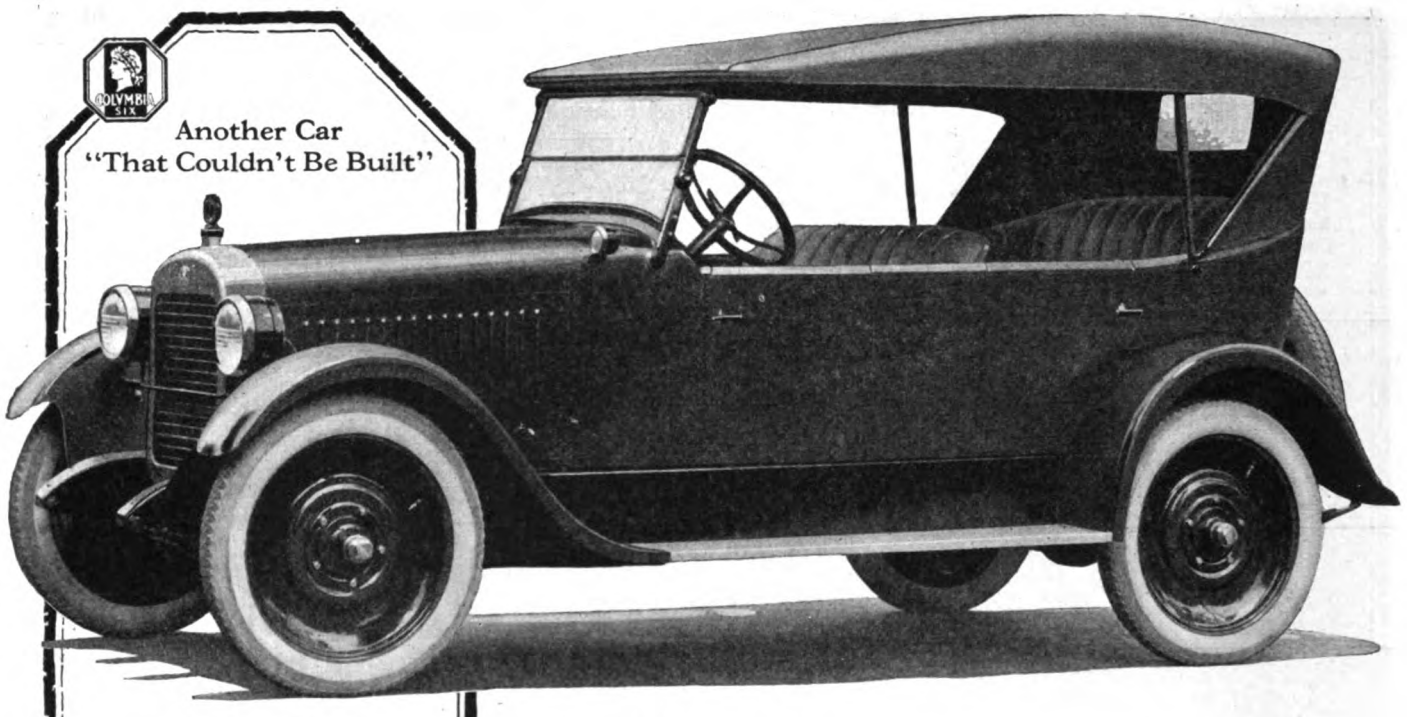


KEEPS YOUR CAR YOUNG

H. G. SAAL COMPANY • CHICAGO

1800 Montrose Avenue

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Another Car
"That Couldn't Be Built"

Specifications

6 Cylinder 50 h. p. Continental "Red Seal" Motor
Timken Axles—Front and Rear
Durston Transmission—with Timken Bearings
Auto-Lite Starting, Lighting and Ignition
Wood Wheels (Steel Wheels $30 extra)
Cord Tires.
Borg & Beck Clutch
Gemmer Steering Gear
Stromberg Carburetor
Harrison Radiator with Thermostatically Controlled Shutters
Spicer Universal Joints
Latest Design Semi-Permanent Top
Heavyweight Deep Drawn Crown Fenders
Barrel Type Headlamps
Genuine Machine-buffed Leather Upholstery
Full 5-passenger Body; Rear Seat 46 inches wide
Body Finished in Suburban Blue with Ivory Stripe
Standard Equipment: Moto-Meter; Cowl Ventilator; Barrel Type Cowl Lamps; Nickel-plated Radiator, Robe Rail and Foot Rail; Extra Rim

$1095

and now—
the Special Six Phaeton

This new Columbia is a five-passenger car with complete equipment including cowl ventilator, barrel-type head lamps and cowl lamps, Moto-Meter, thermostatically controlled radiator shutters, crown fenders and cord tires.

It has a large, roomy body with upholstery of exceptional quality and a rear seat 46 inches wide.

Eight months ago we demonstrated what many automobile men said was impossible—that a high grade six can be built and sold at the price of an average popular four. Now we are offering a *completely equipped,* specialized Six at a price far below that of any six-cylinder car on the market with similar equipment.

Thousands of buyers are used to the refinements of high priced cars and it is for this type of buyer that we are building the new Columbia Special Six. Our price of $1095 also brings a completely equipped car within the reach of many thousands who have hitherto been denied the comfort and convenience of such an automobile.

Read the specifications—then see if you can match the many features of the Special Six in any motor car at anywhere near the price.

Need we tell you about the advantages of handling a line that includes this and other sure-fire sales-makers priced from $985 to $1995?

Someone will sell the Columbia in your territory—why not you?

ALL PRICES F. O. B. DETROIT.

COLUMBIA MOTORS COMPANY
DETROIT, U. S. A.

Columbia Six

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DURA

WINDOW REGULATORS



THE self-starter made the closed car possible. The window regulator makes it adaptable to all seasons and all weather conditions; makes it comfortable and convenient.

The DURA COMPANY Toledo, Ohio.

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DURA

WINDOW REGULATORS

Better for Car Builder and Car Owner

THE function of a window regulator represents the main difference between a closed and an open car.

If the regulator is not quiet, easy to operate, positive in its action, and of permanent efficiency, it can do the car *builder* incalculable harm among *owners*.

The lowering and raising of the windows is the one thing a closed car driver *does* that an open car driver does *not* do. Up to that detail, the driving of the two cars is the same.

But that *one detail* spells so important a difference that the *majority* of closed cars are equipped with Dura Window Regulators.

They are simple in design, honestly made, easier to operate, more quiet, and remain that way, and are always dependable.

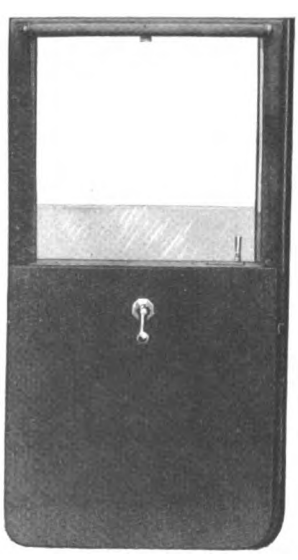
The manufacturer gets the easiest and simplest ventilation for his closed models for the least final cost, *when he specifies Dura!*

We start with your body drafts and select the best of the three types for that particular job.

Then, samples are made and checked by a sample installation.

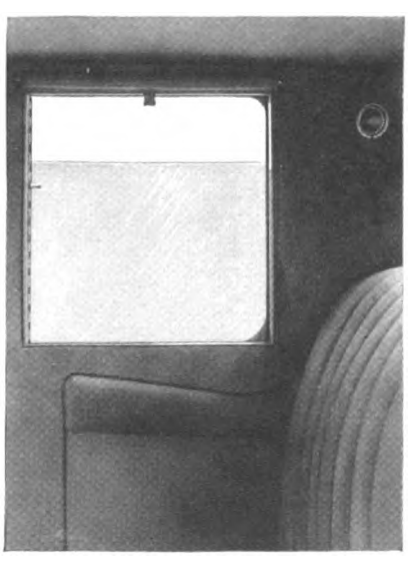
Then, we show you how to install them quicker and more economically.

Let us consult with you concerning *your* needs.



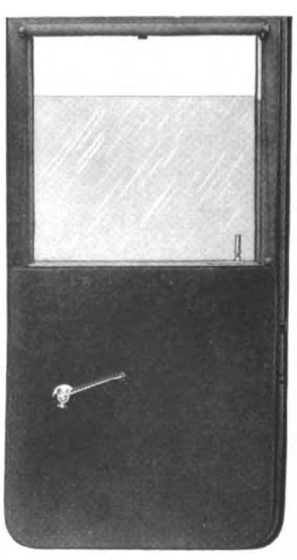
CRANK TYPE

A crank-operating regulator with less than thirty-five parts with the simplest locking means known.



CLEMENT TYPE

This type most satisfactorily meets every need for rear windows or other windows where the operating handle must be out of the way.



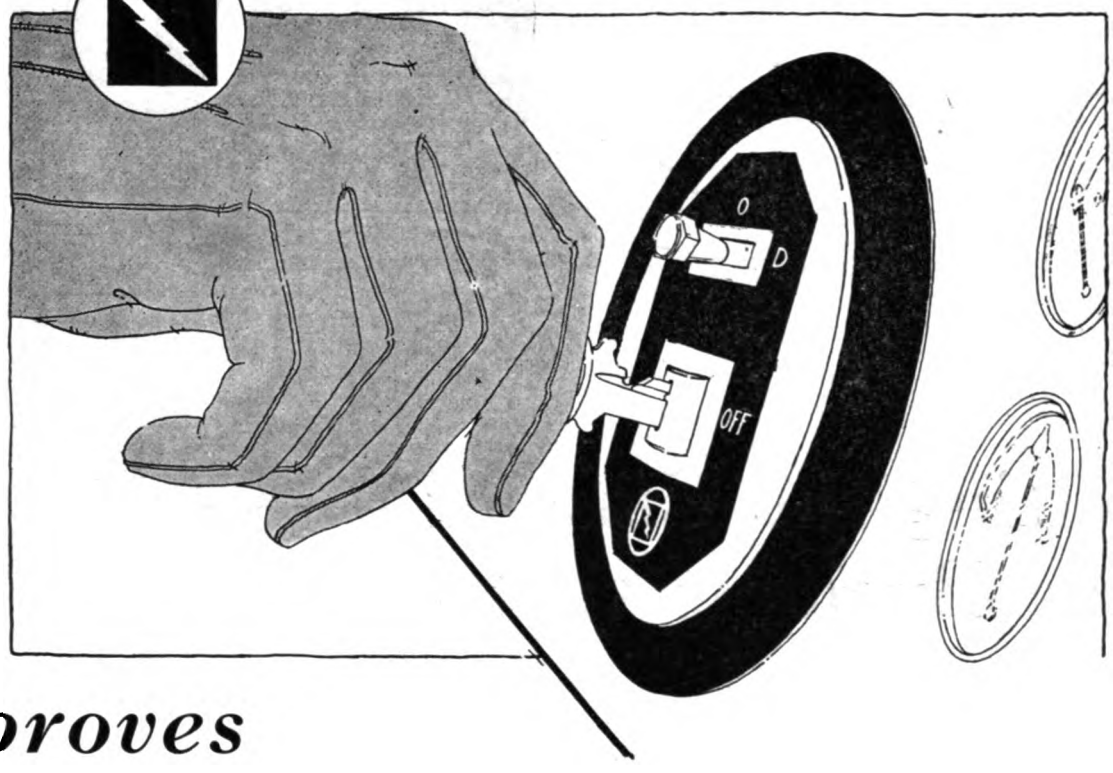
LEVER TYPE

This quick-acting, Lever Type Dura raises or lowers the window instantly—with less than half a turn.

The DURA COMPANY Toledo, Ohio.

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CONNECTICUT



Improves any Dash

Big or little—any car will be improved—both in the appearance of its dash and in the convenience of its ignition and lighting control by the installation of the

CONNECTICUT

190-Y Replacement Switch

Mechanically

Handsomely finished beveled Aluminum and black enamel face plate, size to cover space taken by regular round type switch.

Complete with studs long enough for mounting on either wood or metal dash.

Switch block of CETEC, a high dielectric of great mechanical strength. Toggle action (crosswise) for both ignition and lighting controls.

Lever, with Bright, Dim, and Off positions for lights—

Pin tumbler lock (with changes) with On and Off position for the ignition.

And From A Merchandizing Standpoint

The universal adaptability of the CONNECTICUT 190-Y switch not only enables you to meet practically every replacement order you get, but eliminates the necessity of carrying a large assortment of switches.

Packed in individual cartons with wiring diagram and mounting instructions. Price,

$4.50

SHOW IT—THEY'LL BUY IT

CONNECTICUT TELEPHONE & ELECTRIC COMPANY
Meriden Connecticut

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REVERE
TIRES
&
TUBES

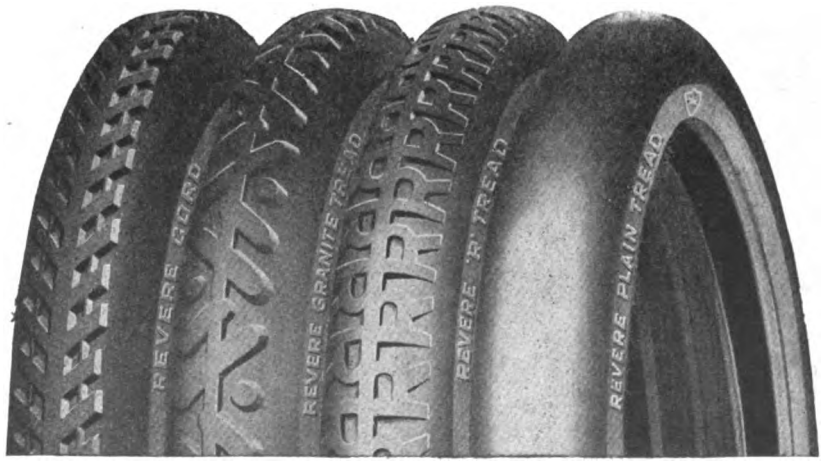
Getting the Class of Tire Business that *Sticks*

THE average motorist looks at tire buying about like this—

Smith sold me my last tire. He said it was good value. I took his word for it. Best money's worth I've had in years. I'm going back to Smith for my next tire.

Revere Tires are made with the sole idea of reflecting good judgment and good intent on the dealer who sells them—of bringing to him the class of business that *sticks.*

REVERE RUBBER COMPANY
1790 Broadway **New York**



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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The ONE Engine That Answers In Actual PERFORMANCE This Prominent Engineer's Arguments

In the May, 1922, issue of Industrial Management there appeared an article entitled "Motor Truck Design From The Truck Buyer's Viewpoint", by Cornelius T. Meyers, M. E., one of the foremost consulting automotive engineers in the country. Mr. Meyers is an authority on all that pertains to automotive equipment. During the War he was in direct charge, under the War Department, of the design of Class "A" and "B" Liberty Trucks. He has been associated with some of the largest companies in the country. The quoted excerpts in this advertisement are taken from Mr. Meyers' article in Industrial Management. Although Mr. Meyers in his article deals with the motor truck, what he says about *engines is applicable to tractors, motor busses, taxicabs and passenger cars,* as the same fundamental principles apply in all cases.

Mr. Meyers Says—

1 "The maintenance of a measurable film of clean oil on bearing surfaces will eliminate wear almost entirely, and the day is approaching when this will be a motor truck requisite, for it also reduces loss of power."

2 "Engines of smaller bore than those now in general use can be made to give satisfactory performance if other details of the chassis design are properly co-ordinated, and if drivers are trained in their use. This is a very promising method of reducing weight and fuel consumption and is worth close study. * * * "

3 "Engines will go from 200 to 500 miles on a charge of oil."

Midwest Gives—

1 Midwest lubrication does actually "float" all bearings on an oil film—proved by the fact that for the past three years no bearings have been sold due to wear. For three years Midwest engines have been giving in actual performance the things that Mr. Meyers so ably discusses in his article.

2 Midwest engines have never been sold on a bore and stroke basis. Because of the design, which actually eliminates much of the usual internal friction losses, we get *more power* to the "business end"—and with a smaller, more economical engine.

3 Economy of lubricant is vital. Our records show in heavy motor bus service over 900 miles to the gallon of oil—in truck service more than 1,000 miles per gallon, while in taxicabs Midwest engines are giving over 2,000 miles per gallon according to operator's own figures.

Midwest engines deserve your immediate and careful investigation if you would sell a product that will completely meet present day conditions and demands in every field of transportation. Literature on request.

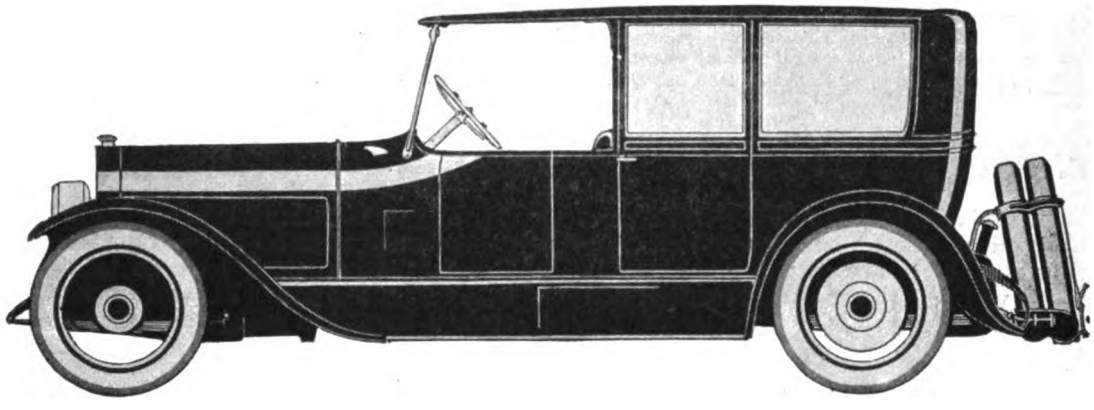
Please address Department 11

MIDWEST ENGINE CORPORATION Indianapolis, U. S. A.

MIDWEST

PASSENGER CAR POWER PLANTS

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Three-Quarter Limousine $8,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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Enduring Strength in



AGATHON
Alloy STEELS

THE CENTRAL STEEL COMPANY, Massillon, Ohio

SWETLAND BLDG. CLEVELAND | BOOK BLDG. DETROIT | PEOPLES GAS BLDG. CHICAGO | UNIVERSITY BLOCK SYRACUSE | WIDENER BLDG. PHILADELPHIA

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Bone-Dry or NOT Bone-Dry

If a battery isn't one it *must* be the other.

If it IS Bone-Dry it is free from the slightest trace of moisture, and therefore safe from the possibility of chemical action that would otherwise go on all the time.

If it IS NOT Bone-Dry, even though the moisture is confined to a slight dampness of insulation, there is constant chemical action! This action subjects the plates to a slow unavoidable wear so that the battery cannot be kept brand new.

Willard Threaded Rubber Insulation is the Willard feature that makes it possible to ship and stock Willard Threaded Rubber Batteries in *absolutely Bone-Dry condition,* thus enabling service station dealer and car dealer alike to assure the buyer of getting a battery that is *in every sense as new as the day it left the factory.*

WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio

Made in Canada by the Willard Storage Battery Company of Canada, Limited, Toronto, Ontario

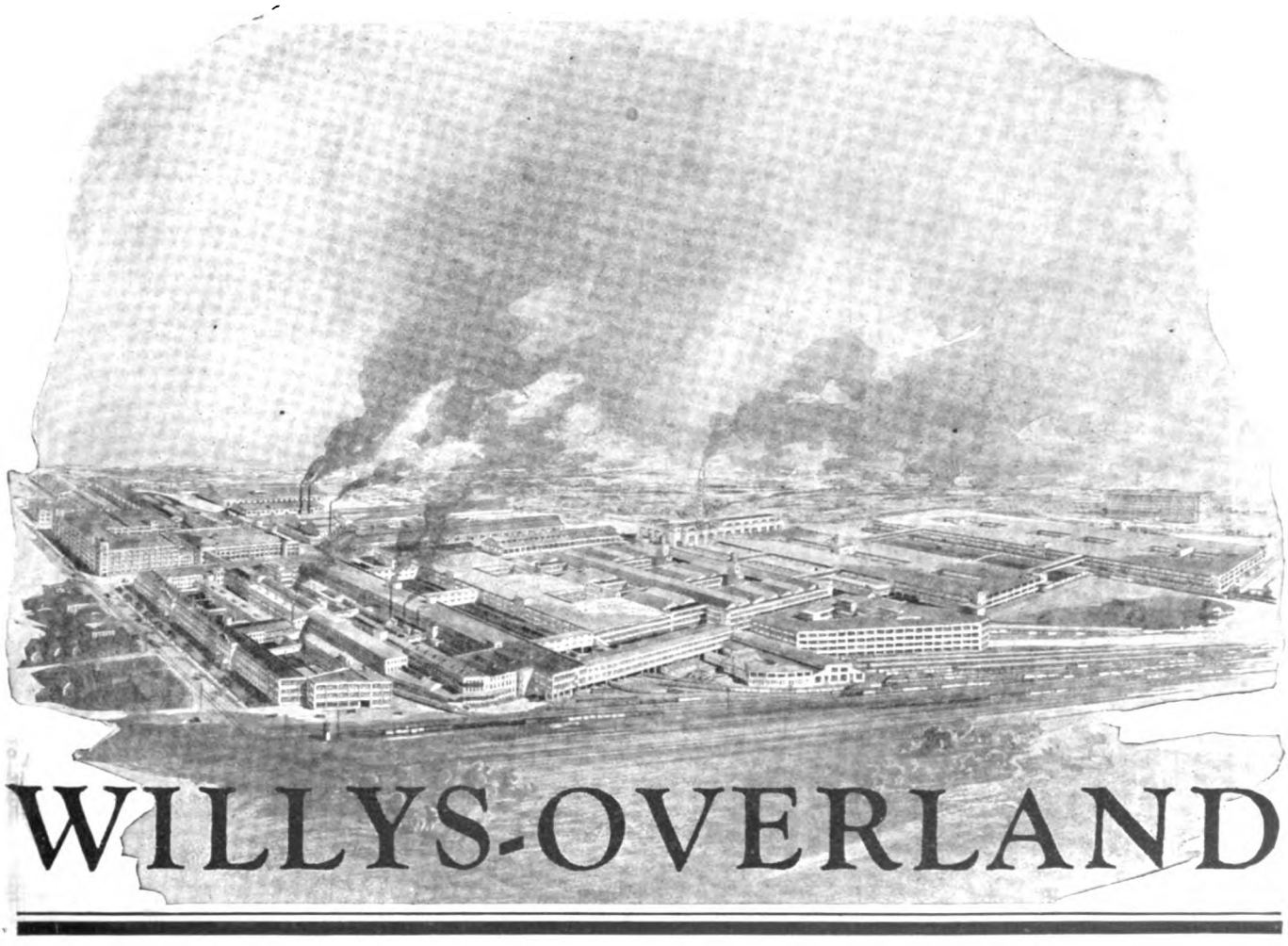
Willard THREADED RUBBER BATTERY

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HOW MUCH MONEY DID YOU MAKE THIS YEAR?

How much money could you have made had you been selling

Today's Overland TRADE MARK REG. at $550 f.o.b. Toledo



WILLYS-OVERLAND

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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YALE

Super-Quality Storage Batteries

The Men Back of Yale Batteries



HARRY MURPHY
President

Organized Pumpelly Battery Co. in 1907 and operated it until 1915 when on consolidation with the Prest-O-Lite Co. he was elected Vice-President, in charge of Battery Division. In October, 1920, he resigned to become President of Yale Storage Battery Company.



L. H. KELLER
1st Vice-President

One of the foremost sales executives in the battery business. From 1910 to 1921, General Sales Manager of American Eveready Works of the National Carbon Co. In January, 1921, he joined the Yale Storage Battery Company, as Vice-President in charge of sales.



MARTIN GEISZLER
2nd Vice-President

Probably the best-known storage battery designer in America. Operated his own company from 1907 to 1914. On consolidation with American Eveready Works he was made Chief Engineer, organizing their storage battery department. Joined Yale Storage Battery Company as Vice-President and Chief Engineer, January, 1921.



A Real Battery and a Square-Deal Policy

DEALERS who sell YALE Batteries make more money, because of two vital factors—a super-quality product and a square-deal selling policy.

The batteries possess the best features developed by leading battery engineers—improvements that are the result of many years' practical experience in manufacturing thousands of batteries for automobile use.

Compare a YALE Battery with any other make and you'll find it superior in every feature. YALE construction is more substantial. Terminal posts are leak proof and resist corrosion, Plates last longer, do not buckle, and give higher porosity and more sustained voltage. Separators are extremely high in porosity and conductivity. Covers are extra heavy and reinforced. Unit construction insures greater accessibility, and cheaper repairs.

The selling policy is the fairest you ever saw. It is written by men who know the problems of the battery dealer, and gives you a square deal from every point—price, profit, territory and guarantee. It forms the basis for a profitable and permanent business. It stands back of you squarely on every adjustment, eliminates "red tape" and enables you to satisfy every customer.

Back of YALE Batteries is a strong company with ample resources—plus substantial distributors who give dealers quick service and real cooperation.

No matter what battery you now sell, investigate the YALE Battery Square Deal Contract.—Write today.

Yale Storage Battery Company
Indianapolis, Ind., U. S. A.

H. B. RAMEY, Sales-Manager

For years connected with well-known manufacturers of electrical automobile equipment. Sales Manager of storage battery division, American Eveready Works from 1914 to 1920. Joined Yale Storage Battery Company as Manager of Sales in 1921.



B. E. O'CONNER, Secy.-Treas.

For 25 years Secretary and Treasurer of M. O'Connor Company, Indianapolis. Interested in storage battery manufacture since 1916. Joined Yale Storage Battery Company in January, 1921, elected Secretary-Treasurer.



I. W. MERIDITH, Purchasing Agent

With Prest-O-Lite Co. as Assistant Purchasing Agent 1912-1919 and Purchasing Agent 1919 to 1921, when he joined Yale Storage Battery Co. as Purchasing Agent.



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Bowen-Empress

HIGH PRESSURE LUBRICATING SYSTEM

FOR ALL MOTOR CARS AND TRUCKS

How The Kelly-Springfield Motor Truck Company Regards The Bowen-Empress System

THE KELLY-SPRINGFIELD MOTOR TRUCK CO.

SPRINGFIELD, OHIO

March 2nd
1 9 2 2

Mr. Ross,
Bowen Products Corporation,
Auburn, N. Y.

Dear Sir:

We are in receipt of your letter of February 24th, requesting a photograph of a Kelly-Springfield truck and also requesting us to outline our reasons for adopting the Empress System of Lubrication. Enclosed you will find photograph of our model K-41 truck which would be suitable for publication.

Our reasons for adopting the Empress System were

1: The good will shown our company in the past and present, and because you are a reliable source of supply.

2: Because it was the consensus of opinion that your outfit was far superior to other makes, inasmuch as it took less time to operate, was clean, and would stand up under the use it would be put to by truck drivers.

3: Because of your policy for our service requirements, inasmuch as you would allow us to sell direct to our customers this outfit.

We might add that we have now been in production for some time with your outfit and we have yet to receive the first complaint, and in these critical times it speaks very well for your lubricating system.

Yours very truly,

THE KELLY-SPRINGFIELD MOTOR TRUCK CO.,

BY: L. F. Hosley
L. F. Hosley
Chief Engineer

LFH:GL

Installed on your trucks, it will render this same satisfactory and effective service, provide proper lubrication and help to keep down maintenance costs.

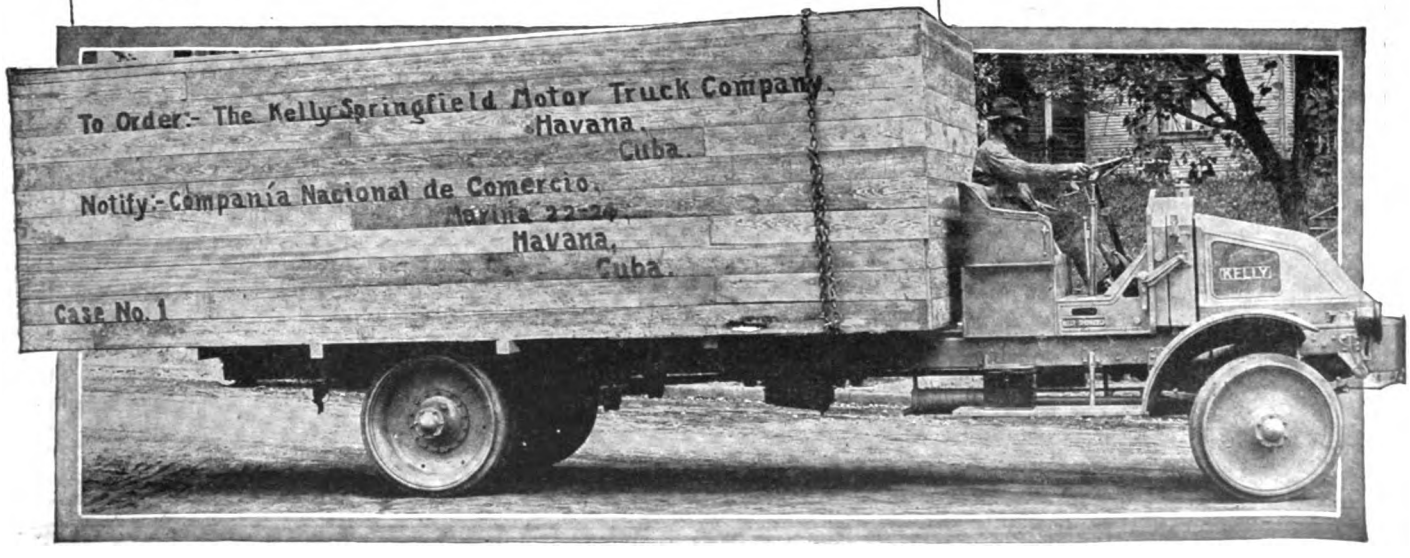
By eliminating the drudgery and messiness of other methods, the Bowen - Empress System provides the driver with a real incentive for keeping his truck properly lubricated, saving many dollars in repair bills.

Ease, speed and effectiveness of operation together with the absence of the usual mechanical troubles encountered in similar pressure systems are its outstanding features.

Write for Descriptive Folder No.-W-301

Bowen Products Corporation

Auburn Division, Auburn, N. Y.



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The new and very powerful H. C. S. contains 81% of the parts and features of the highest priced automobile in the world; yet it sells for one-fifth the price.

How many persons are there in your territory who would be interested in just such a car?

$2475 at Indianapolis.

H. C. S. Motor Car Company

INDIANAPOLIS, U. S. A.

Make this Your Personal Car

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Snappy Sellers from bethlehem

Snappy Cap for Fords. Quick-way Socket Wrench for ALL cars. Bethlehem Spark Plug, and that's only the start!

Three Bethlehem Betterments for Motordom ready — and more a-coming! Jobbers can expect *real* service if they speak up NOW.

Snappy Cap for Fords

Beauty sells it! Richly nickelled arms and body. Glossy black enamel cap and lock-clamp. Handsome in every detail—a quality product, of course. Looks like a $5-accessory—sells for a mere fraction of that!

Utility sells it! Screw it on the Ford radiator and it's there to stay—yet it won't freeze in. Press the trigger and a powerful spring snaps the cap wide-open for filling—no more scorched fingers. Click cap down, and it locks securely, sealing radiator.

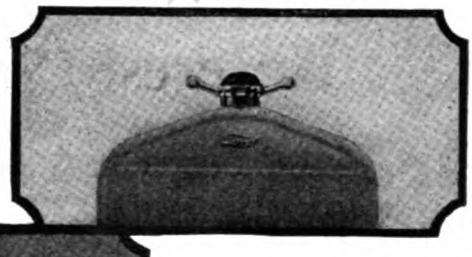
Publicity sells it! Forceful farm-paper and newspaper campaign now in full swing, moving Snappy Cap out of the dealer's store fast!

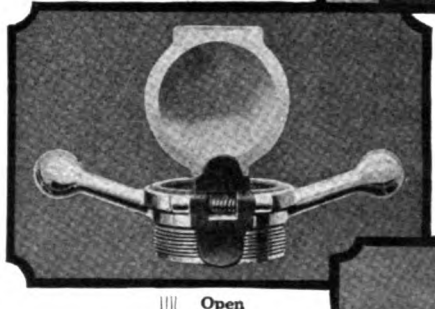
Price sells it! Tell us to send you a Snappy Cap on suspicion—look at it—test it—compare it—and THEN notice the price and the dealer's margin. If you say "Bill it to us" we will. Otherwise, accept the Snappy Cap with our compliments.

Where'll we send your Sample Snappy Cap, please?

Bethlehem Spark Plug Co., Inc.
Bethlehem, Pa.

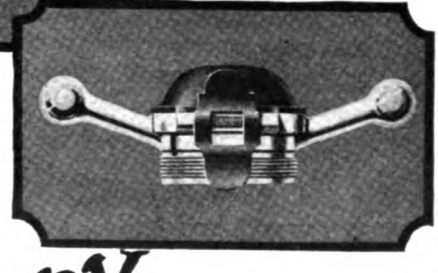
The Perfecting Touch!





Open for Filling

Closed for Driving



Snappy Cap

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They Run True

Tires, so important in cost of upkeep, are being favored when a car is equipped with Michelin Steel Wheels.

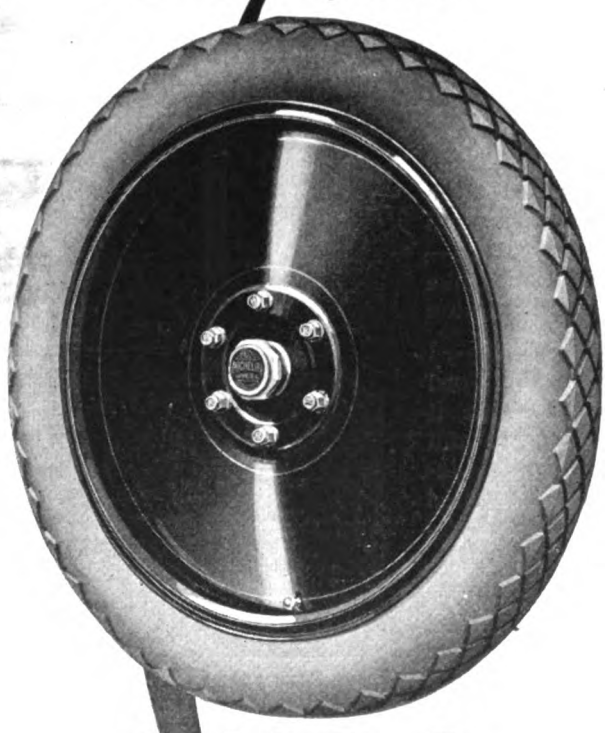
A wobbly, zigzagging wheel—even a wheel that is very slightly out of alignment—twists and grinds the tire against the gritty surface of the road. At every turn of the wheel the tread is worn away like the eraser on your pencil.

Michelin Steel Wheels run true. **There is nothing to swell or warp out of shape, nothing to get loose and throw the tire out of alignment. They are pressed from live, resilient steel into permanent form by precise and massive presses.**

Moreover, heat generated in the tire by travel is drawn off—spread over the hundreds of square inches of disc surface and dissipated in the air.

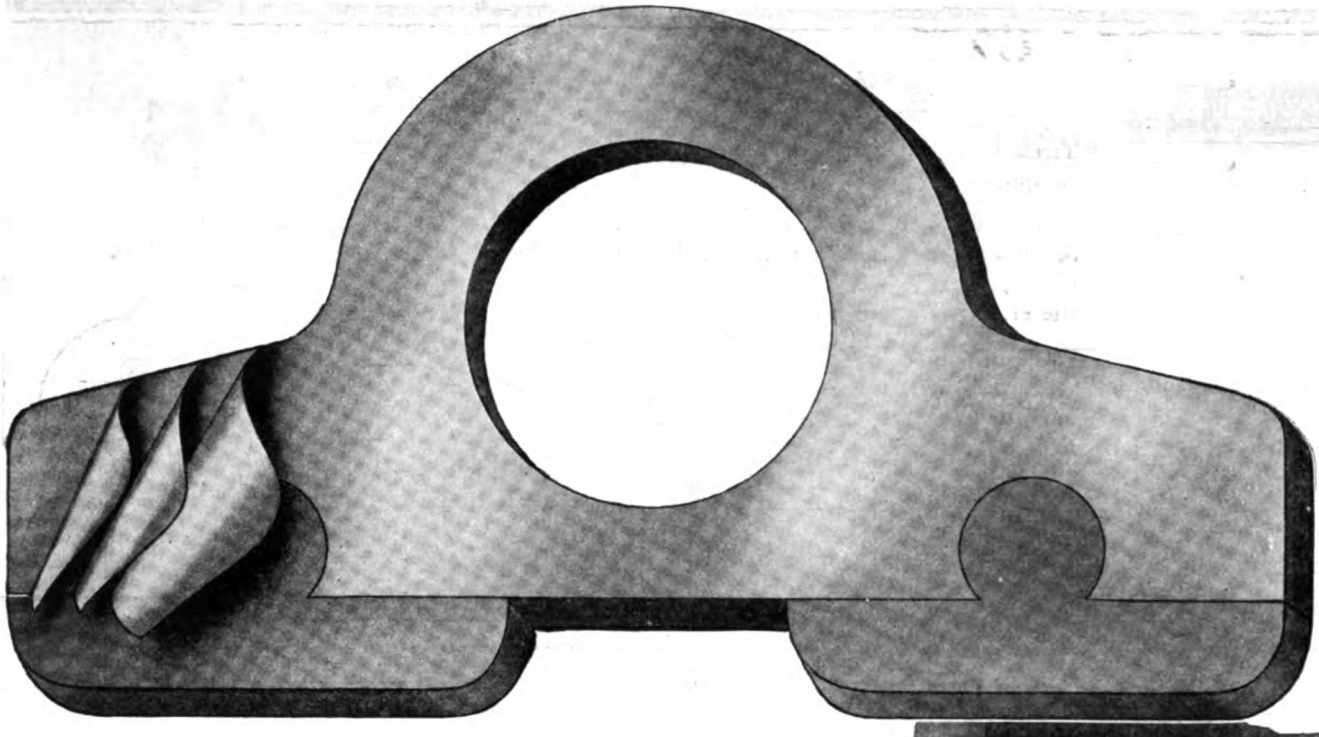
There are five complete wheels in each set. The extra wheel in the rear adds noticeably to the beauty of your car. Changing wheels is a matter of moments—much simpler than changing tires in the old way.

BUDD WHEEL COMPANY
Philadelphia

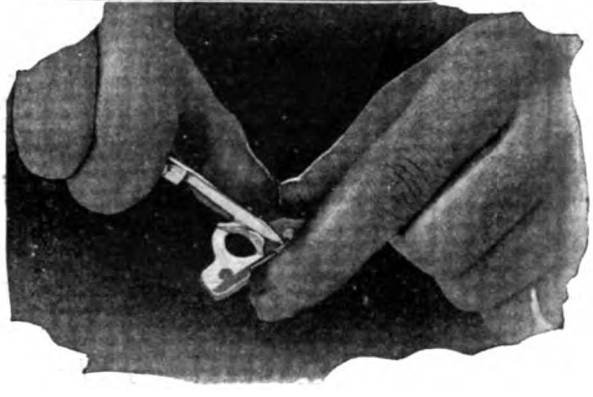


BUDD
Michelin
STEEL WHEELS

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Babbitt Faced-



for pressure oiling

The use of babbitt faced Laminated Shims to make an all-babbitt bearing is rapidly increasing. Under pressure the soft babbitt metal readily accommodates itself to the shaft, producing what is practically a sealed bearing. Indispensable in connection with force-feed lubrication.

Babbitt Faced Laminated Shims are made to specifications or blueprints. Send for samples and details.

LAMINATED SHIM COMPANY, INC.
14th St. & Governor Pl., Long Island City, N. Y.

Detroit ..... Dime Bank Building
St. Louis ..... Mazura Mfg. Co.
Chicago ..... 1118 S. Michigan Ave.

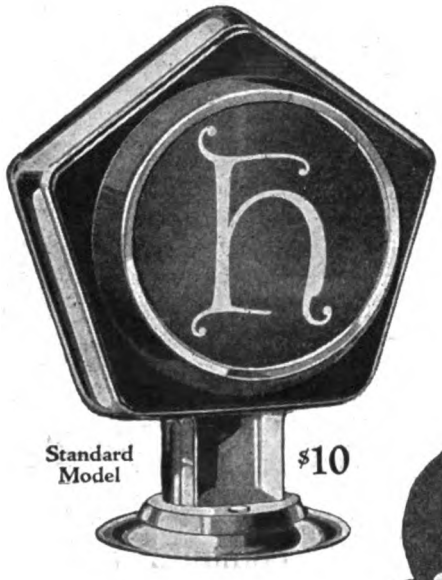
LAMINUM

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Free Set of Initials

Now Included with Stewart

Warn-O-Meter



Standard Model $10

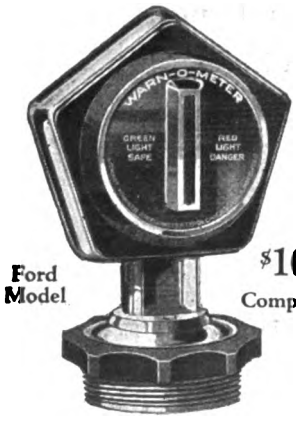
WITH every Stewart Warn-O-Meter, an entire set of initials free. The complete alphabet from A to Z. The first time such an offer has been made.

Printed in a beautiful green, illuminated by the light from within the Warn-O-Meter, it adds an attractive personal touch to the car's appearance.

You are familiar with the Warn-O-Meter's efficient operation. How the green light shows at normal motor heat and flashes to red should overheating begin. Accurate because it is connected directly to the motor itself.

Arrange immediately to supply your customers with this beautiful accessory with their initials included.

Stewart-Warner Speedometer Corporation
CHICAGO, U. S. A.



Ford Model $10 Complete



Special Radiator Cap Furnished with Ford Model



DeLuxe Model $12.50

Stewart

PRODUCTS
USED ON 7 MILLION CARS

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The Value of a Clientele

THERE are people in your community who will want a car like the Mercer. The dealer who takes on the Mercer as a leader has an opportunity to build up a business that will repeat from year to year. He acquires the prestige which accompanies the handling of such a car and a reputation which comes from dealing with the class of people who recognize Mercer superiority.

The Mercer selling organization is ready to take on several new agents. Dealers who desire to build up their business still further should write immediately for full particulars.

MERCER MOTORS COMPANY
TRENTON, N. J.

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HAYES

DEMOUNTABLE AT THE RIM



DOMINANCE in any branch of industry is the logical and natural reward of making a product consistently fine.

Hayes leads the world in the manufacture of automotive wheels for one reason only—because the wheels themselves, whether of wood, wire or steel, reflect a higher standard of workmanship, materials and precision.

There has come a definite and highly gratifying reward for these ideals in manufacture.

For today considerably over half of all the automobiles produced are Hayes wheel equipped. Our large resources, our tremendous volume are responsible for our ability to manufacture a better product and sell it for considerably less.

These very definite savings are passed on to manufacturers with whom we are always pleased to co-operate in planning for present and future requirements.

46

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers,* Jackson, Michigan

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PREST-O-PLATES have opened the eyes of Car Owners to this vital fact:-

the life of the battery is in the plates.

The long-lived plates, Prest-O-Plates, *naturally* make Prest-O-Lite the long-lived battery.

Possessing great heat-resisting durability for hot summer driving, and ready reserve power for winter weather starting, Prest-O-Plates *naturally* make Prest-O-Lite the best all-around, all-weather battery. Here is the net of selling the best battery:

Choose Prest-O-Lite with Prest-O-Plates. They are found *only* in a Prest-O-Lite battery.

THE PREST-O-LITE COMPANY, INC.

Carbide and Carbon Building, 30 East 42nd Street, New York

Eighth and Brannan Streets, San Francisco, California

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto

To Dealers: We have a better battery proposition—more profit for you—more and better satisfied customers. Write us.

To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

Write us for open territory.

Oldest service to motorists



"INSIDE THE BATTERY"

An unusual book explaining how a battery is made, how it works, and how to take care of it. We have a free copy for you. Write for it.



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This cabinet makes Alemite a quick, easy sale

"It's the best looking and best paying silent salesman I've ever seen." That is what thousands of enthusiastic dealers are saying of the Alemite Counter Cabinet.

This cabinet links up their stores with our strong national advertising on the superior convenience and economy of lubricating automobile chassis bearings the Alemite way. It enables them, in a moment's time, to supply replacement fittings or a complete Alemite High Pressure Lubricating System for any make of car. It calls for a minimum investment in parts.

Hang an Alemite sign over your door, put an Alemite Cabinet on your counter and suggest Alemite whenever you see a car fitted with grease cups. Then watch the profit side of your ledger grow.

Remember that the Alemite Dealer Proposition also includes two other quick moving money makers, Alemite (all-metal) Lubricating Spring Covers and Alemite Lubricant. Write today for full details.

A Product of

THE BASSICK MANUFACTURING COMPANY

2650 N. Crawford Avenue, Chicago, Illinois

Alemite Products Company of Canada, Ltd., Belleville, Ontario

ALEMITE

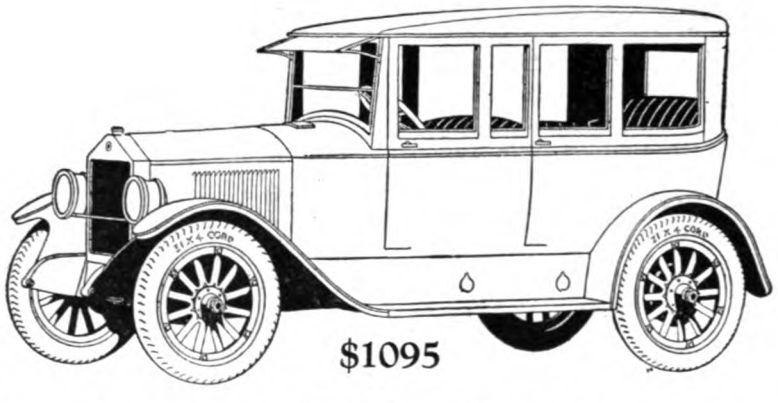
High pressure lubricating system

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DORT

Quality Goes Clear Through

Dort stands well in the foreground of automobile successes this year because Dort is giving in liberal measure what the public demands—sound value! The great sale of the Dort Yale Sedan, $1095, Yale Coupe, $1045 and the other four models has placed the Dort dealer in a particularly strong position and has made the Dort franchise more highly prized than ever.



Six models from $885 to $1385; Light delivery car, $825; at Flint

Dort Motor Car Company, Flint

(1443)

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Ferry Bright-Finished, Heat-Treated Cap Screws

Buying Heat-Treatment for Protection

All Ferry Hexagon Head Cap Screws are heat-treated. Why? Because, only by heat-treatment can the uniformity and reliability of cold-headed products be guaranteed.

Engineers prefer and are demanding heat-treated cap screws. They know they can always be depended upon. Then why accept cap screws that are not heat-treated when Ferry offers you a heat-treated product at no additional cost?

They have found it to be the only sure way to prevent brittleness in the steel from which screws are formed.

Send for the Ferry Bright-Finished, Heat-Treated Cap Screw for comparative purposes.

Write or wire today for prices on your requirements.

"If It's Upset, It Must Be Heat-Treated"

The Ferry Cap & Set Screw Co., Cleveland, Ohio

FERRY

PROCESS SCREWS

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GEARS

form the all-important link between the power unit and the wheels of every automobile.

They are called upon to absorb shocks and impacts by suddenly applied thrusts by the careless chauffeur.

They must retain their pitch, developed with geometrical precision, under the most severe service.

Therefore, the steel from which they are made must excel in strength, hardness, toughness, wear resisting and anti-fatigue qualities.

VANADIUM STEEL

combines all these properties in the highest degree, and advantage should be taken thereof where "perpetual service" gears are the goal.

VANADIUM CORPORATION of AMERICA

120 BROADWAY

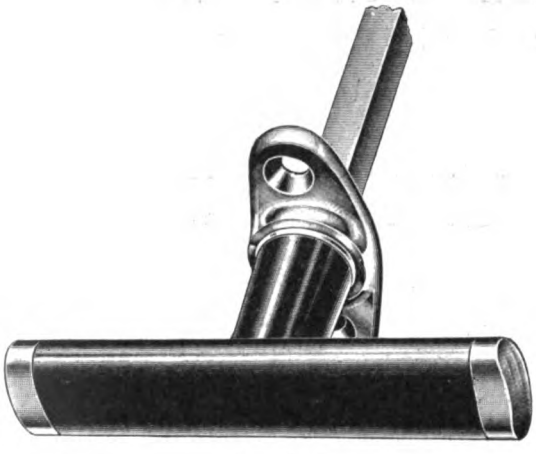
NEW YORK CITY

Detroit, Michigan—849 Book Bldg.

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SOSS

OUTSIDE DOOR HANDLE



No. 82

Aluminum Die Cast
Hard Rubber Covered
Highly Polished
Grasp 3¾" x ⅞"
Furnished with Various Types of Escutcheon Plates
Shank 5/16" Standard Cold Rolled Steel, Any Length, Drilled and Tapped to Specifications

No. 82A

Same as No. 82 with Grasp 3¾" x ¾"

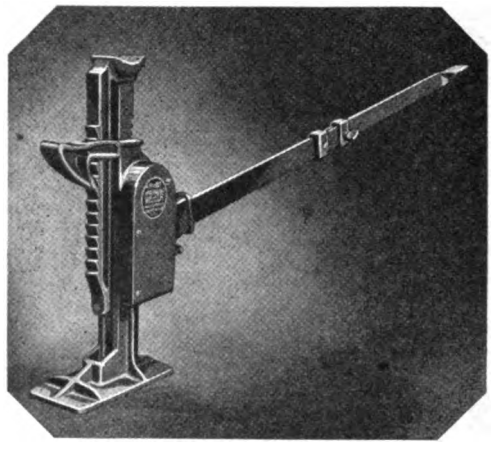
IMMEDIATE DELIVERY FROM STOCK

Send for Sample and New

LOW PRICES

Anti-Rattling Devices
Door Bumpers
Door Handles
Door Locks
Concealed Hinges
Die Cast Hinges
Hood Hinges
Malleable Hinges
Rear Deck Hinges
Automobile Fittings
"Grip-Tite" Curtain Lights
Metal Stampings

SOSS MANUFACTURING CO., INC.
GRAND AVENUE & BERGEN STREET
BROOKLYN, N.Y.



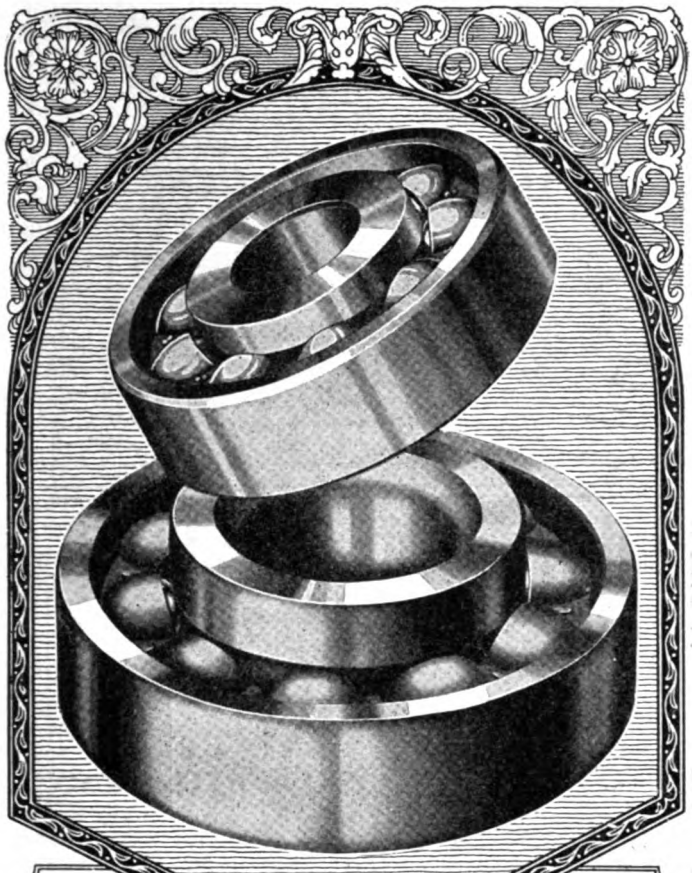
THERE is one big reason why you should have a Walker Jack in the car you drive and that is because Walker Jacks are so uniformly dependable in operation. The experience of twelve years is embodied in every Jack bearing the Walker name. This is of vital importance to you as a manufacturer, jobber, dealer or just a car owner, for, after everything is said and done, a Jack is an emergency tool and it is useless unless it is "Dependable in Emergencies."

Walker Manufacturing Co.
Dept. 1005
Racine, Wisconsin

Walker JACKS

"Dependable in Emergencies"

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New Departure Ball Bearings

A SIGNIFICANT development in ball bearing installation is the new high grade Front Wheel type ball bearing which New Departure has evolved in response to the insistent demand of many of the largest manufacturers over a period of years.

It demonstrates the trend towards the utilization of ball bearing advantages to front wheels as well as other positions in the chassis.

New Departure Ball Bearings are non-adjustable for the simple reason that their long life makes "taking up" for wear unnecessary. This advantage is especially marked in the front wheels where the slightest looseness is injurious to the mechanism and dangerous to the driver.

The New Departure Manufacturing Company

Detroit BRISTOL, CONNECTICUT Chicago



Oakite service man makes $5000 saving for engine maker

This Advertisement is one of a series based on actual accomplishments to date.

THE engines are now cleaned with Oakite five times faster than their former method. Their old method of washing engines by hand was so slow that it held up production and only six engines per man, per hour, were cleaned.

The Oakite Service man after careful study designed a simple washing machine of the conveyor style by which the engines are cleaned at the rate of 30 an hour with far less labor. (Blue prints of this machine, sprays, and layout of equipment for this job may be had on request.)

The Superintendent figures that the saving in materials and labor will amount to over $5,000 a year.

Your cleaning problem is perhaps of a different nature, but this instance serves to indicate the merit of Oakite as a cleaner and the value of Oakite service.

Our knowledge and study of industrial cleaning problems is available to you through our Service men. Wouldn't you like to have one of our experienced men go over your cleaning problem with you? Let him point out any differences that may exist between your methods of cleaning and what we have found to be the most economical practice elsewhere. By correcting these differences, perhaps you can make a saving in time, labor, money that is well worth the effort.

A postal card does not obligate you, but will be considered merely an invitation to lay our ideas before you.

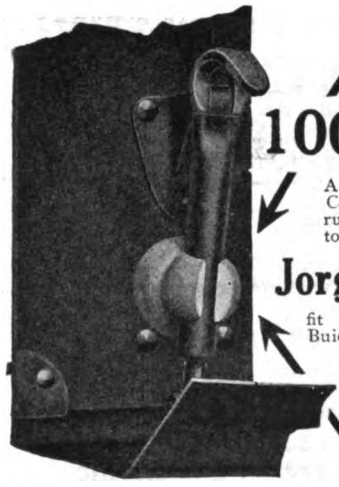
OAKITE

MANUFACTURED BY

OAKLEY CHEMICAL CO.

32 THAMES STREET · NEW YORK

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In Four Months

100,000 Sold

A great demand is sweeping the Country for this vacuum-cup rubber device which is guaranteed to eliminate all hood rattles.

Jorgensen Silencers

fit the hood fasteners of Dodge, Buick and other cars. Let us send you the remarkable story of this new profit-making accessory.

Jorgensen Hood Silencer Co.
Erie, Pa.

BUNTING BUSHINGS

"Always in Stock"

THE BUNTING BRASS & BRONZE COMPANY
753 Spencer Street, Toledo, Ohio

NEW YORK: Grand Central Palace, Vanderbilt 7300
CHICAGO: 722 S. Michigan Ave., Wabash 9153
CLEVELAND: 1362 E. 6th St., Main 5991
SAN FRANCISCO: 198 Second St., Douglas 6245
BOSTON: 36 Oliver St., Main 8488

Motor Wheel PRODUCTS

Gier Tuarc Steel Wheels
Gier-Lewis Steel Wheels
Gier Stampings
Wood Wheels for Cars and Trucks

MOTOR WHEEL CORPORATION - LANSING, MICHIGAN

SHEET METAL STAMPINGS

From Steel, Brass, Bronze, Copper and Aluminum.

We also specialize in Case Hardening and Tool Tempering.

THE CROSBY COMPANY
Buffalo, N. Y.

New York Office: 30 Church St.
Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building

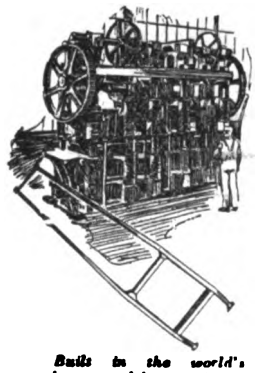


It will do the same for you

A Wayne Oil Storage Tank (like the one here) has been in use for six years in the Dixie Garage at Milford, Illinois, without being idle a single day for repairs. A Wayne Tank and Pump will serve you just as well. Write for Bulletin 35-AT.

WAYNE TANK AND PUMP COMPANY
783 Canal Street Fort Wayne, Ind.

Wayne



Built in the world's largest and best equipped frame plant

for

Better Motor Cars

SMITH FRAMES

Rear Axle Housing Assemblies,
Running Boards and Hangers,
Torque Arms and Tubes,
Wheel Hubs and Flanges,
Fender Brackets, Brake Drums, Body Sills

A. O. SMITH CORPORATION
Milwaukee, Wisconsin

TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS

NATIONAL TWIST DRILL & TOOL CO.

DETROIT, U.S.A.



CLASSIFIED ADVERTISEMENTS

Rates for advertising in this department, 45 cents per line, per insertion. Minimum charge $2.25. Cash with order. Each line contains about seven words.

WANTED: A man experienced in automobile and electrical practice to write service instructions and technical descriptions and also to prepare advertising copy. In applying give age, full details of past experience, salary expected and date available. Address: North East Electric Co., Rochester, N. Y.

If interested in the Automobile Industry, Subscribe to

AUTOMOBILE TOPICS THE TRADE AUTHORITY

15 Cents Per Copy **$3.00 A Year**

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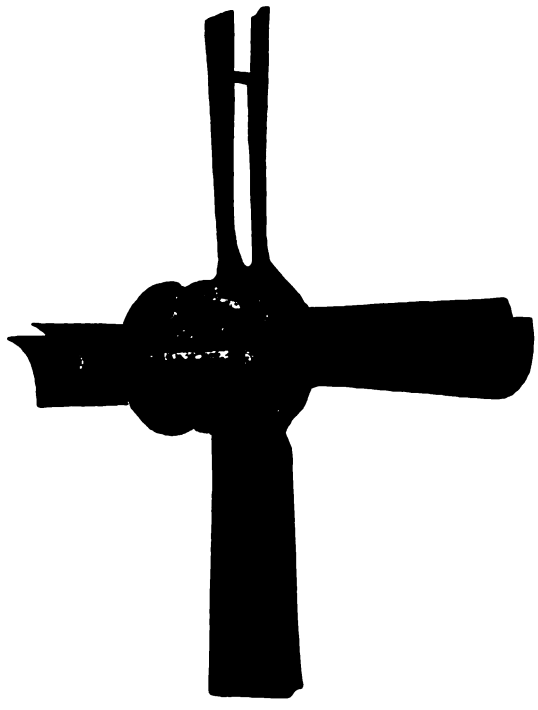
Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

EDMUNDS & JONES CORP.
Buchanan & Lawton Avenues
DETROIT, MICHIGAN

MULTIBLADE FAN



DETROIT CARRIER & MFG. CO.
DETROIT, U. S. A.

THE MODERN GAS TRACTOR
By VICTOR W. PAGÉ, M.E.
Revised and Enlarged
504 Pages with Folding Plate
Nearly 300 Illustrations
PRICE $2.50

A complete treatise describing all types and sizes of gasoline, kerosene, and oil tractors. Considers design and construction exhaustively, gives complete instruction for care, operation and repair, outlines all practical applications on the road and in the field. The best and latest work on farm tractors and tractor power plants. A work needed by farmers, students, blacksmiths, mechanics, salesmen, implement dealers, designers, and engineers.

Automobile Topics
Book Dept. 1790 Broadway, New York

THE Bearings Company of America—manufacturers of Thrust Ball Bearings, Angular Contact Radial Bearings, Angular Contact Thrust Bearings—Bearings made to your B/P's and requirements—Your present Bearings sizes duplicated.



THE BEARINGS COMPANY OF AMERICA
Lancaster, Penna.
Detroit, Mich., Office, 1012 Ford Bldg.
H

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WYMAN-GORDON

The Crankshaft Makers

Worcester Division
WORCESTER, MASS.

Ingalls-Shepard Division
HARVEY, ILL.

Most of the best cars of all classes use

Morse Silent Chains

Refer your cam and accessory drive problems to Morse Engineers

MORSE CHAIN COMPANY
ITHACA, N. Y.
Engineering & Sales Office
COR. 8TH & ABBOTT STS. DETROIT, MICH.

GABRIEL
SNUBBERS

Control the action of the car's springs—eliminate the unnecessary rebound after every bump and let you ride in comfort *on the seat.* Soon pay for themselves in saving of tires, springs, gas and time.

GABRIEL MANUFACTURING CO.
1421 East 40th St. Cleveland, Ohio



PERFECT REGULATOR

Standard Equipment
for America's
Leading Automobiles

PERFECT WINDOW REGULATOR CO.
20 Exchange Place New York City

51 6/10 MILES ON A GALLON OF GAS

It is the official world's record breaking test with Ford Touring car. The 1922 Stromberg Carburetor and Hot Spot did it—made this marvelous mileage possible.

Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

Live dealers are requested to write for facts pertaining to territory.

Stromberg Motor Devices Co.
64 E. Twenty-fifth St., Dept. 19 Chicago

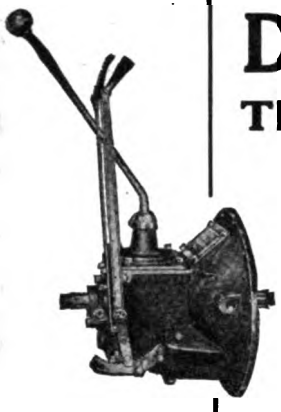
BROWN-LIPE-GEAR
TRANSMISSIONS
BROWN-LIPE-CHAPIN
DIFFERENTIALS
Both at Syracuse, N.Y.

OVER 50,000 MILES

now reported on "Whitney" High Efficiency Front End Motor Chain Drives and still in good condition.

THE WHITNEY MFG. CO.
Hartford Conn.

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DURSTON TRANSMISSIONS

For trucks up to one-ton capacity, and Passenger Cars.

DURSTON GEAR CORPORATION

13 Maltbie St. Syracuse, N. Y.

Six body types, from $1,395 to $2,165

COURIER

Dealers — Write for "Courier" literature

A GOOD LIGHT SIX

COURIER

"The Most Completely and Conveniently Lubricated Car in America"

THE COURIER MOTORS CO., Sandusky, Ohio

"Air-Bag Cured"

Firestone Cord Tires are cured on air-bags. Internal expansion during this important operation aligns and straightens each separate cord, insuring equal distribution of strain under load.

Most Miles per Dollar

Firestone

GUM-DIPPED CORDS

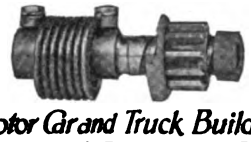
Grant Six

—an excellent car

BENDIX

ECLIPSE

for ELECTRIC STARTERS DRIVE AUTOMATIC ENGAGING & DISENGAGING



194 Motor Car and Truck Builders Use It

ECLIPSE MACHINE CO. ELMIRA N.Y.

Touring Car

$1195

Coach

$1450

F.O.B. Factory

The Coachbilt

ANDERSON

LIGHT ALUMINUM SIX



Is there an Anderson dealer in your town?—if not, write us.

Anderson Motor Co., Rock Hill, S. C.



WARNER GEAR COMPANY
MUNCIE, INDIANA

WARNER GEAR CO

CLUTCHES, TRANSMISSIONS, CONTROLS, DIFFERENTIALS

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DOEHLER DIE-CASTINGS

A product whose uniformly high quality contributes largely to the high quality of the better class of motor cars and trucks. Send us your specifications.

DOEHLER DIE-CASTING CO.
BROOKLYN, N.Y.
CHICAGO, ILL. TOLEDO, OHIO.

Highest Quality—Correct Finish

AUTOMOBILE
Body, Hood and Fender
Sheets

This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

CHAMPION DROP FORGINGS

Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.
The Champion Machine & Forging Co., 3694 E. 78th St., Cleveland, O.
New York Office—30 Church St.
Philadelphia Office—Bourse Bldg.
Detroit Office—705 Ford Bldg.



COUNTER-BALANCED CRANK SHAFTS HEAVY DIE FORGINGS
The Park Drop Forge Co.
Cleveland, Ohio

Union Drawn Steel Co
Beaver Falls, Pa.
Manufacturers of
BRIGHT FINISHED STEEL SHAFTING, SCREW STEEL CHROME NICKEL and CHROME VANADIUM STEELS in FLATS, SQUARES, ROUNDS HEXAGONS and SHAPES; also ELEVATOR GUIDES
BRANCH OFFICES: Boston, Buffalo and Cleveland
BRANCH OFFICES AND WAREHOUSES: Chicago, Cincinnati, Detroit, New York and Philadelphia

Keep Posted
on what is going on in the trade by reading
Automobile Topics
$3.00 PER YEAR
1790 Broadway New York

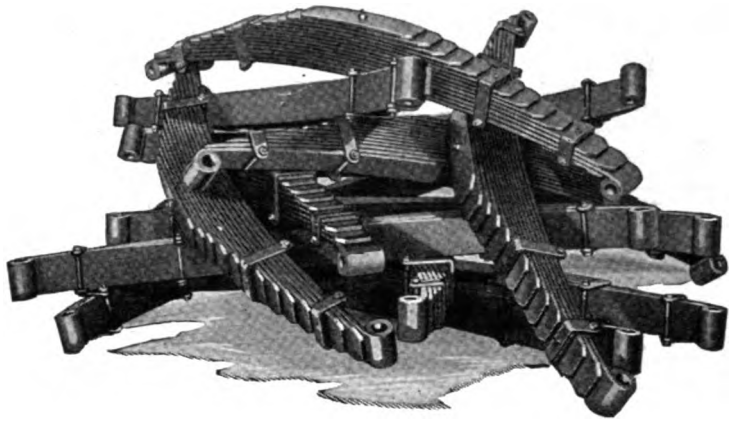
SHARON PRESSED STEEL
MOTOR CAR and TRUCK FRAMES AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.
SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
SHARON, PA.

AXLES
SPINDLES
RADIUS RODS
LEVERS
FORTY YEARS EXPERIENCE
Anything that can be Drop Forged up to 300 lbs.
Any Analysis of Steel
Drop Forgings are made from Structural Material Uniform in Quality, Chemical and Physical Properties.
CRANKSHAFTS
CAMSHAFTS
CONNECTING RODS
GEAR BLANKS
DROP FORGINGS
UNION SWITCH & SIGNAL CO.
PITTSBURGH DISTRICT SWISSVALE, PA.

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MATHER SPRINGS

Standard of the World



The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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Removal of this rear plate gives ready access to gear case and differential.

There is a big appeal to the modern farmer in the new Cletrac F. Here's a tractor, built for every farm, rugged yet *simple in construction*, low in price, unequalled in the wide range of its usefulness—a *real* tractor for the practical dirt farmer.

Dealers who have been selling the Cletrac F—together with Cletrac W, a tractor for larger farms and all types of industrial uses—are cashing in *now* on the double profits in the double market of the Cletrac line. Write us for complete information and open territory.

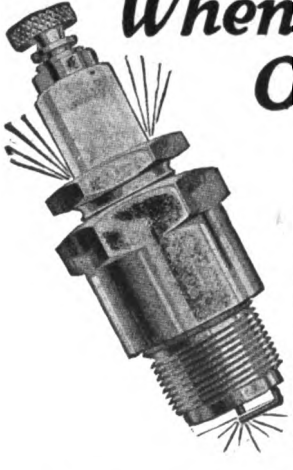
THE CLEVELAND TRACTOR CO.
Largest Producers of Crawler Tractors in the World
19173 Euclid Avenue Cleveland, Ohio



View showing remarkable accessibility when cover plate is removed.

Model "F" $595

When the Juice Oozes out!



The spark plug is no better than its insulation. If that becomes porous and fails to carry the vital spark into the combustion chamber, good-night efficiency!

Spark plug makers who want to protect themselves and the public equip their plugs with "775", the perfect insulator. When you see "775" stamped on the porcelain you can feel assured that you are buying a good spark plug. It will pay you to buy no other.

"775"

FRENCHTOWN PORCELAIN CO.
Trenton New Jersey

"Established 1910—Busy ever since"

STANDS THE TEST

INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc..... 447
American Sheet & Tin Plate Co. 492
Anderson Motor Co..... 491

B

Bassick Manufacturing Co.. 482
Bearings Company of America 489
Bearings Service Co..... 398
Bethlehem Spark Plug Co.. 475
Bethlehem Steel Co., Inside Back Cover
Bowen Products Corp..... 473
Bower Roller Bearing Co.. 491
Brown-Lipe Chapin Co.... 490
Brown-Lipe Gear Co..... 490
Budd Wheel Co. 476
Buick Motor Co. 405
Bunting Brass & Bronze Co. 488

C

Cadillac Motor Car Co.... 424
Central Steel Co. 469
Chalmers Motor Car Co... 400
Champion Machine & Forging Co. 492
Cleveland Tractor Co..... 494
Columbia Motors Co. 464
Connecticut Telephone & Electric Co. 465
Continental Motors Corp., Inside Front Cover
Courier Motors Co..... 491
Crosby Co. 488

D

Dayton Engineering Laboratories Co. 462
Detroit Carrier & Manufacturing Co. 489
Detroit Pressed Steel Co... 394
Dodge Brothers 406
Doehler Die-Casting Co.... 492
Dort Motor Car Co..... 483
Dura Co. 464a
Durston Gear Corp..... 491

E

Earl Motors, Inc..... 443
Eclipse Machine Co..... 491
Edmunds & Jones Corp.... 489
Electric Auto-Lite Co., The, 402, 403

F

Federal Bearing & Bushing Corp. 393
Ferry Cap & Set Screw Co. 484
Firestone Tire & Rubber Co. 491
Fisk Tire Co., Inc..... 401
Flint Varnish & Color Works 399
Frenchtown Porcelain Co... 494

G

Gabriel Manufacturing Co.. 490
Goodrich Rubber Co., B. F. 407
Grant Motor Car Corp.... 491

H

H. C. S. Motor Car Co.... 474
Hayes Wheel Co. 480
Haynes Automobile Co., Back Cover
Hess-Bright Manufacturing Co. 496
Houdaille Co. 459

J

Jorgensen Hood Silencer Co. 488

Digitized by Google

INDEX TO ADVERTISEMENTS

L

Laminated Shim Co., Inc... 477

Lang Body Co. 449

M

Mather Spring Co..... 493

Mercer Motors Co. 479

Metal Stamping Co. 404

Midwest Engine Corp. 467

Morse Chain Co. 490

Motor Wheel Corp. 488

N

Nash Motors Co. 408

National Twist Drill & Tool Co. 488

New Departure Manufacturing Co. 487

Norma Company of America 395

O

Oakley Chemical Co..... 487

Olds Motor Works..... 450

P

Packard Electric Co....454, 455

Park Drop Forge Co..... 492

Perfect Window Regulator Co. 490

Perfection Heater & Mfg. Co. 461

Prest-O-Lite Co., Inc..... 481

R

Reo Motor Car Co..... 445

Revere Rubber Co. 466

Rickenbacker Motor Co.... 458

S

S K F Industries, Inc..... 496

Saal Co., H. G..... 463

Sharon Pressed Steel Co... 492

Smith Corp., A. O..... 488

Soss Manufacturing Co., Inc. 486

Stephens Motor Car Co., Inc. 460

Stevens-Duryea, Inc..... 468

Stewart-Warner Speedometer Corp. 478

Stromberg Motor Devices Co. 490

Studebaker Corp. 397

T

Ternstedt Manufacturing Co., ...Front Cover

Timken Roller Bearing Co. 456, 457

U

Union Drawn Steel Co..... 492

Union Switch & Signal Co.. 492

U. S. Ball Bearing Manufacturing Co. 396

United States Rubber Co.. 441

V

Vanadium Corporation of America 485

W

Walker Mfg. Co..... 486

Warner Gear Co..... 491

Wayne Tank & Pump Co.. 488

Whitney Manufacturing Co. 490

Willard Storage Battery Co.. 470

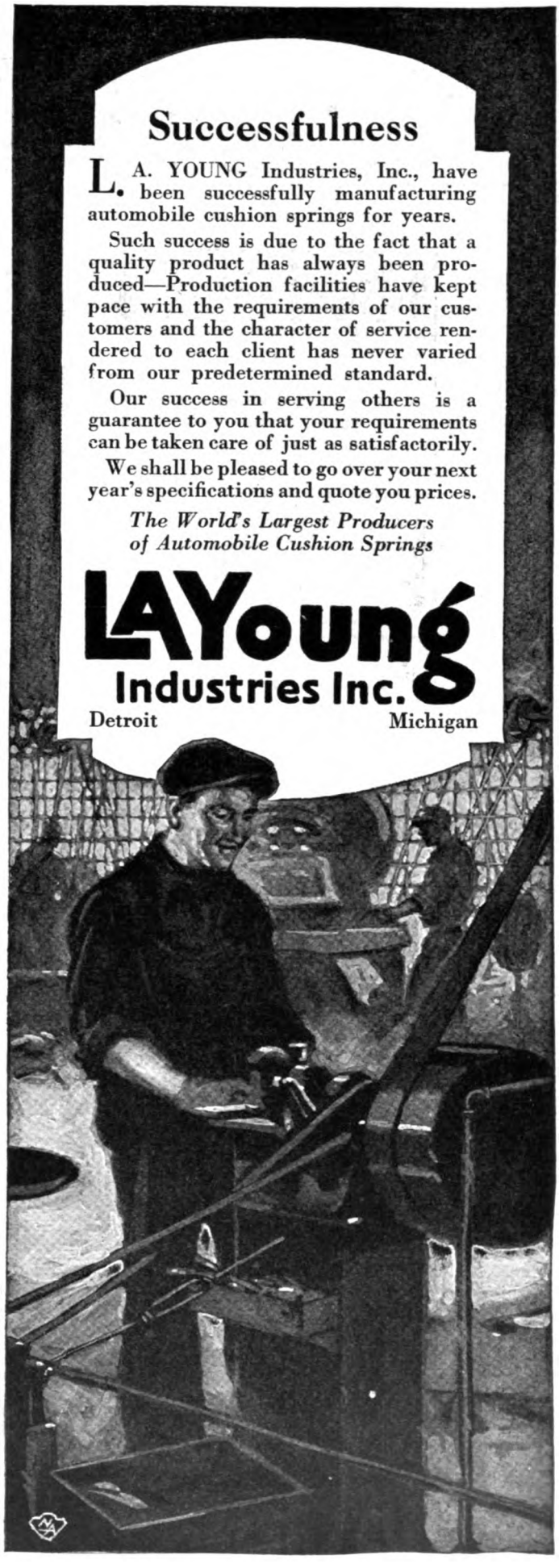
Willys-Overland, Inc..... 471

Wyman-Gordon 490

Y

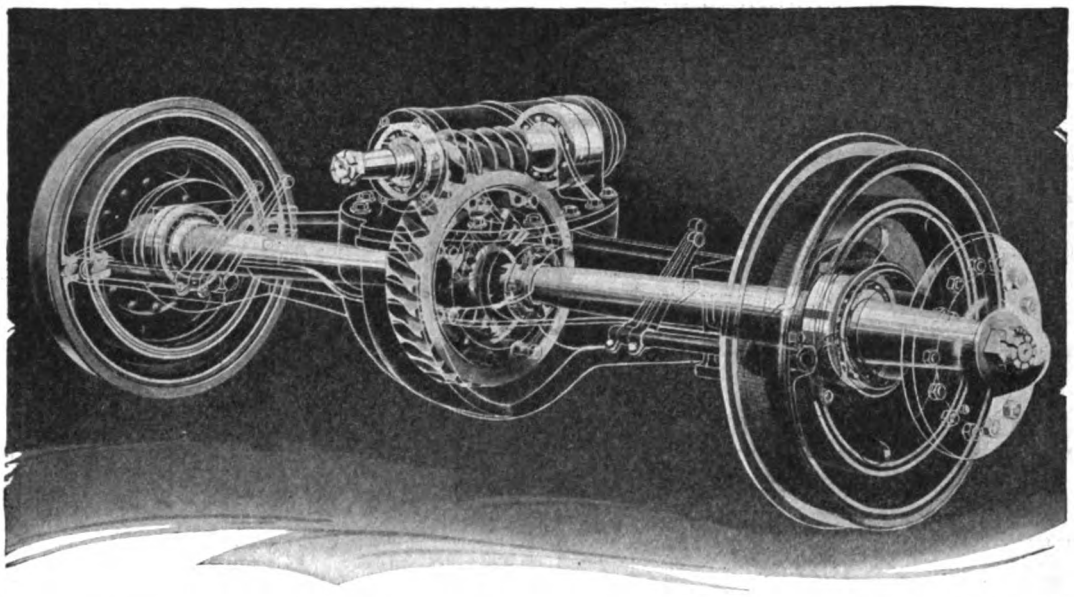
Yale Storage Battery Co... 472

Young Industries, Inc., L. A. 495



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SKF



Ball Bearings on Rear Axle Assemblies

Maintain Original Settings of Rotating Parts

SUBJECTED to the severe and varying strains of road shocks and jars—as well as the heavy thrust loads due to turns, road slants and skidding—the rear axle assembly must be capable of withstanding severe strains without disturbing the accurate relation of rotating parts. The moment wear occurs there is destructive play in the hubs and the gears rub, grind and chatter with disastrous results.

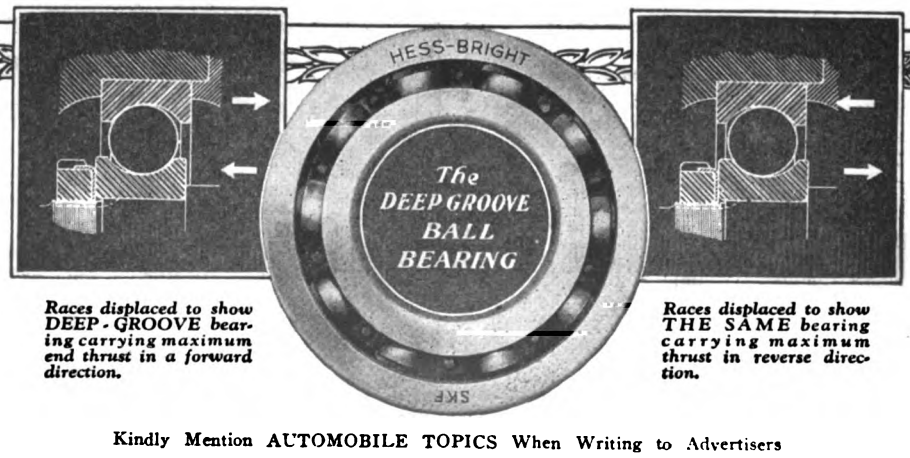
To resist these heavy radial and thrust loads without appreciable wear, is the duty that must be demanded of the bearings in order to maintain the rotating parts in their original settings throughout the life of a car.

As this ability is an inherent quality of deep-groove ball bearings, as made by the Hess-Bright Manufacturing Company, they are considered by many as standard for this purpose.

THE HESS-BRIGHT MANUFACTURING COMPANY

Supervised by SKF INDUSTRIES, INC., 165 Broadway, New York City

799



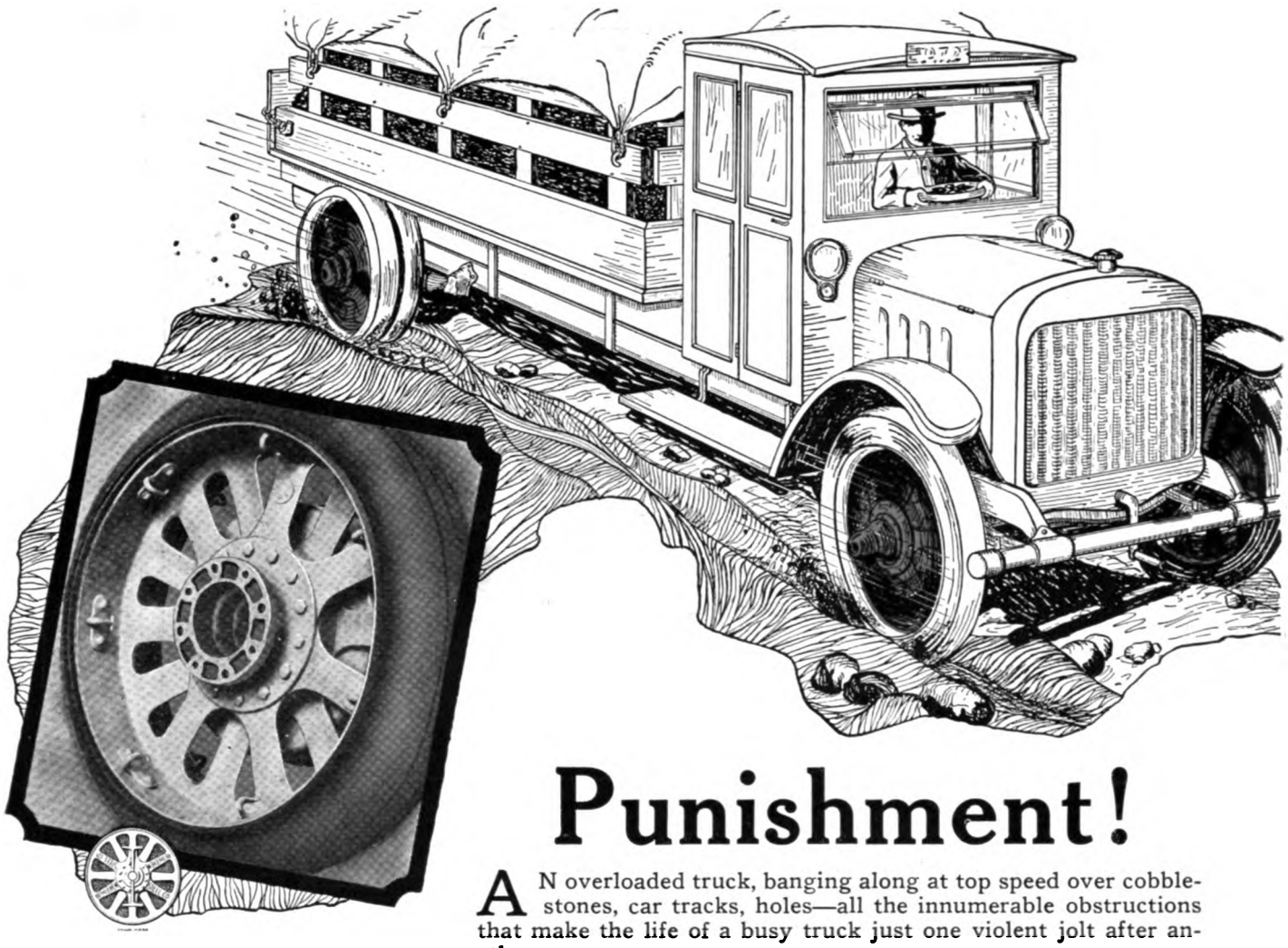
Races displaced to show DEEP-GROOVE bearing carrying maximum end thrust in a forward direction.

Races displaced to show THE SAME bearing carrying maximum thrust in reverse direction.

BALL BEARINGS

The Highest Expression of the Bearing Principle

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Punishment!

AN overloaded truck, banging along at top speed over cobblestones, car tracks, holes—all the innumerable obstructions that make the life of a busy truck just one violent jolt after another.

These jolts reach the frame of the truck greatly softened by the springs; but they hit the wheels with the smashing force of a steam hammer blow.

Built from a rolled steel I-beam, the Bethlehem Rolled Steel Truck Wheel combines abundant strength to stand the punishment of the severest service, with the light weight that spells economy.

An organization with unmatched facilities for the making and treating of steel manufactures the Bethlehem Wheel and stands unqualifiedly back of it. Automotive engineers of broad experience designed and perfected it. Years have been spent in developing it. Severe road and laboratory tests have repeatedly proved its worth.

To the far-seeing truck builder, the Bethlehem Wheel comes as a definite sales asset. It will make his truck a better truck—one that will appeal more strongly to the prospective buyer and that will operate with greater economy and all-round satisfaction. Let us tell you all about it!

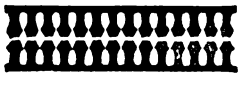
BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

Sales Offices in the Following Cities:

New York Philadelphia Washington Pittsburgh Detroit St. Louis Boston
Baltimore Atlanta Cleveland Chicago San Francisco

A New Method of Wheel Building

Here are the steps by which the Bethlehem Wheel is made from a specially-rolled I-Beam:



The spokes are outlined by punching. (Each I-beam produces two wheels.)



The spokes are grooved and staggered.



The ends of the beam are bent at right angles, and the hub spacer inserted.



The wheel is bent to shape, the ends of the felloe welded together, and finished.

BETHLEHEM

ROLLED STEEL TRUCK WHEELS

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BEAUTY · STRENGTH · POWER · COMFORT



THE NEW IMPROVED FIVE PASSENGER HAYNES 75 BROUGHAM

Upholding all those fine traditions of style and distinction which grew around the aristocratic broughams of other days, the new, improved Haynes 75 Brougham is an accurate reflection of social and business position.

There is satisfaction in such fashionable touches as the three-quarter length running boards which leave the front fenders individual, while the lounge-like cushioned and upholstered interior is reminiscent more of the drawing room than of the automobile. And yet there is a substantial character, and an absolute dependability in the performance of the famous, quiet-running Haynes-built 75 motor. With the coming of winter, the motorist can appreciate the snug coach work and perfect enclosure, bringing protection from harshest weather, and allowing the car to give the maximum degree of comfort.

The Haynes 75 Brougham and its companion cars of the 55 and 75 series appeal to one of the widest markets ever open to dealers.

$3095
F.O.B. FACTORY

Write, telephone or telegraph regarding attractive territories. Communications will be held in confidence. Address Dept. 951.

Harvey disc wheels are optional equipment on all of the new, improved Haynes 75 models

THE HAYNES AUTOMOBILE COMPANY, *Factories and Offices: Kokomo, Indiana, U.S.A.*
EXPORT OFFICE: 1715 Broadway, New York City, U.S.A.

1893 • THE HAYNES IS AMERICA'S FIRST CAR • 1922

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 6 | PUBLISHED WEEKLY NEW YORK, SEPTEMBER 23, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



To appreciate fully all it means to be a Wills Sainte Claire dealer you must know the full extent to which engineering, metallurgical and manufacturing skill have gone to make the Wills Sainte Claire car. You can then realize that you have, in a sense, a franchise which becomes at once an asset of immeasurable value. Be sure your territory is not contracted for.

C. H. Wills & Company, *Marysville, Michigan*

WILLS SAINTE CLAIRE *Motor Cars*

©C.H.W.Co.

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LAIDLAW
CLOSED CAR UPHOLSTERY CLOTH

BEAUTY and Durability are the first essentials of any closed car upholstery cloth.

These qualities make every style of our new line of English Bedford Cords, a most desirable fabric for use in any type of enclosed car.

LAIDLAW BEDFORD CORDS

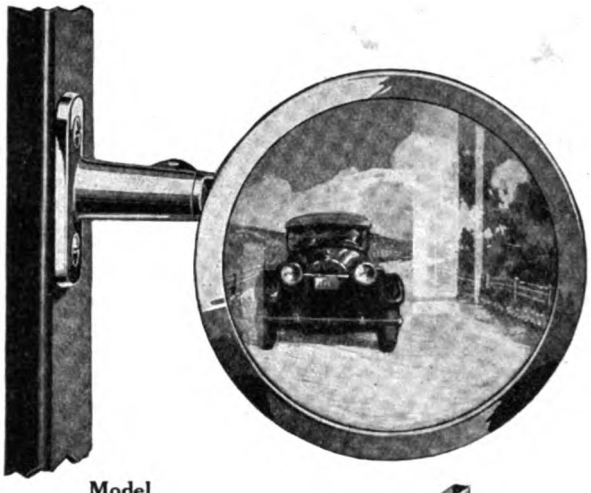
Because of their new and unusual coloring and design are especially adapted for use in show cars.

Write for Samples

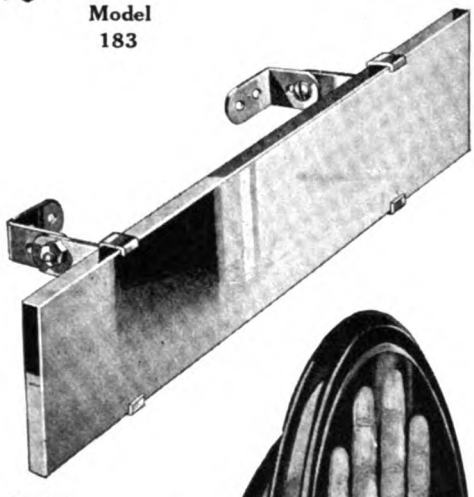
THE LAIDLAW COMPANY, INC.
16 West 60th Street
New York

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A Stewart Safety Combination



Model 183



Model 170



Stop Signal Model 184-A

offering a driver protection from the car behind. Eliminates the needless risks incurred from looking to the rear and the use of arm signals for warning drivers approaching from behind.

A sales combination that offers big business opportunities for the motoring season.

Rear Vision Mirrors

MODEL 170 is made of heavy, beveled-edge glass with durable backing. Furnished with nickel-plated clamps for installation above the windshield of closed or open cars. It reflects the road thru the back curtain window.

Model 170-A, for closed cars.
Model 170-B, for open cars.
Complete, $2.50

Model 183 is for fender or windshield installation on all cars. The five inch beveled glass is held securely in place by a nickel rim. Finished in black enamel.

Model 183-A, closed car windshield model.
Model 183-B, open car windshield model.
Model 183-C, fender model for all cars.
Complete, $4.00

Stop Signal

DON'T sell a customer a stop signal you can't depend upon yourself. The Stewart is electrically perfect. The unique design of the six inch beveled lens is something absolutely new. A distinctly Stewart feature. Flashes a signal with the prestige of a traffic officer at a street crossing. Demands attention—gets it. Large enough not to be mistaken for the tail light. A necessity in present-day congested traffic.

Model 184-A, complete with wiring and switch, $5.00.

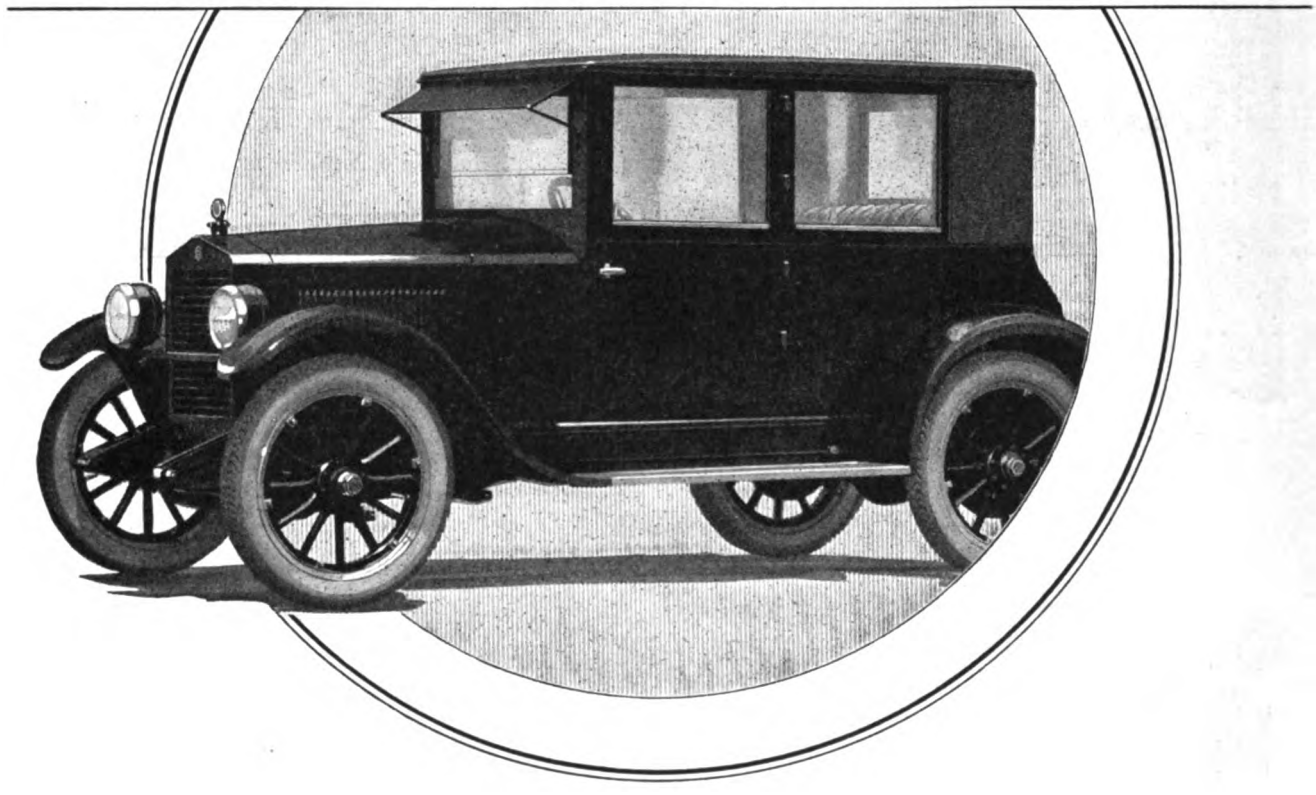
Stewart

PRODUCTS
USED ON 7 MILLION CARS

STEWART-WARNER SPEEDOMETER CORPORATION, CHICAGO, U. S. A.

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ESSEX COACH $1295



Essex Dealers Are Making Money

The Essex line is limited to three models—the Touring car, $1095—the Cabriolet, $1195—the Coach, $1295.

All are wanted types in every community. The values have no equal. No closed car approaches the Coach in utility, attractiveness and price. The Cabriolet is the ideal individual car—in special demand for business and professional use.

Thus Essex dealers have no slow selling models. Their sales effort is applied to types for which there is big demand. And they have little service cost. The reliability of Essex cars keeps them away from the shop.

Factory production was never so great. Yet sales exceed the supply.

Don't you want a business with orders booked ahead, and real prosperity and growth to reward your efforts?

Get in touch with the nearest Essex distributor if you would like to sell the Essex, either as Dealer, Associate or Resident Dealer (the last takes no capital requirement). Or write the factory direct.

Touring $1095 **Cabriolet $1195** **Coach $1295**

Freight and Tax Extra

ESSEX MOTORS, DETROIT, MICHIGAN

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, SEPT. 23, 1922 NO. 6

TABLE OF CONTENTS

Tire Trade Gives Six Months' Report 513
Business Tide Rises with Motor Output 513
Fitzpatrick to Resign from G. M. C. October 1.. 514
Myers Adds Philadelphia to Large Earl Territory 514
Harry S. Daniels Gives Up His Post with Dort .. 514
Studebaker-Cletrac Alliance Dropped 515
100,000 Studebakers Estimated for Year 515
Gardner Gains in Comparative Output 515
Expect Hupp to Make 30,000 Cars in 1922 516
Tariff Bill Export Feature Commended 516
Silica Gel Process Gives Better Fuel 517
Ford Plants Reopen After 4-Day Closing 517
Willys-Knight and Overland Reduced 518
Price Cut Energizes Pierce-Arrow Sales 518
Maxwell 1922 Output Expected to Be 56,000 518
Foreign Sales Work Unusually Effective 518
Mooney Brings Good South American News 519
Dodge Brothers Closed Car in Demand 519
Motor Shares Show Gains from "Lows" 520
Distribution of G. M. C. Common Stock Spreading 520
New Process Gear Sale Again Delayed 520
Saxon Lists 213,000 Shares on Exchange 521
U. S. Light & Heat Presents Its Report 521
Associated Motors Shows First Balance Sheet ... 521
Packard Earnings Running at $500,000 Monthly .. 522
Rickenbacker Delivered 3,000th Car Last Week .. 522
Dodge Brothers Has New Canvassing Plan 523
Study of Gas Engine in Schools Endorsed 523
Southwest Sales in Much Better Shape 524
Says Dealers Can't Solve the Problem 524
Equipment Business to Be Still Better 525
New Type of Engine Announced by Bendix 526
New York to Enforce New Headlight Laws 527
Engineers Declare Against 12-Hour Day 527

FEATURES IN THIS ISSUE

Wherein a Trailer Doubles for a Magic Carpet .. 531
Satisfaction—the Goal of Every Customer 534
By Gordon M. Mather
Selling Goods at Retail 535
"Don't Miss It" Urges New York Trade 536
Sales Contest Proves to Be Powerful Elixir 537
Better Cars and Components for Them 538
Greater Profits for the Shop 540
Products That Aid in Quick Repairs 541
With the Wholesalers and Retailers 543
Calendar 550
Table of Passenger Car Selling Points (copyrighted) 555
Alphabetical Index to Advertisers 602

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
WORCESTER, MASS. CHICAGO, ILL. CLEVELAND, OHIO

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ZENITH

Profits for Dealers in This Notable Leadership

These are the automotive manufacturers that use Zenith carburetors as standard equipment.

In Europe, far more makes use the Zenith than all other carburetors combined. And in America the Zenith has had and continues a phenomenal growth.

The Zenith fixed adjustment carburetor gives greater economy, better acceleration, easier starting, more uniform operation and added power to any motor vehicle.

Motor car and truck owners realize this superiority as well as manufacturers. That is why Zenith dealers do such a profitable replacement business. Write for our proposition.

All These Makers Use ZENITH

Passenger Cars

United States
Anderson
Brewster
Chalmers (export)
Chevrolet
Comet
Crow Elkhart
Daniels
Driggs
Elgin
Fox
Hatfield
Kurtz Automatic
Maxwell (export)
Meteor
Monroe
Noma
Norwalk
Oldsmobile
Ranger
Romer
Standard Eight
Tulsa
Wills St. Claire
Washington
Yellow Cab

France
Alba
Aries
Ballot
Beck
Bazelaire
Bedelia
Bellanger
Benjamin
Bignan
Brasier
Bugatti
Charron
Colda
Correla Licorne
Cottin Desgouttes
Crespelle
De Dion Bouton
Delage
Delaugere Clayette
Doriot-Flandrin & Parrant
Farman
Gobron
Gregoire
Hotchkiss
Irat
La Buire
Leon Bollee
Lorraine Dietrich
Mors
Motobloc
Mourre
Paquis
Paulet
Peugeot
Philos
Rauch Lang (Taxi Cab)
Rochet Schneider
Rolland Pilain
Roy
Salmson
Th. Schneider
Sidea
Sigma
Slim
Soriano-Pedroso
Turcat Mery
Vermorel
Vinot-Deguingand
Voisin
Zebre
Zedel

England
A. B. C.
Angus Sanderson
Argyll
Arol Johnston
Austin
Beardmore
Belsize
Blackburn
Briton
B. S. A.
Calcott
Calthorpe
Charron Laycock
Cluley
Enfield Allday
Ensign
Galloway
Guy
Hampton
H. E.
Hillman
Jowett
Lagonda
Orpington
Palladium
Phoenix
Ruston Hornsby
Standard
Star
Swift
Talbot
Vauxhall
Vulcan
Waverly

Germany
Adler
Audi
Beclowen
Benz
Benz-Sochne
Dux
Elite
Horch
Joswin
Ley
N. A. G.
N. S. U.
Protos
Richard & Hering
Simson
Steiger
Stoewer
Szawe
Wanderer

Belgium
Abadal
Belga
d'Acoust
Dasse
F. N.
Metalurgique
Minerva
Niesse
Nagant
Pipe
Somea

Italy
Alfa Romeo
Ansaldo
Bianchi
Chiribiri
Diatto
Isotta Fraschini
Itala
Lancia
Nazzaro
S. C. A. T.
Spa

Trucks

United States
Abbot-Downing
Acme
American
American Motorbus
Armleder
Atlas
Atterbury
Beaver
Belmont
Bethlehem
Biederman
Bridgeport
Buffalo
Casco
Clydesdale
Collier
Commerce
Dart
Day Elder
Dearborn
De Martini
Dependable
E. A. Denz
Double Drive
Eagle
Elgin St. Sweeper
Facto
Fageol
Federal
5th Ave. Coach Co.
Forschler
Gotfredson-Joyce
Hahn
Hall
Harmer-Knowles
Hawkeye
Hercules
Higrade
Huffman
Hug Co.
H. R. L.
Huron
Indiana
J. T. Tractor
Koehler
Kelly-Springfield
Kerns Dughie
Keystone
Kimball
Krebs
Larrabee-Deyo
Maccar
Mack
Massey-Harris
Moreland
Municipal Supply Company
National
Nelson
New England
Northway
Norwalk
Oklahoma
Olympic
Oshkosh
Penn
Perfection
Power
Rainier
Ranger
Rowe
Samson Tractor
Sanford
Schacht
Southern
Sterling
Stewart
Stoughton
Sullivan
Tower
Towmotor
Traylor
Triumph
Veteran
Vim
Wachusetts
Walker Johnson
Watson
White
Witt-Will

England
A. E. C.
Albion
Austin
Beardmore
Belsize
Daimler
Enfield Allday
Guy
Halley
Hallford
Karrier
Marathon
Mandslay
McCord
Pagefield
Palladium
Scrammell
Star
Tilling Stevens
Vulcan

France
Aries
Cottin Desgouttes
De Dion Bouton
Peugeot
Rochet-Schneider
Saurer

Italy
Spa

Switzerland
Berna

Germany
Adler
Benz
Horch
N. A. G.
Richard & Hering

ZENITH CARBURETOR COMPANY, DETROIT, MICHIGAN

Factories at: DETROIT LYONS LONDON TURIN BERLIN

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Studebaker

LEADERSHIP

Studebaker is the world's largest builder of six-cylinder cars. Studebaker is a consistent leader in the development and perfection of automobile design, quality, durability, comfort and intrinsic value.

Among Studebaker's recent achievements may be mentioned:

First to use cord tires as standard equipment on a car selling for less than $2,000.

First quantity manufacturer to design and produce really high grade open bodies sufficiently strong and heavy to endure permanently and meet the exacting requirements of style and finish. Our liberal use of materials is confirmed by the fact that bodies of most cars of the same wheelbase are from 10 per cent to 25 per cent lighter and of proportionately less cost.

First quantity manufacturer to use, as standard equipment, composition leather tops with beveled plate glass windows, tonneau lamp, transmission lock, cowl ventilator, cowl lamps, one-piece windshield, windshield wiper.

First quantity manufacturer to provide, as standard equipment, substantial and adequate body fittings of high quality, such as carpets, robe rails, upholstery beading with tacks concealed, door handles, grip handles, big, roomy cushions, clocks, thresholds, etc.

Records of yesterday established by Studebaker include:

First to make extensive use of pressed steel.

First to make a six-cylinder motor bloc in a single casting.

First to sell a six-cylinder car for less than $2,000.

First to produce a car with crown fenders.

First to produce a car, selling for less than $1,500, with crankshaft and connecting rods machined all over.

First to produce a car in which Molybdenum steel was used.

First to mount engine accessories on front drive shaft with improved mounting and lubrication.

First to use, and inventor of, the internal hot spot.

First to cast the intake manifold in a detachable head.

First to use 20° inclined, silent operating valves.

MODELS AND PRICES—*f. o. b. factories*

LIGHT-SIX *5-Passengers, 112" W. B., 40 H. P.*		SPECIAL-SIX *5-Passengers, 119" W. B., 50 H. P.*		BIG-SIX *7-Passengers, 126" W. B., 60 H. P.*	
Touring	$ 975	Touring	$1275	Touring	$1650
Roadster (3-Pass.)	975	Roadster (2-Pass.)	1250	Speedster (4-Pass.)	1785
Coupe-Roadster (2-Pass.)	1225	Roadster (4-Pass.)	1275	Coupe (4-Pass.)	2275
Sedan	1550	Coupe (4-Pass.)	1875	Sedan	2475
		Sedan	2050	Sedan (Special)	2650

Cord Tires Standard Equipment

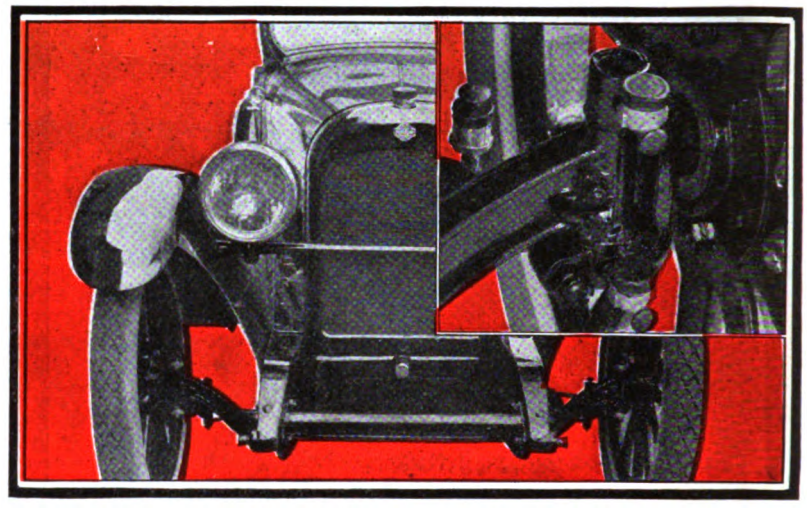
THE STUDEBAKER CORPORATION OF AMERICA
SOUTH BEND, INDIANA

THIS IS A STUDEBAKER YEAR

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HOW NASH RECOGNIZES THE WOMAN DRIVER.

Steering made unusually easy by new standard equipment on the SIX



New, improved aluminum Oil-Kipps are now standard equipment on the steering knuckles and tie rods of the Nash Six. Over 1200 pounds of pressure can be developed in the Oil-Kipps by merely pumping them with the palm of the hand; almost unlimited pressure is available for clogged bearings.

Backing out of garages, driving in traffic, and taking a trick at the wheel on tours have changed women's buying attitude toward automobiles.

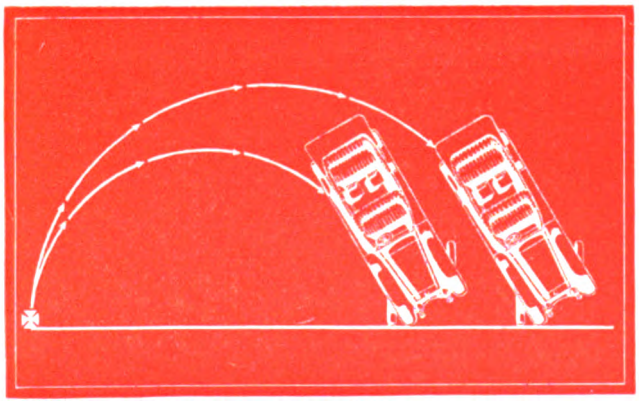
Pleasing her eye is no longer enough. Her hands and arms have to be taken into consideration too.

The steering gear is one mechanical feature in which she will have a lively interest when the family's next car is bought.

Why Nash Chose Oil-Kipps

Hard steering is practically always due to poor lubrication of knuckles and tie rods.

The Nash organization long ago decided that oil was the only thing that could succeed where grease had always failed.



Relative turning radii of a car before and after equipping with Oil-Kipps. With Oil-Kipps on the steering gear, the car turns so much more easily that it can be brought about in a much smaller radius.

To them the problem soon narrowed down to this: What is the right device for lubricating tie rods and steering knuckles with oil?

With the usual Nash thoroughness they investigated, experimented, tested and retested.

After eighteen months they were all agreed that there was one clearly satisfactory solution for their problem.

That solution is the Oil-Kipp—now standard equipment on the steering gear of the Nash Six.

What Oil-Kipps Are

Each Oil-Kipp consists of a complete pumping unit contained in a die-cast aluminum cup carrying several months' supply of heavy oil. No gun or auxiliary pressure booster is necessary.

They are operated by merely pumping the spring plungers or pistons.

Their success in forcing heavy oil all around tight fitting bearings is due to a simple hydraulic principle.

The outstroke of the plunger creates a vacuum in the barrel, so that oil is sucked into it from the cup.

The instroke of the plunger puts this oil under pressure, because the plunger is so small in diameter that each pound of pressure exerted on the handle means a great many pounds in the pump.

What Nash Dealers are doing with Oil-Kipps

With them, tie rods and steering knuckles can be lubricated in one minute, even by a woman.

Because of the size of the new Oil-Kipps, they carry enough oil for several months. They can be easily refilled with an oil can containing heavy oil.

Nash dealers who have seen the new equipment are so pleased with its appeal to women drivers that many are ordering Oil-Kipps to be put on older cars.

A set of Oil-Kipps can be installed on the steering gear in twenty minutes.

A number of Nash distributors are already carrying stocks of them and orders from others are coming in.

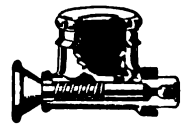
Where distributors have not yet received their stock, we can arrange direct shipments. When writing please give name of your distributor.

MADISON-KIPP CORP., MADISON, WISCONSIN

Nolan Smith & Co., Sydney, Australia. Wm. Coulthard & Co., Ltd., Carlisle, England

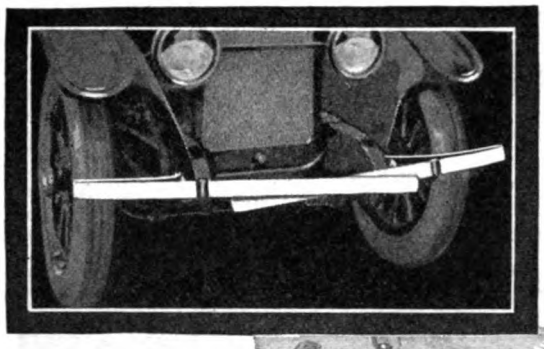


Oil-Kipps



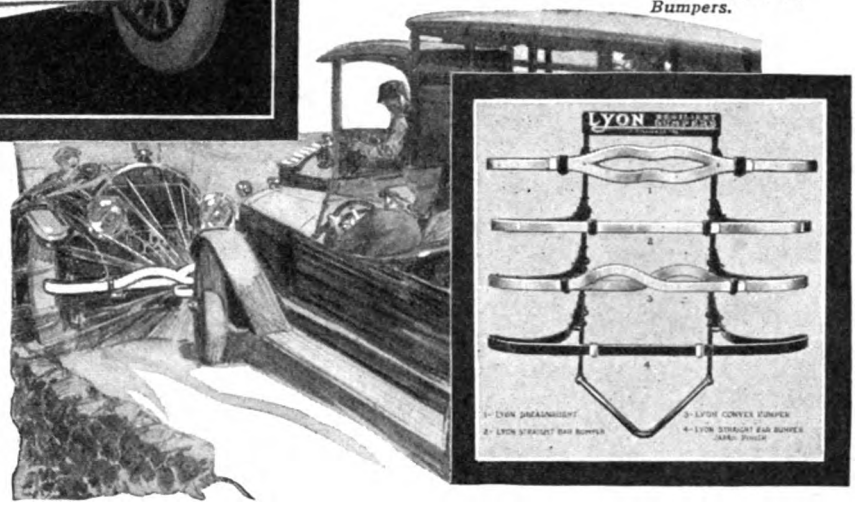
MAKE STEERING EASY

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This shows how the two leaves overlap in the center, giving a double thickness of impact surface and increased flexibility. Leaves are held tightly together by pressed steel clips.

Here is the Lyon Distributor's Display Rack showing the four famous fast-selling Lyon Spring Bumpers.



Just as there are Pigs and Pigs—

there are bumpers and bumpers. But, seek as you will, you can only find one bumper that stands the gaff and "comes back smiling." That bumper is the *Lyon Spring Bumper!*

Lyon construction means "spring" construction to the last degree. That's why every one will take a severe blow without damage. The two-piece overlapping front bars with the Lyon-patented open "looped-ends" are imitated *—but their resiliency will never be equaled!*

Think this over before you recommend a bumper that's built for show instead of action. Consider, too, that there are more Lyon Spring Bumpers sold than all the others put together—over a million in use!

Lyon Spring Bumper sales are increasing by leaps and bounds. They are one of the biggest accessory items on the market. Use the "ask 'em to buy" idea when they come to you for supplies; every unprotected car is a prospect. It only takes a short time to attach them without drilling or altering the frame.

Dealers: Direct advertising, display stands, window trims and "prospect" literature are all working for hundreds of Lyon dealers. Write your jobber if you're not familiar with our proposition.

JOBBERS—*Here is an accessory that needs no introduction. Write for our proposition.*

Retail prices—$10 to $25

Over one million Lyon Spring Bumpers in use.

METAL STAMPING CO., LONG ISLAND CITY, N. Y.



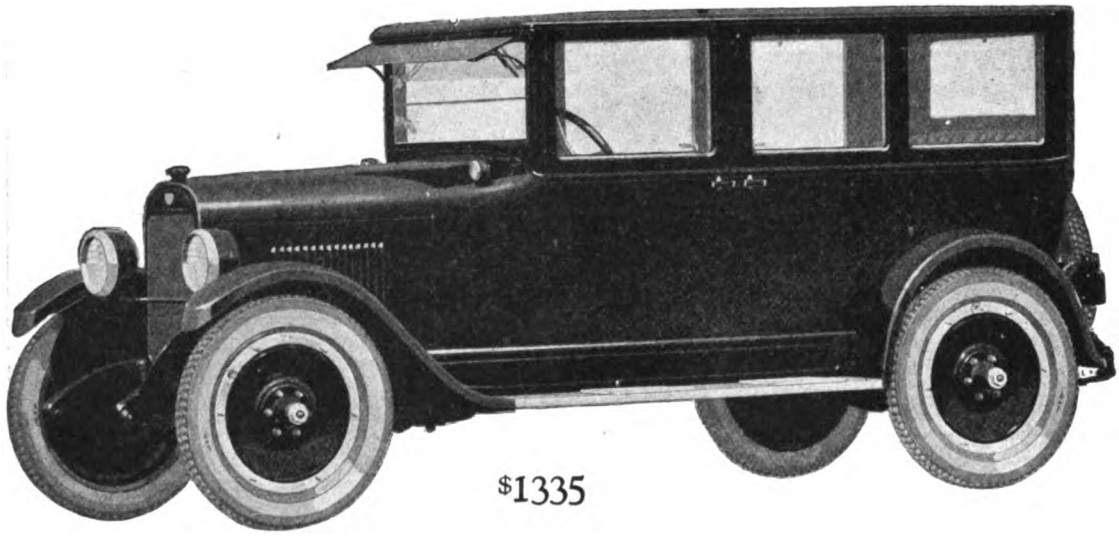
Lyon Straight-Bar Bumper



Lyon Convex Bumper

LYON RESILIENT BUMPERS

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Owners know that the good Maxwell Sedan is just as unusual in reliable, economical performance as it is in pronounced beauty. Its sound value is more than ever apparent.

Cord tires, non-skid front and rear; disc steel wheels; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; new type water-tight windshield. Touring Car, $885; Roadster, $885; Coupe, $1235; Sedan, $1335. Prices f. o. b. Detroit. Revenue tax to be added

MAXWELL MOTOR CORPORATION, DETROIT, MICHIGAN
MAXWELL MOTOR CO. OF CANADA, LTD., WINDSOR, ONT.

The Good

MAXWELL

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Why You Should Sell Red-Tops

The letter below is by all odds the best evidence we could present to convince you that the Fisk Red-Top is a sure profit-maker, and a builder of the finest kind of business through creating good-will for the dealer:

Fisk Tire Company, Inc.,
Nashville, Tenn.

Smith's Grove, Ky., 7/7/22

Dear Sirs:—

I am pleased to note that the price of 30 x 3½ Red-Top has been reduced, as I am sure it will mean a still larger volume of business.

I started to handle Fisk Tires three years ago. My first order was for four 30 x 3½ Red-Tops. I had quite a time making my first sale because I had casings for less money.

I watched these casings run and they went beyond my expectations as well as my customers'. I was so thoroughly sold on them that I began to advise my trade to buy Red-Tops, and with very few exceptions every sale has been a repeater.

I have tried selling cheap tires, the result being dissatisfied customers and hard to resell; not so with Fisk line. Once a buyer always a buyer, has been my experience.

I find it easier to sell one line rather than to have several different kinds to sell provided you have the right kind. I have tested several standard brands and find Fisk Red-Tops the best yet, as well as the whole line of Fisk products.

With the strongest possible competition I am selling more casings than ever before. Car owners that never buy anything else from me come here to buy Red-Tops.

Yours very truly,
J. K. Cooke.

Put the Red-Top to work for you. Its extra strength, extra-ply construction, and its distinctive heavy red tread will do for your business what it does for the car owner—stand up, give you no trouble, last long and show a real profit.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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General Motors Trucks

Prompt service to the thousands of GMC trucks now operating all over the country is insured by the direct factory branches and authorized distributors that are to be found in every section.

Each of these maintains a large and comprehensive supply of replacements for GMC trucks, and is so located that rapid delivery of new parts can be made to practically every one of the three thousand towns in which GMC trucks are in operation.

This complete distribution is of course most valuable to every GMC dealer. It helps to build profitable business and to maintain the universal satisfaction of GMC owners.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

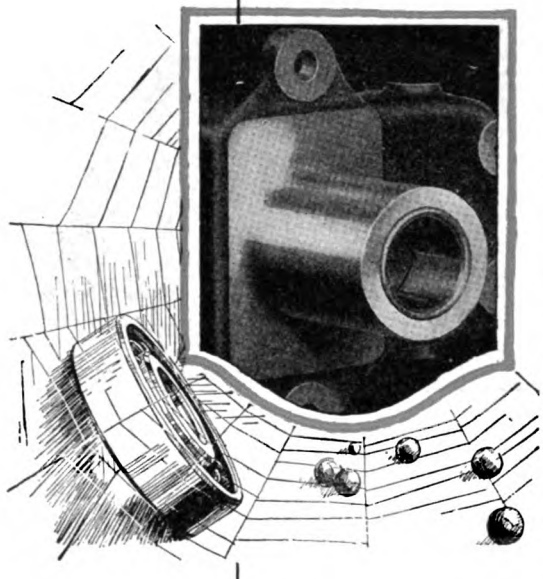
1 Ton $1295 *2 Ton $2375* *3½ Ton $3600* *5 Ton $3950*

Chassis Only—At the Factory—Tax to be Added

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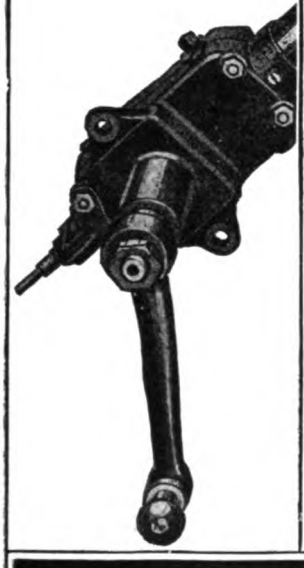
JUST One Working Bearing —another Lavine Feature that Appeals to Truck Builders



In the *Lavine Steering Gear,* no ball or roller bearings are needed to carry steering thrusts. The only working bearing is the husky phosphor-bronze bushing which carries the trunnion shaft.

As this bushing receives no driving shocks, it is obviously over-size—trouble-proof for the life of the truck or motor bus.

The base of the worm shaft is supported by a small ball-thrust bearing. This permits perfect adjustment of the gear for any desired amount of wheelplay.



Manufacturers of trucks, motor busses and tractors—you should know the other *Lavine* features. Exchange specifications with us—send us your blueprints. No obligation, of course, but you want the *Lavine* story—and reasonable prices.

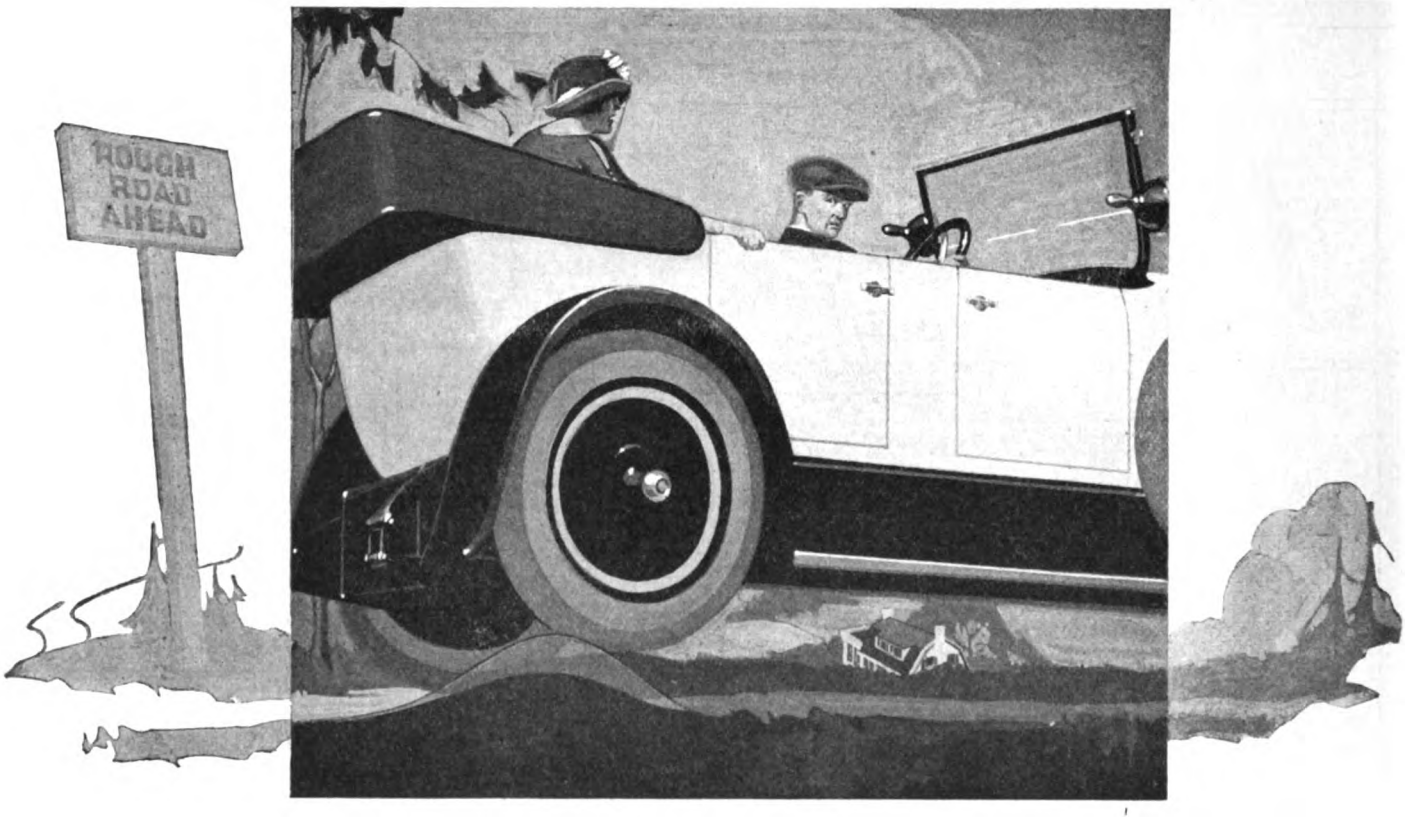
LAVINE GEAR COMPANY
Milwaukee, Wisconsin

There's a LAVINE for every job

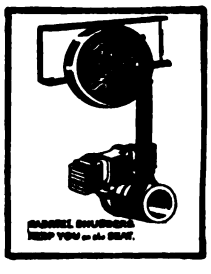
Lavine Steering Gears for trucks, busses and tractors are made by the same organization as the Lavine "Pilot," the new standard of steering gear value for fine passenger cars.

LAVINE STEERING GEAR

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Why Let Your Car EXAGGERATE *Each Bump?*



FLEXIBLE springs are absolutely necessary for comfort—for when your car hits a bump, the flexibility allows the springs to compress and soften the shock. But when springs compress, they develop force for the rebound—the upward throw—and it's the rebound that exaggerates the size of the bump—lifts you off the seat—bounces the passengers and strains the car.

Gabriel Snubbers *stop* the *rebound*—they control the compressed spring, letting it return to normal slowly and gently. They give you the full comfort of flexible spring action yet eliminate the "throw." Instead of exaggerating the bump, they keep you on the seat and make the bounce of the car negligible compared to the size of the bump. With Snubbers, you drive rough roads with the speed and comfort that you ordinarily drive good roads—the nervous strain of motoring is eliminated.

Ask your dealer about the advantages of Snubbers. Unless he is making $40 to $50 a set on high priced shock absorbers, he will tell you that no matter how much you pay for other makes, Gabriel Snubbers will give the best results.

Sixty-Five Leading Cars Equipped With or Drilled for Snubbers at Factory.

GABRIEL MANUFACTURING COMPANY, 1421 E. 40th St., Cleveland, Ohio

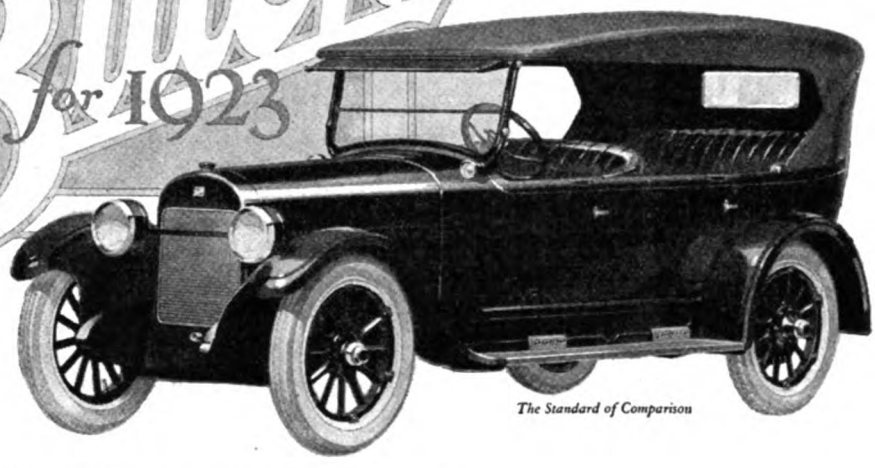
GABRIEL SNUBBERS



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THE SATURDAY EVENING POST

VALVE-IN-HEAD Buick for 1923



The Standard of Comparison

The *New* Master of the Road

The 1923 Buick Seven-Passenger—$1435

Marked comforts, refinements and the most complete equipment characterize the 1923 Buick Seven-Passenger Touring Car and heighten those splendid qualities of appearance, riding ease and power which have made this model so often patterned after.

The long graceful lines have been accentuated by lowering the body height appreciably and by the new full crown fenders, drum type head and cowl lamps. The sitting posture for all seven seats has been made perfect in its comfort; the top has an exclusive tailored design with a distinctive type of windshield visor to match its trimness; a rear-vision mirror, completely new instrument board, cowl ventilator and transmission lock are among the many other touches of fine craftsmanship which are reflected in this new model.

The time-proven Buick type of cantilever spring has been given an entirely new suspension which absorbs road roughness and does away absolutely with any necessity for rear snubbers or shock absorbers. The famous Buick Valve-in-Head motor, the velvet Buick clutch, the body construction—all evidence the painstaking care in

This new model

Among the other improvements and refinements are: etched threshold nickeled foot rest brackets, [illegible] wind-

Everybody is a Buick Prospect

Selling the Buick line is not limited to any one class of motor car buyers. The fourteen distinctive open and closed models include body styles and sizes for every family, for every kind of business and motoring at prices that fit every purse. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

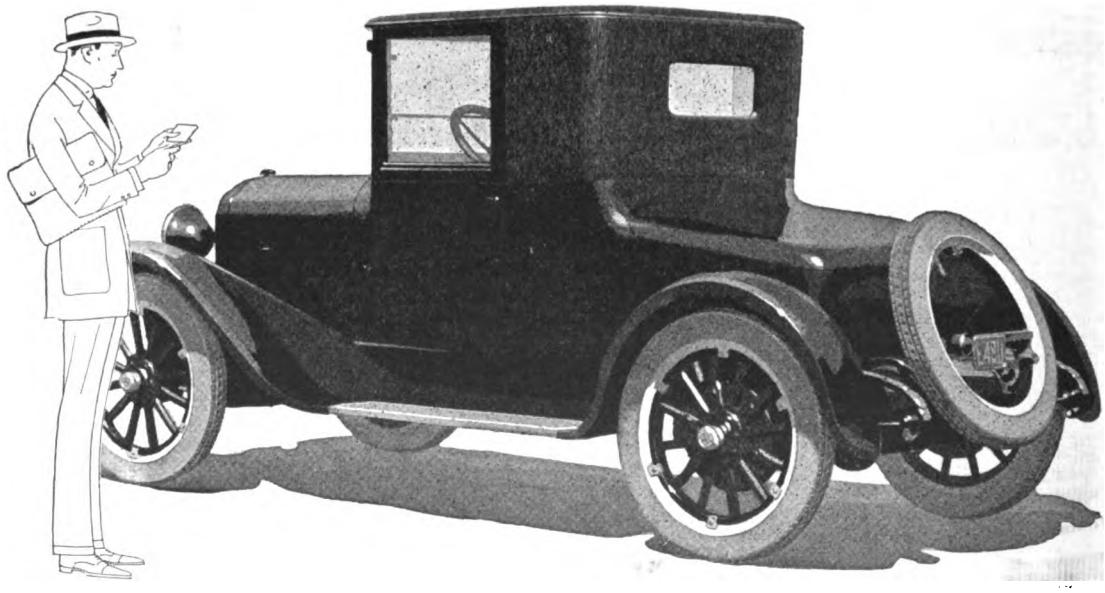
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

The price is $980 f. o. b., Detroit

DODGE BROTHERS



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Turnover is the big word in profits

IT costs less to stock one complete line, than to carry three or four incomplete lines.

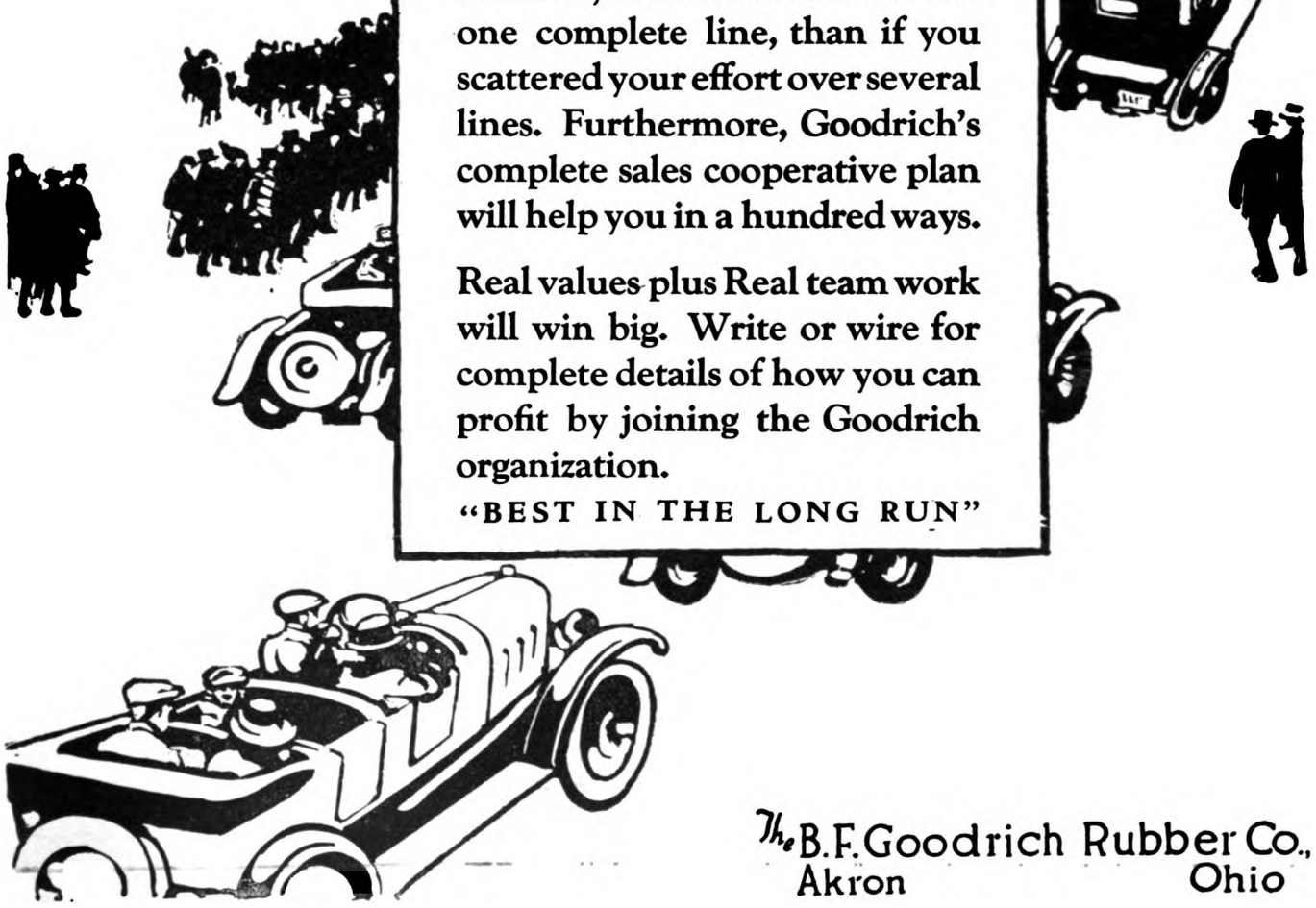
The Goodrich Line is *complete* —offers real Goodrich quality to every possible Tire user.

The whole range of Goodrich Tires, Goodrich tubes, the fastest selling tubes in America, and Goodrich complete line of Automobile and Tire accessories.

You will sell with more enthusiasm if you concentrate on this one complete line, than if you scattered your effort over several lines. Furthermore, Goodrich's complete sales cooperative plan will help you in a hundred ways.

Real values plus Real team work will win big. Write or wire for complete details of how you can profit by joining the Goodrich organization.

"BEST IN THE LONG RUN"



The B.F.Goodrich Rubber Co.,
Akron Ohio

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"Nash Leads the World in Motor Car Value"

Bigger Profits for Nash Dealers on Enclosed Cars

You know what it means to have enclosed car orders staring you in the face and no cars with which to fill them

The Nash Company is working out protection for its dealers on this point just like it worked out protection for them against price decline.

The biggest unit of the Nash body building plant at Milwaukee is being doubled in size.

It is just this kind of practical co-operation with dealers that is making the Nash franchise a steady, big-profit proposition.

Write today to the Sales Department about territory now available.

Reduced Prices

SIXES		FOURS	
5-Passenger Touring	$1240	5-Passenger Touring	$ 935
7-Passenger Touring	1390	Roadster	915
7-Passenger Sedan	2190	Coupe	1385
4-Passenger Coupe	1890	5-Passenger Sedan (enclosed)	1545
Roadster	1210	2-Passenger Cab (enclosed)	1195
Sport Model	1395	5-Passenger Carriole (enclosed)	1275

(*f. o. b. factory*)

The Nash Continuous Contract—Not Annual—Protects Dealers Against Decline in Price

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

"Nash Leads the World in Motor Car Value"

(597

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, SEPTEMBER 23, 1922 No. 6

TIRE TRADE GIVES SIX MONTHS' REPORT

Rubber Association's Figures Show Industry Used Up Twice as Much Crude —Value of Shipments Made Therefrom Not As Great Relatively.

Total sales value of shipments of manufactured rubber products for the six months' period of 1922 reached $348,090,432, or nearly $18,000,000 more than the comparable figure of 1921. In making the sum the manufacturers used up 256,758,727 pounds of crude rubber as compared with 131,979,361 pounds in the first six months of 1921. It is thus apparent that while consumption of crude rubber was nearly doubled, the money result comparatively was not nearly as great.

These figures and others equally as interesting were announced this week in the annual statistics of the industry, for the period named, by the Rubber Association of America, Inc. Of the totals, tire and tire sundries account for 210,018,457 pounds of crude consumed and $239,458,658 of the money realized. The consumption is therefore practically four-fifths of the total and the value of these products something more than two-thirds of the whole.

These statistics are based on the reports from 219 rubber manufacturers, 53 crude rubber dealers and importers and six reclaimers. Of these, the total being 278, 196 are members and the remainder non-members of the Association.

The compilation shows that the total daily average number of employes was 133,281 which is record of the growth of the industry since few employers thus hired more men than the 333 companies did in 1921, the latter figure being 110,104. The number of pounds of reclaimed rubber produced from raw and cured scrap totaled 57,845,680, of which the bulk was produced by the six concerns dealing solely in this branch of the industry.

Under the head of tires and tire sundries, the following figures are given, the total sales value of shipments of the manufactured product being given first and the number of pounds of crude rubber being given in parentheses: Automobile and motor truck pneumatic casings, $192,890,053 (150,086,346); automobile and motor truck pneumatic tubes, $25,660,091 (37,630,043); motorcycle tires, casings and tubes, $786,744 (496,423); bicycle tires, tubes and casings, $1,769,331 (984,-

(*Continued on page 516, first column*)

Crowding the Road

Questioned as to his view of the present tendencies in the automobile manufacturing business, a certain widely known and prominent maker has hit upon the illuminative simile that the business presents the picture of "many charioteers racing their chariots down a narrowing road." "Only a very few chariots, perhaps can eventually pass the narrows," he continued. "While some cannot afford to be too conservative because of their being unable to meet competition if great output is lessened and costs thus sent relatively higher, others are crowding on more and more speed in an effort to reach the narrows first."

"War" Vehicle Duty Retained

Duty on re-imported "war" vehicles remains at 90 per cent in the tariff. This desirable provision was the object of the special attention of the National Automobile Chamber of Commerce which finds that that and other measures it advocated have been retained. Crude Aluminum is subject to a duty of 5 cents per pound and ball bearings are dutiable at the rate of 45 per cent plus 10 cents per pound, the original rate of the House committee and lower than that proposed by the Senate.

BUSINESS TIDE RISES WITH MOTOR OUTPUT

Cleveland Trust Co., Measuring Advances in Trade, Predicts No Slack for Some Time to Come—Automobile Business in Van of Trade Revival.

Increased activity in the automobile business is in effect given second place among the underlying and greater causes for the rise of general commerce's tide by the Cleveland Trust Co., in its mid-month bulletin, largely the work of Leonard P. Ayers, vice-president. The bank believes that there is no reason to fear that the business revival will either terminate or suffer a serious reverse for some months to come.

"Business recovery has now been definitely under way for one year," the bulletin states. "It is still continuing. It has been retarded, but not stopped, by the coal and railroad strikes, for its momentum has been too great to be seriously checked by even these widely effective disturbances in two of our truly fundamental industries.

"There have been five great factors in the process of business recovery. The first was the working off of the accumulated stocks of high priced goods left on the hands of producers and dealers when prices collapsed in 1920. This process has been greatly stimulated in recent months by rising prices and the increased purchasing power resulting from expanding payrolls. The second factor was the abundant supply of funds that became available after prices dropped and interest rates fell.

"The third stimulating influence was the great building boom which is still under way, creating new high records in the construction industry, and rapidly cutting down the building shortage left

(*Continued on page 516, second column*)

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FITZPATRICK TO RESIGN FROM G. M. C. OCTOBER 1

Former Head of Acceptance Corporation to Withhold Plans While on Trip

Paul Fitzpatrick, accredited with much of the early development of automobile financing through his connection with the Continental Guaranty Corp., and who in 1918 was chosen by General Motors to organize the General Motors Acceptance Corp., has tendered his resignation from G. M. C. to take effect October 1. He is sailing for Europe on October 5 on a combined vacation and personal mission. His plans for the future will be divulged upon his return, which will be around the middle of November.

Fitzpatrick personally was responsible for the growth of the Acceptance Corporation. Under his guidance a tremendous volume of business was built up in a very short time after operations got under way early in 1919. In March, 1921, General Motors added to his responsibilities by entrusting to him the reorganization of the Export Company operations. Since the completion of that work in October of last year, he has been in the central offices of G. M. C. as special assistant to A. P. Sloan, Jr., vice-president in charge of all the Corporation's operations. In this capacity he devoted much of his time to the affairs of General Motors, Ltd., the London subsidiary, which has accomplished one of the most spectacular "come-backs" the industry has witnessed in foreign fields.

Haynes and Nichols Tour West

Fred J. Haynes, president, and John A. Nichols, sales manager of Dodge Brothers, are touring the Pacific Coast investigating business conditions. It is expected that their travels will consume a month's time.

Walter P. Chrysler Returns

Walter P. Chrysler, accompanied by Mrs. Chrysler, returned to the United States on the *Berengaria* September 20. He sailed late in June for a trip through Europe more for a vacation period than with any intention of more than casual business surveying.

Rickenbacker Marries Mrs. Durant

Maj. Edward Rickenbacker married Mrs. Adelaide Durant, former wife of Clifford Durant, at Greenwich, Conn., on September 17. The couple sailed for a two months' tour of Europe the same day. They will reside in Detroit.

Chas. E. Miller Makes a Tour

Charles E. Miller, "the first automobile jobber," who recently closed out a business of 26 years honorable standing and retired, is now on extensive automobile tour which will take him through the Berkshires, the White Mountains, portions of Canada, and the Lake Champlain basin. Accompanying him are two of his old and faithful employes, Matthew Sweeney and Lawrence Hess, who were manager and secretary, respectively, of the old concern. Miller himself is devoting much of his energy and attention to the cause of the Memorial Hospital, in which he is deeply interested.

J. O. Eaton Sails for England

J. O. Eaton, president of the Torbensen Axle Co., has joined the ranks of automobile men going to the Continent. He sailed for England September 22 on a trip of several weeks' duration.

C. B. Hayes Married

Friends of Clarence B. Hayes, president of the Hayes Wheel Co., are congratulating him on his marriage to Miss Harriet D. Ballard. The ceremony took place in Detroit on September 2.

HARRY S. DANIELS GIVES UP HIS POST WITH DORT

Advertising Chief Is Widely Known in Trade and Newspaper Circles

Harry S. Daniels is about to sever a five-year connection with the Dort Motor Car Co., Flint, Mich., as advertising manager. His plans for the future have not as yet been definitely decided upon.

Daniels is widely known through the trade and to newspaper men connected with it. His early experience was in news and editorial writing, after which he branched out into advertising. For the past 12 years he has held advertising managerships, 10 of these years in the automotive field, notably with Kissel and Dort. Among his achievements have been several national campaigns, and the creation of successful trade names.

Baskerville Now with Maxwell

Dean E. Baskerville, well-known body engineer and designer, has been added to the staff of the Maxwell Motor Corp. Baskerville has been with Dodge Brothers in a similar capacity for the past six years and prior to that time was connected with Packard and a number of body builders. His coming enables E. W. Goodwin, consulting engineer of the Maxwell corporation, to give his entire time to creative work in design.

Firestone Turns the Crank

Harvey S. Firestone, president of the Firestone Tire & Rubber Co., visiting in France, turned movie operator on September 14, according to press despatches, in order to gain admission to the famous Basque fete, the greatest event at Biarritz. Unable to obtain a ticket, Firestone and his friend Thomas Clements, appealed to a news reel representative who had passes for himself and two assistants. Carrying the representative's heavy cameras, Firestone gained admission to the fete and assisted in filming the Shah of Persia and King Alfonso.

MYERS ADDS PHILADELPHIA TO LARGE EARL TERRITORY

Former Engine Designer Now Operating His Organization in Six States

E. A. Myers Co., Pittsburg, distributing the Earl line exclusively in western Pennsylvania and West Virginia, has taken over the Philadelphia territory of the Earl Philadelphia Motor Car Co. With this acquisition, the Myers company will be operating in six States, in which territory incidentally, President E. A. Myers has built a powerful dealer organization. L. M. Myers, for several years sales manager of the Pittsburg Branch, will head the Philadelphia office. C. S. Miller, formerly wholesale manager out of Pittsburg and more recently operating as a dealer under the Myers company, will be in charge of the Philadelphia territory. Present Earl headquarters in the latter city, 235 North Broad street, will be retained.

E. A. Myers himself was one of the pioneer advocates of the long stroke engine. For 18 years he was engaged in the design and manufacture of power plants, founding and heading the Model Gas Engine Works, which later became the Pittsburg Model Engine Co. He is credited with the building of 82 four-cylinder power plant designs ranging in size from 2½x4½ to 16½x26. In 1916 he organized his present distributing company and handled successfully several leading lines until the formation of Earl Motors, Inc., at which time he decided to concentrate all efforts upon the one product.

H. O. Smith Resigns

Harold O. Smith has resigned as general manager of the Racine Automobile Tire Co. Smith was appointed to that position early in May, 1921. He was formerly president of the J. & D. Tire Co., from which office he retired in July, 1918.

Charles C. McDaniels

Charles C. McDaniels, sales manager of Fiske Bros. Refining Co., Pittsburg, was taken suddenly ill in Toledo on the evening of September 16 and died on the 18th, following an operation. Death resulted from paralysis of the digestive organs. McDaniels was very well known in the industry and his host of friends were shocked to learn of his sudden demise.

Mrs. Anna H. Clarkson

Mrs. Anna Howell Clarkson, widow of the late Gen. James S. Clarkson and mother of Coker F. Clarkson, general manager of the Society of Automotive Engineers, and H. R. and Grosvenor B. Clarkson, died on September 14 at her home in Newark, N. J. Mrs. Clarkson was 75 years of age at the time of her death. Her husband at one time was chairman of the Republican National Committee and for eight years surveyor of the port of New York.

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STUDEBAKER-CLETRAC ALLIANCE DROPPED

Negotiations Off, Two Groups Proceed on Independent Lines — Cleveland Tractor in Favorable Circumstances— Separate Financing for Zeder.

Negotiations between the Cleveland Tractor interests and Clement Studebaker, Jr., and his associates have been practically abandoned. Consequently the plan for an alliance of the two with a reorganization and increased capitalization of the Tractor company as a basis of operations has been dropped. Difficulties unexpectedly blocked the consummation of the project, which was to have been carried out under the new name of the Allyne-Zeder Motors Co., and consequently the two groups are proceeding with their respective plans along independent lines.

It will be recalled that the proposition assumed form last May and was carried up to the point where stockholders in the Tractor concern were to be asked to consent to the reorganization. This was never done, as the negotiators suddenly found themselves unable to agree upon at least two points in connection with the setting up of the enterprise. These differences being found irreconcilable, after much deliberation, it was decided to let the whole thing lapse. The parting of the ways was discovered mutually and it is said the decision to proceed individually was reached in entire amity.

With the immediate prospect of a changed status dissolved, the Cleveland Tractor Co. finds itself in highly favorable circumstances. The tractor business offers wholesome and profitable opportunities for a concern having a good product that is at once able and conservatively managed. The Cletrac has a good name, is backed by an effective distributing organization and can be made and sold at a comfortable margin of profit. As the proposed alliance had been sought on the theory that the Cletrac plant and organization would be an effective contribution to the success of that undertaking, it follows that the termination of the project in its original form has no bearing whatever on the continuance of the tractor business itself.

The Company is in a strong cash position, having successfully marketed its $2,000,000 bond issue, with the cooperation of Cleveland bankers and business men. It has also fortified its position in other respects. Frederick (?) Ramsey, who temporarily gave his service to the organization in the same connection has completed his work there and is no longer active in its affairs.

The light truck, work on which has been going forward some time, and which antedates the negotiations with the Clement Studebaker interests, is coming along favorably. It has given a good account of itself, and is thought by some of those who have seen it to give promise of putting the Cletrac into a position in the light commercial vehicle field analagous to that occupied in the heavy truck business by the White Company, of which Rolin H. White, now President of the Cleveland Tractor Co., was also the original designer.

It is also understood that the Cleveland Tractor interests have other plans under consideration. When these are sufficiently mature for disclosure it is thought they will prove highly advantageous. At the moment, however, they have not passed the incipient stage.

In the meantime, Studebaker and the interests allied with him, are continuing the development of the Zeder car, more or less along the lines originally planned, and at the same time are developing a new plan of organization. This, it is understood, will place the product, which is of great promise, on an independent footing in the passenger car field. While the engineering work is progressing, it is said financing plans are being discussed with Hornblower & Weeks and the Boston connections of that house, through which it is deemed not at all unlikely definite arrangements may be concluded.

IT'S ALL ON THE TABLE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 555-7 of this issue. It is revised to Sept. 19.

Each succeeding week sees the Table growing more valuable. Its up-to-the-minute accuracy is assured by constant checking by manufacturers themselves, coupled with the news gathering facilities available.

Its legibility is one of the Table's most talked-of features. This cleanliness is assured by the fact that the Table is printed from fresh plates every week.

Gardner Gains in Comparative Output

Gardner Motor Co., Inc., St. Louis, points with pride to the fact that its sales figures put it among leaders in the industry. In units of production, Gardner reports it ranked seventeenth in June and sixteenth in July among approximately 90 passenger car manufacturers. This showing is the more remarkable since it comes during a period usually characterized by slackened automobile sales. Actual closed car orders on hand call for over 50 per cent of total output of all models.

Moon's August a Record

Moon Motor Car Co. produced 1,018 cars in August, thereby establishing a record for this concern. Indications are that September shipments will exceed August's, the volume of closed car sales showing a decided increase.

100,000 STUDEBAKERS ESTIMATED FOR YEAR

Current Quarter's Production Expected to Be Between 28,000 and 30,000— Net Profits for 1922 Indicated at Nearly $19,000,000 Review Shows.

Studebaker Corp. will deliver between 28,000 and 30,000 cars in the current quarter on which net profits after charges and taxes should approximate $5,250,000, according to latest available figures. This may be compared with net profits of $7,086,552 in the second quarter and $4,069,848 in the first three months of the year.

While definite production schedules have not been laid out as yet for the final quarter it is believed by the Corporation that a total of 100,000 cars will have been made and shipped when 1923 comes in. Since output for the nine months ended September 30 will probably be found to be in excess of 86,000 vehicles, it follows that net profits for the final quarter will be in the neighborhood of $2,500,000 which will bring the year's total in "black ink" figures up to $18,900,000, equivalent to more than $30 a share on outstanding common.

As has been intimated from time to time by President Erskine, the Corporation has been little affected by the coal and railroad strikes. It has had enough coal and steel in its plants to carry it through the depressing days and now that the coal miners have returned to work and the railroad situation shows signs of clearing, it is not thought by the management that any great difficulty will be in store in the immediate future.

Meanwhile the Corporation has made rapid strides in its program of expansion. Undertaken early in the year and involving an expenditure of approximately $3,000,000, a number of new units were roofed last week and by next month will be ready for occupancy.

President Erskine says there is no sign of a let-up in demand and no early curtailment of current production schedules, calling for about 10,000 a month, is contemplated. It is expected that sufficient progress will have been made this year to assure Studebaker entering 1923 with an output of 150,000 cars yearly at capacity operation.

Spicer Plants Busy

Plants of the Spicer Manufacturing Corp. are working at capacity, according to Charles A. Dana, president. "It is my belief," Dana asserts, "that the increasing popularity of the closed bodies apparently will mean a larger demand for automobiles than has been thought probable. Our orders for 1923 delivery are coming in in good volume. All our plants are well supplied with fuel."

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EXPECT HUPP TO MAKE 30,000 CARS IN 1922

Output to Date More Than 25,000 as Compared with 20,705 in Full Year of 1920—Net Profits Before Taxes to Be More Than $2,750,000, Is Belief.

If results of operation for the current and final quarters of this year are equal to those of the first half, Hupp Motor Car Corp. will net approximately $2,750,000 in 1922. And it is altogether probable if indeed not certain that Hupp will sell more cars and return more profits per share of stock outstanding than in any preceding year of its history.

Since January 1 shipments have exceeded 25,000 cars, compared with 20,705 for the full twelve months of 1920's fiscal year, which was the Corporation's best previous record. It is estimated that 30,000 cars will be the year's quota. First quarter shipments exceeded 6,400 vehicles and net profits before Federal taxes were $383,656. In common with many other automobile manufacturers, the second quarter showed a great increase, 10,500 cars being shipped and profits estimated at more than a million dollars were reported.

Thus the profits before Federal taxes for the six months ended June 30 approximated $2.75 per share of common stock outstanding. A comparison of preceding periods in the Corporation's history shows that this year's estimated production will be more than double 1921's output of 13,626. The following has been the production record of the Corporation: 1915, 10,403; 1916, 12,055; 1917, 11,293; 1918, 9,544; 1919, 17,442.

TIRE TRADE GIVES SIX MONTHS' REPORT

(*Continued from page 513, second column*)

876); all other pneumatic casings and tubes, $1,773,147 (1,163,395); solid tires for motor vehicles, $11,132,417 (16,668,395); tire sundries and repair materials, $4,874,061 (2,501,992).

Comparing these figures with those of the six months ended June 30, 1921, it is found, in brief, that automobile and motor truck pneumatic casings used nearly twice as much rubber but produced values only about five per cent greater than in 1921. Other figures are in about the same percentages.

Analyzing the statistics, the Association believes that the reported crude rubber consumption of 256,758,727 pounds represents between 80 and 85 per cent of the total consumption in the Country during the first six months of the year.

"We believe," the analysis continues, "that the reported crude rubber inventory figure of 82,110 long tons as of June 30, 1922, is representative of 95 per cent of the total amount of rubber in the United States on that date. This estimate is predicated on the fact that all of the rubber manufacturers who generally carry a good supply and practically all of the crude rubber importers and dealers have reported their figures. The five per cent balance is believed to be held by manufacturers or dealers who did not contribute to the report. We believe the Association report of importations of 130,358 long tons of crude rubber during the first six months of the year is 100 per cent complete."

BUSINESS TIDE RISES WITH MOTOR OUTPUT

(*Continued from page 513, third column*)

as a result of the war years. The fourth of these constructive factors was the unprecedented and unexpected activity in the automobile industry. The fifth is just now becoming actively effective. It is the abundant crops of the present season, already partly harvested, and promising to increase greatly the purchasing power of the agricultural sections of the country.

"The combination of these five great forces, together with many others of similar nature but lesser magnitude, has created a rising tide of business so vigorous as to carry forward over obstacles like those of the strikes, and of the threatening developments over-seas. This tide is still rising, and it will probably keep on for many months to come."

The bank quotes figures based upon many thousands of transactions which show that the typical purchaser of an automobile may be described as follows: He is a married man 33 years old; he has a bank account and carries life insurance; he buys a $1,400 car and pays $700 down; he pays the balance at the rate of $100 monthly; his monthly income is $350; he owns real estate in which his equity is $5,000; he has personal property worth about $2,000; this is not his first car. These figures are approximately the same as those appearing heretofore in AUTOMOBILE TOPICS.

Weeks Goes to Europe

J. Borton Weeks, vice-president of the National Motorists' Assn., and president of the Keystone Automobile Club of Philadelphia, is now in Europe. He is making arrangements with organizations abroad to take care of members of the N. M. A. who shall hereafter tour the Continent.

Lon R. Smith to Leave Midwest

Lon R. Smith, long identified with parts and accessory sales and widely known throughout the industry, has tendered his resignation as director of sales and advertising of the Midwest Engine Co., Indianapolis. Pending development of further plans still to be disclosed, he remains in charge of Midwest sales.

TARIFF BILL EXPORT FEATURE COMMENDED

Drake Sees Boost to Our Trade Abroad in Newly Accepted Provisions—Retaliatory Rates Could Be Applied—Cites Finland as Good Example.

Stimulation to American automotive trade abroad lies in the newly agreed upon export phase of the tariff bill, in the opinion of J. Walter Drake, chairman of the foreign trade committee of the National Automobile Chamber of Commerce. This is the feature that assures equality of treatment in non-manufacturing as well as industrial countries.

"Under the general export feature," Drake points out, "the newly lowered automobile rate of 25 per cent, if conditions warranted, could be increased by one-half, bringing it up to a maximum of 37½ per cent. If some manufacturing country were unwilling to allow a duty as low as 25 per cent on American vehicles in return for an equally low rate on its automobiles brought into the United States, steps could be taken to have a higher rate up to 37½ per cent apply.

"In the extension of our trade with non-industrial countries, the general export feature of the tariff will also prove helpful. Finland is one of these countries.

"At the present time American manufacturers are at a handicap there, because French exporters pay a duty of 10 per cent compared with 40 per cent assessed on United States automobiles. With means now being provided, such a discrimination would be discouraged either by concessionary or higher duties on paper and other products imported into the United States from Finland."

A. A. Ryan Starts Again

Allan A. Ryan, bankrupt last July for $18,000,000, has formed a new brokerage corporation. The Allan A. Ryan Co., Inc., will have capital of $50,000 and will be a stock concern.

Sir Harry MacGowan Coming Over

Sir Harry MacGowan, director of the General Motors Corp., together with other representatives of the British interests in the Corporation, will arrive in this Country early in October. In company with General Motors officials, the party will make an extensive tour of the extensive properties composing the system.

Flynn Accepts Durant Position

James J. Flynn has joined the forces of Durant Motors, Inc., with headquarters at Elizabeth, N. J. For the past six years Flynn has been in charge of the Cincinnati zone for the Chevrolet Motor Co., acting as sales manager.

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SILICA GEL PROCESS GIVES BETTER FUEL

Automobile Men Highly Interested in New Refining Agent—It Is Claimed to Remove Objectionable Sulphur in Gasoline and Lubricating Oils.

Automobile manufacturers are evidencing high interest in the new Silica Gel process of refining petroleum oils and petroleum products. This process has its principal attraction to automobile men in that it results in a better product, which in turn promises better engine performance. The process was favorably presented at the last meeting of the directors of the National Automobile Chamber of Commerce, was exhibited at the recent chemical show in New York City, and is now being widely exploited by the Silica Gel Corporation, Baltimore.

This process appeals to automobile engineers chiefly in that it is said to eliminate sulphur from gasoline and lubricating oils. The Silica Gel Company has convincingly satisfied itself through exhaustive tests that many of the present-day engine troubles are directly traceable to the presence of sulphur in petroleum products.

It is not appreciated as much as it should be, perhaps, that sulphur in gasoline and lubricating oils is responsible for much of the carbon accumulations in engines, the smoking proclivities of lubricating oils, and the "pitting" of valves and cylinder walls. By removing the sulphur, a "cleaner" fuel is obtained, and this results in better all-around engine performance.

In recent years when the higher sulphur crudes came into use, and when cracking processes became the source of a considerable proportion of gasoline production, difficulties arose in obtaining petroleum products of the high quality formerly available. Heretofore, the principal method of reducing sulphur content of oils has been treating with strong sulphur acid, in which certain proportion of the sulphur compounds are soluble. Complete extraction is impossible, however. In the case of cracked gasoline, which is high in unsaturated hydrocarbons, another difficulty is experienced in that the acid that is designed to extract the sulphur compounds only, seems to prefer a combination with the unsaturated bodies present, forming therewith an asphaltic sludge which separates out from the oil. Thus a large loss of the oil itself results.

These unsaturated hydrocarbons have been blamed by some for the poor burning fuels and the sludge in lubricating oils. The company has proven in tests that in the absence of sulphur, unsaturated hydrocarbons of petroleum products have no detrimental effect on the quality of petroleum products, but, on the contrary, are actually held to be beneficial, in the case of gasoline, for automobile engine use.

The Silica Gel process of refining is purely physical and not chemical. The name silica gel does not accurately describe the physical nature of the material as used in this process, but rather refers to its condition at one stage in its manufacture. As actually used, it is a hard, glassy material, with the appearance of a clear quartz sand. For oil refining it is pulverized to a fine powder of approximately 250 mesh.

The principal property that differentiates this material from ordinary sand, however, is its highly porous structure, and especially the size and uniform arrangement of these pores. While the pores cannot be seen, even by means of the ultramicroscope, deductions from observations made suggest a structure such as would be obtained by piling together in a uniform manner spherical particles of extremely small diameter.

By controlling conditions of manufacture, it is said to be possible to produce gels of different pore dimensions and thereby obtain materials of different absorptive characteristics. It has been found that the small pores will effect a selective separation of the liquid having the lowest surface tension toward the absorbent from any mixture of hydrocarbon liquids. Since the sulphur compounds present in petroleum oils have lower surface tensions toward silica gel than the pure hydrocarbons themselves, it is claimed that the former can be completely separated from the latter, when treated with the proper proportions of silica gel.

The Silica Gel Corporation does not intend to go into the refining business itself. Rather, it aims to interest the large refiners in its process as a means of obtaining better petroleum products at practically no advance in refining costs.

G. M. C. Lines Unchanged

Recent report that the General Motors Corp. is soon to make a reduction in the number of its units was misconstrued as meaning that one of the manufacturing organizations is to be closed out. This is not only far from the truth, but has caused a regrettable amount of confusion in the trade. No such change is even being considered. As a matter of fact, the report applied only to a comparatively obscure product in the long list of General Motors manufactures, and has since been officially denied.

McLaren Rubber Prospers

McLaren Rubber Co., Charlotte, N. C., reports business coming back strongly. Their trade is standing up surprisingly well during September, it being the best month in its experience despite the generally low status of commerce in general in the home district during that season. Total business of the Company increased 100 per cent during the month.

Ford Buys Antwerp Site

An assembling plant for Ford Motor Co. is to be erected on a plot of land purchased by the Company on the outskirts of Antwerp, Belgium. It will be ready for occupancy early next Spring.

FORD PLANTS REOPEN AFTER 4-DAY CLOSING

Assured of Coal Supply for Indefinite Period, Management Explains—Commercial Drama Ends After Much Speculation Over Reasons.

After a four-day shutdown the plants of the Ford Motor Company reopened on September 22. Orders for all Ford employees to return were given out on the day preceding.

An announcement was made that a supply of coal, sufficient to keep the Ford plants going indefinitely, had been assured by Kentucky and West Virginia coal operators. The offers, which were presented to Edsel Ford in Cincinnati, were approved at noon on the 21st by Henry Ford, who wired the successful operators of the Ford company's acceptance.

"We had to close the bulk of the plants," Ford said, "before we were actually out of coal because we had to have a little coal on hand to keep the coke ovens warm. If we permitted them to get cold the damage would run into hundreds of thousands of dollars. Ordinarily, in operating the ovens, a charge of fifteen tons is put into each oven, where the coal is roasted from eighteen to thirty hours. Now under these emergency conditions we use a charge only large enough to keep the ovens warm—say one or two tons to a load."

Thus ended the commercial drama that set the entire industry to guessing and estimating and figuring on why he did it and when he would open again. Many advanced "reasons" that would not credit the coal theory.

Whatever else it may have accomplished, the closing helped clean the dealers' show room and the assembly plants' floors. Dealer reports embody essential facts that many call attention to in advancing the hypothesis that Ford shut up shop to stimulate sales. As reported in AUTOMOBILE TOPICS under date of September 16, supply houses and parts stores found themselves with cleaned shelves before the closing order was many hours old.

The most surprising fact about the closing situation, the best minds of the industry believe, was that the largest producer in the automobile business could close down and yet disturb the industry itself not at all.

"Imagine what would happen in the steel business if the U. S. Steel Corporation should suddenly suspend," remarked one of these far-seeing individuals. "Panic or a near panic would surely result. Yet Ford shuts down and to all intents and purposes the business of automobile making, financing, exporting, selling, and the thousand and one other branches, cheerfully continues into larger and larger endeavor."

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WILLYS-KNIGHT AND OVERLAND REDUCED

Willys-Knight Touring at $1,235 Lowest at Which Any Car with Knight Engine Has Sold—Overland at $525—Record Production Reported.

Prices on all models were reduced by the Willys-Overland Co. effective September 18. The greatest cut was on the Willys-Knight line, reductions on these models ranging from $80 to $145. Under the new schedule, the five-passenger touring car is listed at $1,235. This is the lowest price at which any car equipped with a Knight engine ever was sold. Reductions on the Overland, ranging from $20 to $55, brought the open models down to $525.

New and old prices on both the Overland and Knight lines compare as follows:

Model	Old	New	Change
OVERLAND			
Touring	$550	$525	$25
Roadster	550	525	25
Coupe	850	795	55
Sedan	895	875	20
Chassis	450	425	25
WILLYS-KNIGHT (118-inch wheelbase)			
Touring (5)	$1,375	$1,235	$140
Roadster	1,350	1,235	115
Coupe	1,875	1,795	80
Sedan (5)	2,095	1,950	145
Chassis	1,250	1,125	150
(124-inch wheelbase)			
Touring (7)	$1,575	$1,435	$140
Sedan (7)	2,295	2,195	100

Accompanying the new schedules, the Company sent out word that "At these new prices, the Willys-Knight and Overland cars offer a number of improvements and refinements which add materially to their value and which have been big factors in the tremendous demand which has made the new prices possible. The Overland touring and roadster models are equipped with all-steel bodies, have a baked enamel finish and ride on the famous Triplex springs. They are also equipped with new and heavier rear axles, thus adding weight in the rear system."

John N. Willys commented in part: "The Willys-Overland Company to date this year has completed the production of more cars than the entire year's schedule called for. And we have just completed the largest July and August production in our plant history. It is this unprecedented production which has made possible the lowered production costs which are reflected in our new prices.

"We are not worrying about getting coal and are not afraid that the cost of coal will compel us to slacken our production one iota. We are going ahead with all the energy we can command, planning for the biggest business in our history and which we know is ahead of us."

To those in the distributing end, the reductions, especially on the Knight-engined models, were not wholly unexpected. Typical of the manner in which the field men received the news are the comments of W. H. Masten, New York branch manager: "To those of us in the organization, this reduction in price is a source of great satisfaction. Not just because lower prices are helpful to the salesmen but because it means that Willys-Overland has achieved a great objective."

Jordan Reviews Tendencies

Edward S. Jordan, president of the Jordan Motor Car Co., agrees with the generally expressed opinion that next year will see a shortage of automobiles in the dealers' stores. However, he calls attention to the tendency to count every inquirer a prospective buyer, whereas it may be that the person who steps into one dealer's showroom hunting an automobile may have already visited several others and failed to obtain what he wanted. The result of counting these visitors as all new customers is plainly a lead to overestimates. The lack of storage through the Winter and the greater demand of this year is bound to make for shortage next Spring, he points out.

MAXWELL 1922 OUTPUT IS EXPECTED TO BE 56,000

Price Cut Speeds Closed-Car Sales and Production on This Type Gains

Present indications are that Maxwell Motor Corp. production for 1922 will exceed all previous estimates, the latest figure being set at 56,000 for the year. In the first quarter 8,300 cars were produced; 18,600 in the second quarter; 2,400 in July, and 7,600 in August. September schedule calls for 5,500, and for the last quarter, 13,500. The recent $150 reduction on closed cars has been met with a hearty sales response, and, whereas closed-car output is now running at 15 per cent of the total, present inquiries indicate its reaching 25 per cent soon.

Net earnings, after all charges, for the first six months of this year were $1,700,000. After deducting loss on Chalmers, there remained $1,100,000. July earnings were small on account of engine changes slowing down production to 2,400 cars as against 7,600 for August. August profits were good, and preliminary estimates set the amount at $500,000. The improved engine, it is reported, is boosting September sales.

Seek More Economic Distribution

Conditions in the tire business are pushing systematic economy above par. Consequently, distributing methods, as well as all others, are being scrutinized with an eye to improved efficiency. In this connection the remoteness of the market on the Western Coast has caused concerns having eastern factories to consider the establishment of western warehouses, to be supplied by charter shipments through the Panama Canal.

PRICE CUT ENERGIZES PIERCE-ARROW SALES

Production Cannot Be Speeded Up Enough to Offset Effect on Earnings—No Steps Taken in Financing Program—Now Has $1,600,000 in Cash.

Pierce-Arrow sales have trebled since the price cuts of July 15. An even better showing is expected by the management and those close to the Company when the closed car season gets into full swing within the next few weeks. With two months' forward business on its books, the Company looks for capacity operation for some time to come.

Despite this gain, it has not been possible, however, to speed up operations to the point where the $1,250 price cut would be entirely counteracted. As the car is practically a 100 per cent factory-made product it would take about three months to reduce overhead sufficiently to make operations profitable and this means that the middle of October ought to see that state of affairs a fact.

In the second quarter of the year Pierce-Arrow came within $12,000 of breaking even. If depreciation had been sacrificed a surplus could have been reported. The first six months showed a total deficit of $36,991 and it is hardly expected that in the succeeding six months sufficient will be earned to entirely offset these red ink figures.

No further steps have been announced by the management as having been taken in connection with the funding of the bank debt, still at $7,900,000 after a $250,000 reduction earlier in the year. The Company now has approximately $1,600,000 cash compared with $473,000 in January, and if the management wished, $300,000 to $400,000 could be used to liquidate the bank debt. Such a policy is not now contemplated, it is said.

Moon Adds Three New Models

Three new Moon models are revealed by this week's edition of AUTOMOBILE TOPICS' Table of Passenger Car Selling Points. On the smaller "6-40" chassis, a third body type has been added in the form of a four-passenger coupe, priced at $1,595. On the larger "6-58" chassis, recently introduced to replace the former "6-48" series, the Moon Motor Car Co., St. Louis, is offering a new five-passenger sport model at $1,885, and a seven-passenger sedan at $2,485, this latter being $300 lower than the price of the former "6-48" five-passenger sedan.

M. A. M. A. Moves N. Y. Offices

Offices of the Motor & Accessory Manufacturers' Assn. have been moved from the Aeolian to the Fisk building, 250 West 57th street, New York city. The removal took place on September 22.

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FOREIGN SALES WORK UNUSUALLY EFFECTIVE

Return of Frank Wyman Libby Calls Attention to Unfamiliar Phase of Overseas Representation—Took Leading Part in London Business Colony.

Reappearance of Frank Wyman Libby in this Country after an interval of seven years, broken only by brief visits from England where he has been established, calls attention to a phase of foreign representation to which American manufacturers, ambitious for profitable export connections, are prone to pay but scant attention.

Libby has done more than merely attending to the details of making a market for his lines, and creating distributing mechanism to serve its needs. He has accomplished the difficult feat of identifying himself prominently with the entire development of American business affairs in England. This implies not only proficiency in his own line, but a strong grasp of political and commercial relations coupled with ability to move gracefully and with assurance through perplexing and sometimes difficult situations.

Foreign business personnel may be of two kinds. One class remains an alien in the land of its adoption, concentrates along the direct line of attack and seeks, as far as possible, to transplant the home business on foreign soil. The other class adheres to the opposite extreme, insinuating itself into the new environment and merging with it in every possible way, thus seeking to meet and master the native market on a basis of absolute fraternity.

Much may be said for both the distinctly foreign and the distinctly native methods of representation for imported business interests, but neither possesses quite the qualities of the far less familiar third class which maintains its own national identity, but at the same time adapts itself in every way consistent to the new environment.

It was the latter course which Libby chose when, in 1915, he was sent abroad to manage the European business of Willys-Overland, becoming also chairman and managing director of Willys Overland, Ltd., Overland distributer in London for Great Britain.

Libby reached England an absolute and upstanding American, as he still is. He had been sales manager of the old International Tire Co. and the Michelin Tire Co. from 1904 to 1910, but with the termination of his connection in the tire field turned to automobile sales. He went then to Minneapolis, where he operated his own business under the name of Bowman & Libby, Inc., becoming the second largest Overland distributer.

In 1915, however, Harry T. Dunn, president of the Fisk Rubber Co., and also vice-president of Willys Overland, Inc., inaugurated the policy of establishing direct Overland branches in the larger cities. Libby's business was purchased by the Overland company, and he was despatched to the land of John Bull.

His success and experience as an American distributer, he at once capitalized abroad, adapting and modifying American practice to harmonize with varied foreign conditions, building an organization whose sales were second to only one other manufacturer in the territory under his control. An important factor was the policy of appointing many agents with limited territories, instead of depending upon a few controlling large areas. As a result a conspicuous feature of the Overland business, particularly in England, came to be the large number of dealers representing the line in their own localities.

This side of Libby's work brought to bear the advantages of provincial and thoroughly domestic representation for a product of foreign manufacture, although the distributing organization itself remained entirely American in all respects. In the meantime, Libby allied himself personally with the American business colony in England, becoming exceedingly active in it. He is vice-president of the American Chamber of Commerce in London, which he served throughout the war as chairman of the commerce and trade committee. He is also vice-president of the American Club, 95 Piccadilly, is a Pilgrim, and has various other useful affiliations besides.

When the British manufacturing company, Willys Overland Crossley, Ltd., was organized, two years ago, it absorbed Willys Overland, Ltd. Libby, however, was made a director in the new concern, representing the interests of the parent American company, also continuing the work of directing sales, up to the time of his resignation, the first of this year.

He has since returned to this Country for the purpose of settling the estate of his father, the late Wyman Libby, who died recently in Boston. Date of his return to the European arena has not been definitely set, but will probably involve a new and quite important identification.

Dodge Brothers Closed Cars in Demand

Reason for the decision to add a material extension to Dodge Brothers plant for closed body manufacture is not far to seek when it is said that about forty per cent of the output is in this class at the present time. Existing capacity is being forced to the utmost, yet the line is almost hopelessly oversold, with the new all-steel types only just coming on the market. Within a very short time half of all the cars Dodge Brothers build will be closed cars.

MOONEY BRINGS GOOD SOUTH AMERICAN NEWS

General Motors Export Official Found Commercial Conditions Improving—Surpluses Disposed of—Dealers Are Equipped to Handle Large Business.

Prospects for a steadily increasing automotive market in South America were found by J. D. Mooney, vice-president and general manager of the General Motors Export Corp., during his three months' trip on that Continent. He gives an interesting report of conditions as he found them there, including improved commercial relations, a moving automobile market, and excellent sales and service facilities for handling the larger business indications promise.

Mooney, who returned to this country last week, spent the greater part of three months in Brazil and Argentina, winding up his trip through Uruguay, Chile and Peru. In every country he found that the great surplus of automotive vehicles and allied products that had been "dumped" there in 1920 was practically liquidated. Hence, all retail business in those countries will now be reflected in factory orders, instead of simply cleaning out stocks on hand as has been the procedure of the past two years.

He discredits those reports which have reached this Country that South American business would take a sudden and great boom. On the other hand, Mooney foresees a good business with a continuous flow of sales. Rather than being spasmodic, this business will steadily gain, each succeeding period showing a healthy increase over the former period, in his highly respected opinion.

His prediction of a good market there for automotive products is based on the marked commercial improvements found everywhere. Wheat, coffee and hides—all are moving strongly. With prosperity returned and returning, South Americans naturally will have more and more money to spend on automobiles.

Another vital factor affecting the market there are the roads. While Mooney agrees with others that there is need of a good roads movement, he personally found that South America has better and more good roads than is usually credited.

He cites illustrations of several hundred miles of good highways on which for stretches at a time scarcely an automobile would be seen. His version, then, is that what is needed for the present is more extensive sales efforts that would educate people to use the roads already there and keep them in repair.

One of the rather astounding observations made by Mooney is the excellent sales and service facilities, particularly of General Motors dealers, abounding everywhere. Dealers have spent considerable sums for buildings and equipment.

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MOTOR SHARES SHOW GAINS FROM "LOWS"

Characteristic Issues Considerably Above Normal—August Proves Good Month for Shares—Composite High Point 44 Against 36 as Year's Low.

Shares of automobile companies have again risen after making something of a record in June and July by reaching prices from 5 to 60 points above the year's lows and then declining in August. At this week's closing prices, 32 of the active and major stocks traded in on the New York Stock Exchange were only from six points to one-eighth of a point under the year's high, with one exception that registered about twenty-four points off.

The 32 stocks mentioned constitute a valuable barometer to the trade and by comparing them it is found that the average high was 44.9 and the average low 36.3 for the year to date while the average high for August was 44.5 while closing prices were about the same with average low only 42.3. Demand for the motor stocks is explained by "old timers" as due to unprecedented sales and larger activities of the factories. Third quarter statements of all companies are expected to be most gratifying.

Many of the authorities in the trade look for an even greater demand for cars in 1923. If this materializes there is little doubt but that most motor stocks will enter new high ground, for experiences of the past few years have taught their lessons and today the automotive industry is on the most efficient operating basis of its history. General authoritative opinion tends to curb any talk of boom times, with consequent heartening results to the industry's well-wishers as well as speculators.

G. M. C. Debentures Sold

Dominick & Dominick announced on September 18 that the block of General Motor Corp. 7 per cent debenture stock recently offered for subscription has been sold. This was not a new issue of the stock but was acquired privately by the concern.

Retire More Goodyear Bonds

Goodyear Tire & Rubber Co. announced this week that $750,000 of 20-year, eight per cent sinking fund gold bonds will be redeemed on November 1. Redemption will be made at the Union Trust Co., New York city, at 120 per cent of the principal amount and interest to date.

New Process Sale Again Delayed

No new bidders for the New Process Gear Co., at Syracuse appeared when the sale of the plant to W. Warner, of Toledo, for $1,900,000 came up before the judge for confirmation on September 19. As recorded in these columns under date of September 16, a lawyer made representation that his client wished to bid but had been unable to attend the sale. The matter was discussed before the judge who, despite the fact of no opposition being expressed, took the papers in the case and reserved decision.

DISTRIBUTION OF G. M. C. COMMON STOCK SPREADING

Of Total 48,554 Shareholders, 41,144 Own Less Than 100-Share Blocks

Holders of common stock of the General Motors Corporation at the end of August totaled 48,554. Of these shareholders, 41,144 owned 100 shares or less. Only 7,410 owned blocks of 100 shares or more.

There has been a tendency in the past two years toward an increasing number of shareholders owning small blocks of the common issue. This is reflected in the division of holders owning 60 shares or less, from which it is seen that twice as many persons held 10 shares or less, as owned 100 or more. The smaller holdings at the end of August were: 1 to 10 shares—14,774 stockholders; 11 to 20 shares—7,460; 21 to 30 shares—5,315; 31 to 40 shares—2,094; 41 to 50 shares—4,036; 51 to 60 shares—1,404.

DIVIDENDS DECLARED

Auburn Automobile Co.—Regular, quarterly dividend of 1¼ per cent on the preferred stock; payable October 1, 1922, to stockholders of record September 20, 1922.

Auburn Automobile Co.—Regular, quarterly dividend of $1 on the common stock; payable October 1, 1922, to stockholders of record September 20, 1922.

Chandler Motor Co.—Regular, quarterly dividend of $1.50; payable October 1, 1922, to stockholders of record September 20. 1922.

Electric Storage Battery Co.—Dividend of 75 cents on the new common stock and the new preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Fisher Body Ohio Co.—Regular, quarterly dividend of $2 on the preferred stock; payable October 2, 1922, to stockholders of record September 21, 1922.

B. F. Goodrich Co.—Regular, quarterly dividends of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Hudson Motor Car Co.—Regular, quarterly dividend of 50 cents; payable October 5, 1922, to stockholders of record September 25, 1922.

Hupp Motor Car Corp.—Quarterly dividend of 1¾ per cent on the 7 per cent cumulative preferred stock; payable October 1, 1922, to stockholders of record September 20, 1922.

Jordan Motor Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable September 30, 1922, to stockholders of record September 12, 1922.

Kelly-Springfield Tire Co.—Quarterly, dividend of $1.50 on the 6 per cent preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

Reo Motor Car Co.—Quarterly, dividend of 1½ per cent. and an extra dividend of 1 per cent; payable October 2, 1922, to stockholders of record September 15, 1922.

Stromberg Carburetor Co.—Dividend of $1; payable October 2, 1922, to stockholders of record September 18, 1922.

Timken Roller Bearing Co.—Initial dividend of 75 cents; payable September 20, 1922, to stockholders of record September 11, 1922.

Velie Motors Corp.—Regular, quarterly dividend of 1¾ per cent on the first preferred stock; payable October 2, to stockholders of record September 15, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended September 20. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	21	20
Ajax Rubber	15⅛	13⅛
Allis-Chalmers	58½	56½
Allis-Chalmers, preferred	103½	103
American Bosch Magneto	43¾	41¼
Case (J. I.) Plow	6¾	6¼
Chandler Motor	63¾	59¼
Chicago Pneumatic Tool	84⅞	80½
Cleveland Motors	29	26½
Continental Motors, common	10¼	9⅜
Daniels Motor	11½	10¼
Durant Motors	48¾	46
Durant Motors of Indiana	15	13¼
Fisher Body	120½	119¾
Fisher Ohio Body, preferred	95	93¾
Fisk Rubber, common	14¼	13
General Motors, common	14¾	14⅛
General Motors, preferred	99¾	99
General Motors, 6% deb	85	84¼
General Motors, 7% deb	85	84¾
B. F. Goodrich, common	35¼	33¾
B. F. Goodrich, preferred	85	85
Goodyear, common	10¾	10
Gray & Davis	14	13
Hayes Wheel, w. i.	34¾	33½
Hudson Motors	22	21½
Hupp Motor Car, common	23	21⅜
International Harvester, new	112	110
*Kelly-Springfield Tire, common	44¼	42¼
Kelly-Springfield, pf. (6)	84	84
Kelly-Springfield, pf. (8)	103	102
Kelsey Wheel	102	98
Keystone Tire	8⅞	8¼
Lee Rubber	26⅝	25½
Lincoln Motors	2⅜	2
Mack Trucks, Inc	60⅞	57
Martin-Parry	33½	31½
Maxwell Motors, Class A	60½	57¼
Maxwell Motors, Class B	19⅞	18¼
Mercer Motors	3	2¼
Moon Motors	16⅝	13⅜
Mullins Body	22⅜	21½
Parish & Bingham	14	13
Pierce-Arrow, common	13¾	11⅝
Pierce-Arrow, preferred	34½	30½
Reo Motors	13⅝	12⅞
Republic Motor Truck	3½	3¼
Saxon Motors	4¼	3⅜
Stewart-Warner Speedometer	48⅞	47
Stromberg Carburetor	57	51½
Studebaker, common	132⅛	126⅜
Studebaker, preferred	115¼	115
U. S. Light & Heat	1⅜	1 5/16
U. S. Rubber, common	56¼	51¾
U. S. Rubber, 1st preferred	101¾	91
Westinghouse Air Brake	102¾	102
Westinghouse Electric & Mfg	64¼	62½
White Motors	52½	50¼
Willys-Overland, common	7¾	7
Willys-Overland, preferred	46½	43

* Par $25.

Prices for automobile securities quoted in Detroit during the week ended September 19 are as follows:

	High	Low
Auto Body	5¼	3½
Charcoal Iron, common	1¾	1¾
Charcoal Iron, preferred	2½	1¾
Columbia Motors	3½	3
Commerce Motor	3	3
Continental Motor	10¼	9⅛
Edmund & Jones, common	24½	22
Federal Truck	20	20
Ford of Canada	410	390
Motor Products	90	85
Motor Wheel, common	13⅛	12⅜
Packard Motor, common	14¾	13⅞
Packard Motor, preferred	89½	88¼
Paige-Detroit Motor Car, common	23	22½
Reo Motor	13⅞	13
Timken Axle, common	29	28
Timken Axle, preferred	90	87
Truscon Steel, common	21	17½
Truscon Steel, preferred	10	9⅞

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SAXON LISTS 213,000 SHARES ON EXCHANGE

Part of Refinancing Plan Gives New Stock for Old—New Cash Will be Turned Into Treasury—Records Results of Last Year's Business.

Two hundred and thirteen thousand shares of the Saxon Motor Car Corp. were admitted listing on the New York Stock Exchange this week. All but the 13,000 have been offered at subscription at $7.50 a share to stockholders of record on September 15.

SAXON MOTOR CAR CORP.

Balance Sheet, June 30, 1922

(Giving effect to new capital)

Assets	
Cash	$751,685
Notes receivable	9,000
Accounts receivable	61,961
Merchandise inventories	578,749
Prepaid expenses	10,465
Machinery, equipment, etc. (less reserve)	*209,768
Development cost of Duplex model	574,778
Good will	2,000,000
Total assets	$4,196,406
Liabilities	
Notes and accounts payable	$307,151
Interest, taxes, etc	20,560
Dealers' deposits	7,657
Reserves	350,406
Preferred stock	356,200
Common stock	2,000,000
Surplus	1,154,432
Total liabilities	$4,196,406

*Less reserve.

The balance has been sold for cash by the company and is now available for corporate purposes and as additional working capital. The 200,000, in reality, have been issued in exchange for $1,000,000 par value of present and outstanding preferred stocks and $750,000 in cash. This cash is to be turned into the treasury. The preferred stock mentioned is to be cancelled so that hereafter the capital liabilities outstanding of the corporation will consist of $356,000 eight per cent preferred stock at $100 par value per share, and 400,000 shares of common without nominal value.

SAXON MOTOR CAR CORP.

Income Account, June 30, 1922

Total income	$196,286
Costs of sales, material, labor and overhead	389,099
Net loss for six months	192,723
Previous surplus	1,597,155
Final surplus	1,404,432

A comparison of the six months' statement with the financial situation of the company on December 31, 1921, reveals a considerable growth in inventories. Accounts payable remain at about the same figure and the surplus has been reduced nearly a million dollars it having been $2,242,000 at the close of 1921.

Losses for the six months' period ended June 30, aggregated $192,723, or at about the same ratio as 1921's deficit which was $396,263. The loss, however, was amply guarded in the surplus. These figures are contained in the half-year's statement which was issued last week.

An examination of the assets side of the ledger shows a cost of $574,778 credited to the development of the Duplex model. There is also set out $751,000 in cash as part of total assets and liabilities, each of which are $4,196,406.

ASSOCIATED MOTORS SHOWS ITS FIRST BALANCE SHEET

Total Assets Set at $20,254,031 of Which $9,500,000 Are Current

Total assets of $20,254,031 are shown on the first balance sheet to be issued by the Associated Motor Industries, the amalgamation of the National Motor Car & Vehicle Corp., the Traffic Motor Truck Corp., the Recording & Computing Machines Co., the Covert Gear Co., Inc., the Kentucky Wagon Mfg. Co., the Jackson Motors Corp., the Saginaw Sheet Metal Works and the M. & T. Corp. Of these assets, $9,564.55 are listed as current. The balance is made up of land, machinery, buildings, and equipment, less reserves.

On the liability side of the ledger, current items aggregate $1,210,060. First mortgage bonds amount to $3,000,000, there are $3,542,138 in notes and dealers' deposits and $12,426,822 capital liabilities and surplus. Reserves for contingencies are placed at $75,000.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended September 20 are as follows:

	High	Low
Firestone	73	70
Fisher, Ohio	45	45
Fisher Body, Ohio, preferred	97	96
Goodyear	12	10
Grant	⅝	½
Jordan, common	200	150
Jordan, preferred	80	75
Peerless	59	57½
Standard Parts	5	3¾
Standard Parts, preferred	19	16
F. B. Stearns	23½	21
Torbensen Axle	25	24½
W-S-M, common	40	32
W-S-M, preferred	72	70
Winton, preferred	35	25

Prices for rubber securities quoted in Akron during the week ended September 19 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	73	70
Firestone, 6% preferred	91	90
Firestone, 7% preferred	86	80
General Tire, common	300	250
General Tire, preferred	100	95
B. F. Goodrich, common	36½	34
B. F. Goodrich, preferred (7)	87	85
B. F. Goodrich, preferred (6)	102¾	102½
Goodyear, common	11¼	9½
Goodyear, preferred	30	28½
India, common	75	75
Marathon, common	3	2½
Mason, common	12	9¾
Mason, preferred	55	50
Miller Rubber, common	72	70
Miller Rubber, preferred	98¼	95
Mohawk Rubber	20	10
Mohawk Rubber, preferred	100	75

U. S. LIGHT & HEAT PRESENTS ITS REPORT

Annual Report as of December 31 Just Made Public Shows Company Took Its Losses to Get in Competition—First Seven Months of 1922 Satisfac-

Inventory reductions and write-offs necessary to put the U. S. Light & Heat Corp., Niagara Falls, N. Y., on a sound basis and to enable getting business in competition at current prices, left a deficit in the surplus account of $299,338 as of December 31, 1921. This is divulged in the annual report for the year ended

U. S. LIGHT & HEAT CORP.

Condensed Balance Sheet, December 31, 1921

Assets		
Cash and cash items		$136,927
Bills, accounts and trade acceptances receivable less reserve		334,330
Inventory material and supplies		885,701
Bal. cash in sinking fund for retirement of bonds		383
Real estate, plant and equip.	$3,208,610	
Reserve for deprec.	707,362	2,501,248
Investments in and bal. due from other companies and purchase mortgages		248,736
Discount on bonds unamortized		69,620
Prepaid taxes, insurance, etc.		67,633
Patents and goodwill		4,489,292
Total		$8,733,870
Liabilities		
Accounts payable		$228,236
Notes payable		163,714
Accrued interest and taxes, etc.		22,770
First mortgage sinking fund 6% gold bond		853,800
Reserves:		
Service station agreements	$23,569	
Guarantee adjustments	36,369	59,938
Common stock authorized and issued	$4,000,000	
Reacquired and held in treasury	96,750	3,903,250
Preferred stock authorized and issued	$3,000,000	
Reacquired and held in treasury	4,850	2,995,150
Preferred "A" stock issued		806,350
		$9,033,208
Less: deficit surplus account Dec. 31, 1921		299,338
Total		$8,733,870

that date, which report was issued stockholders under date of August 9, 1922.

Business for the first seven months of this year, however, has resulted in satisfactory profits. Contributing toward this better showing have been a number of newly acquired equipment contracts.

President C. O. Miniger, under the August date, said in part to stockholders: "The losses for January and February, 1921, totalled approximately $142,000. In February, 1921, the business passed into the hands of the present officers. The readjustments of salaries and reductions of operating expenses in the executive and manufacturing departments mentioned in report dated August 10, resulted in a profit during the remaining ten months of the year of about $72,000."

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PACKARD EARNINGS RUNNING AT RATE OF $500,000 MONTHLY

Statement Preliminary to Annual Report Gives Net at More Than a Million

After setting aside adequate reserves, net earnings of the Packard Motor Car Co. for the year ended August 31, 1922, will be more than $1,000,000. This is the feature of a statement issued last week by the Company prior to the publication of the annual report, soon to appear. If no reduction in inventory is called for, the Company's net for the period may run as high as $1,500,000.

"This showing," it is added, "does not reflect the true operating condition of the Company at the present time for it was not until May, the last month of the third quarter, that the Company began to receive the benefits from the sale of its new single six car and from products manufactured from materials received at current low prices. Net earnings at present are running in excess of $500,000 monthly and there is no indication of a slackening of business. The Company is now on a production basis of about 2,000 cars monthly and is planning a considerable increase in output."

Chalmers-Maxwell Deposits Soon Due

Time for additional deposits with the New York Trust Co., depository, under the Chalmers-Maxwell exchange plan, expires on October 5. The plan, as set out in these columns heretofore, calls for the exchange of Chalmers six per cent notes on the basis of 10 shares of Maxwell "A," 10 shares of Maxwell "B" and $60 cash for each $1,000 net, or an alternative of $860 cash.

Peerless Still Progressing

Rapid progress of the Peerless Motor Car Co. since announcement of its new line continues to the great gratification of President R. H. Collins and his associates. Production is between 35 and 40 cars a day, while it is reported that the sales department has in hand an accumulation of between 4,000 and 5,000 orders.

RICKENBACKER DELIVERED 3,000TH CAR LAST WEEK

Production of 27 in January Increased to 533 in June, or 1,874 Per Cent

Rickenbacker Motor Co., Detroit, produced and delivered its 3,000th car last week. From an initial production of 27 cars in January of this year, the output steadily increased each month up until June when 533 cars were turned out. This last mentioned figure represents an increase of 1,874 per cent.

This remarkable record stands as a tribute to the abilities of Major "Eddie" V. Rickenbacker, vice-president of the Company, and the experienced personnel associated with him on the directorate and staff. Such men as B. F. Everitt, president; W. E. Flanders; W. J. Drumpelmann, sales manager; H. L. Cunningham, secretary-treasurer; R. M. Hood, C. M. Tichenor, E. R. Evans, and others, with their records in the industry, practically assured the success of the enterprise from the start.

The Traffic Problem

POLICE COMMISSIONER ENRIGHT and CHIEF MAGISTRATE McADOO, both of New York city, had occasion this week to express their views on the reasons back of the deaths in automobile accidents of 3,800 persons in Gotham last year. Enright, complaining, said, "all the State does is collect and pocket the money while leaving the hard work of traffic control to the police." McAdoo declared the deaths came because "there are not enough policemen to protect the public." He added that there are 3,000 dangerous crossings in New York city and that there should be at least 1,500 policeman to guard them—an instructive thought.

Neither Enright nor McAdoo, however, placed their fingers on the fundamental reasons why the traffic police of New York city—and of any other city in the Land—cannot prevent more accidents. This reason is not far to seek. Perhaps politics intervened between the truth and its utterance. Briefly it is:

Excepting a few of the "Finest," policemen detailed to control traffic in all its branches are not trained to their work and are not chosen with enough regard to mental fitness for the task.

There are plenty of men on every police roll who would make excellent traffic officers. If they were selected, trained and sufficiently lectured on what and what not to do, one of the sorest spots, one of the basic causes of traffic congestion and danger, would be eliminated.

Traffic control is not easy. No one deprecates the work of good policemen. But the loud-mouthed bully, the credit hunting cop, the dishonest policeman, the thick-headed dub, the exponent of brute strength and overbearing demeanor must go if the traffic problem is to be solved.

The first great evil to be remedied is the current practice in staging a drive against motorists after a particularly distressing accident. Orders go out from headquarters to bring in so many motorists with charges of traffic regulation violation sworn to willy-nilly by the arresting officer. Police acquaintances of the writer in several cities have freely admitted that an order from a superior officer that a certain number should be brought in by each policeman has resulted in mighty flimsy cases against perhaps eight of ten. Chronic violators of minor traffic ordinances, heretofore allowed to "get by," are then picked up. The drivers are indignant, the policeman shamed, the magistrates wearied and the manufacturer of automobiles loses sales.

Let police commissioners first pick from their staffs the required number of bright, intelligent, honest, efficient and worthy men. Let them be taught systematically and honestly the correct application of traffic rules and penalties. Let them be taught judicial processes of thought. Teach them to judge the merits of suppositious cases of traffic violation. Show them it is wrong to enforce too rigidly certain laws when it is not necessary. Teach them not to arrest everybody indiscriminately. Show them the injustice they work everyone concerned when they adopt bullying, loud-mouthed tactics. Make it plain that there is no need to be disgustingly nasty about minor violations. Train them in judging character, circumstances and contributing causes. In short, teach them to be just men, not bull-headed minions.

This is not an impossible task. In fact, it is easy. This any newspaperman who has worked with the police will substantiate. To be sure, men capable of such training are far from being in the majority on any police force but there are enough, though they are usually kept subdued by their politically stronger but dumber brethren. To give them a chance to display their ability would be a blessing.

After reforming traffic laws, the immediate task is reforming enforcement of them. More can and will be said about it, but reformation of the type of traffic policemen used is the first step. And it is insisted that the automobile manufacturer who neglects even the least of these troublous features of present traffic regulation is neglecting a most prolific source of future depression in his business.

You Made It—Help Solve It

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DODGE BROTHERS HAS NEW CANVASSING PLAN

Sales Promotion Method Latest of Company's Ideas—Trio of Systems Now Cover Used Cars, Service and Present Offering—Involves Home Calls.

Dodge Brothers dealers throughout the Country attended this week the first of a series of meetings held by the Company for the purpose of broadcasting its forward-looking policies in regard to the used car, service methods and sales promotion. Of the trio, the last named is the most recent and made its appearance in a booklet just prior to the calling of the meetings.

"Sales Promotion Common Sense" is the title. The efforts of the Company along the lines of making its dealer body a more homogeneous organization, activated by principles common to all, have been recorded by AUTOMOBILE TOPICS heretofore. At the meetings the dealers now have an opportunity to visualize the methods promulgated by Dodge Brothers through the use of moving picture films.

Why do some people pay a little less, a little more, or perhaps about the same price for other cars when there is a Dodge Brothers dealer in the field? is the question with which the plan leads into discussion of the Company's ideas on sales promotion. The answer, it is stated, is the problem of "carrying the message" through personal contact with the average man. It is urged that the dealer be not content with interviewing less than 100 per cent of the "average men" in his territory. The benefits are readily apparent. Reducing, through the system of canvassing offered, which involves personal interviews, the possibilities of their markets to terms of individual names and addresses, the dealers are enabled to build a sales force of proper size and provide definitely determined prospects at all times for the men to work on.

Demonstration of the plan offered in Cleveland is cited as an example of what may be accomplished. The basis is not geographical division but zones determined on the location of present Dodge Brothers owners. The city was divided thus into districts each containing 50 Dodge Brothers owners. The registration list of all cars in each zone was obtained. In one such zone, 900 cars other than Dodge Brothers were located.

From this list of 900, the owners of higher priced cars were eliminated leaving 600 names. By going from owner to owner of the 600, living in this zone of 7,000 population, the total possibilities were uncovered. The interviewers first concentrated on owners of Dodge Brothers in an attempt to determine if the owner was getting satisfactory service from the car, to develop possible trades and to obtain new names of individuals in the neighborhood who should be interested in Dodge Brothers product.

The work of canvassing in a manner designed to counteract any "back-door peddler" ideas the ones interviewed might entertain, is carefully summarized in the booklet. In the case of the Cleveland experiment, it is reported that out of the 7,000 population of the particular zone here considered, 95 live prospects were uncovered and on these 95 the salesmen will concentrate.

The systems have received the painstaking care and through investigation that characterizes all Dodge Brothers activities and under direction of C. H. Jennings, assistant general sales manager, responsible in large part for their development, they will be given wide application.

Fetterman Joins Jennings Corp.

I. P. Fetterman has been appointed factory representative of the Jennings Corp., Pittsburgh. The Corporation manufactures the Omac carbureter.

WRIGHT GIVEN CLEVELAND OVERLAND DISTRIBUTION

Southern Division Manager Will Operate Branch Under Own Name

Walter F. Wright, southern division manager of the Willys-Overland Co., has taken over the Cleveland branch of the Company and will operate it under his own name as a distributer. The change was effective on September 1. Wright has been a member of the Overland organization for the past ten years and during that period has served as factory representative, special representative, branch manager, division manager and assistant to the vice-president in charge of sales.

As Southern Division Manager he had control of both the physical and sales departments of the branches at Dallas, Omaha, Kansas City, St. Louis, Denver, Atlanta and Jacksonville and the distributers at Asheville, Charlotte and San Antonio. Automobile dealers throughout the Country know Wright and many will regret his leaving the factory but wish him well in his venture for himself, which they all predict will be successful.

Advertisers Add Golden

William A. Golden has been added to the National Vigilance Committee of the Associated Advertising Clubs of the World. Golden, former post-office inspector, has been known to the industry for several years through his activities against frauds in the automotive field, being especially active in the International Automobile League case.

STUDY OF GAS ENGINE IN SCHOOLS ENDORSED

Wide Response to Automobile Topics' Plan Recorded—Manufacturers, Associations and Educators Offer Co-operation—Interest Is National.

AUTOMOBILE TOPICS' plan for putting a course of practical study of the internal combustion engine into the grammar school curricula of the Nation is meeting with widespread response from manufacturers and others of the automotive world and educators. From Los Angeles, Chicago, St. Louis, Detroit, Washington and eastern cities encouraging commendations and equally welcome and helpful suggestions for betterment.

From a man responsibly identified with one of the larger manufacturers of an automotive product comes the surprising information that he himself, is "very poorly informed on the internal combustion engine and would like to know more." Press of commercial activities since reaching the estate of manhood has prevented his acquisition of more intimate knowledge, he admits.

"I can readily see that such a plan as you lay out in your recent issue is going to be a big asset to me," he continues. "It is an idea worthy of every automotive manufacturer's cooperation and when shown the marvelous results which may be derived from this plan, should heartily approve it and back it to the limit."

Carl W. Mitman, of the division of mineral and mechanical technology of the Smithsonian Institute at Washington, who has been working along the line of visual education in connection with the study of machinery, finds added incentive in "knowing that the necessity for such labor is appreciated by the industry which has brought the internal combustion engine to its present state of perfection."

Winston B. Tagney of the Bassick Manufacturing Co., Chicago, believes a "finer idea for teaching young America the fundamentals of the working mechanism of our modern horse, cannot be conceived."

That and other suggestions received by AUTOMOBILE TOPICS will be discussed later in these columns. At present it is heartening to report so general a response to the plan of the article, which appeared under date of September 2. Without the cooperation of everyone concerned little can be accomplished. But that that co-operation is forthcoming so generously is an augury for ultimate success. Others who may be interested are urged to make use of these columns, insofar as possible, in aiding in the work that cannot but be of great ultimate value.

What you want to know about that car is listed on the Table. This week's revised edition pages 555-7.

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SOUTHWEST SALES IN MUCH BETTER SHAPE

Dealers Find Trend Is Upward as Crops Are Harvested—Cotton Helps Texas Trade — Oklahoma Concern Has Thrice Business of 1921 at This Time.

Conditions in the retail trade in the Southwest are reported to be the best for several months. AUTOMOBILE TOPICS, in canvassing the situation in that territory, finds practically all dealers expressing sincere conviction that business will continue good into the Fall, probably aggregating even better than at present, since the agriculturalists are expecting large and remunerative harvests.

At Oklahoma City, the Shelburne Motor Co., Hupmobile, has experienced and is experiencing what it feels is remarkable trade. This it finds true despite the banking situation.

"Our present rate of sales is more than three times as large as during the corresponding period of 1921," S. P. Shelburne reports. "We really wonder where all the business is coming from. Our stock of unsold cars is about normal with the exception of used cars which are considerably in excess of the usual number on hand.

"We believe that business is going to be fairly good, nothing big but a fairly steady volume, throughout the Winter. We also believe that it is now possible to judge used car values better than at any time during the past three years and think that the big losses to dealers therefrom are about over. However, more intensive sales work and a better class of salesmen must be developed."

The Southwest Nash Motor Co., also of Oklahoma City, finds its August sales more than 25 per cent higher than in July and 20 per cent better than in August, 1921. Inability to obtain a sufficient number of automobiles has restricted sales during the past 60 days and stocks of used cars are lower than since July, 1920. The Company sees business as good throughout the Winter.

Dallas distributer of Nash cars and trucks, the Nash-McLarty Motor Co., declares business has picked up very materially in the past 60 days. Wholesale and retail sales have each about doubled, F. E. McLarty, president, asserts.

"Our sales compared with this date last year are 50 per cent better," McLarty finds, "and we have fewer used cars on hand than at any time in two years. From all indications we are going to have a fairly good cotton crop, which is bound to sell at a good price. Cotton is the one commodity that puts money in banks in Texas."

Business carried on in a more business like way has resulted in a considerable improvement in Wyoming, the Kennedy Motor Co., Casper dealer in Wills Sainte Claire, Chalmers and Maxwell cars, states.

"This results in better service, more sales and a tendency for the public to regard the automobile business as a legitimate business after all," C. E. Kennedy continues. "Car sales are considerably better than last year, more money is evident and credit conditions in connection with car sales are better. Our stock of cars is about normal, used cars are not moving as well as last year but we believe that is because people are buying the new cars even though having to expend more money."

CAR SALES IN COOK COUNTY MORE THAN 5,000 MONTHLY

Review of Situation Shows 28,590 Disposed of in Seven-Month Period

Sales of new automobiles in Cook county, in which Chicago is located have reached a rate quite a bit above 5,000 a month, reports from that section indicate. For the seven months ending July 31, 28,500 cars were sold and during May, June and July the average ran close to 5,000 in each. During August and so far this month an indicated volume well over this mark is reported.

Used cars have been pretty well absorbed, it is declared, despite the fact that last year at this time they glutted the market. This is a condition attributed, in part, to the slow deliveries of this season. Tires and automotive accessories in general are sharing the prosperity of the industry although conditions in the truck business are not so good.

Peerless to Move in New York

Van Cortlandt Vehicle Corp., New York City, Peerless distributing organization in the Metropolitan territory, will move October 1 from its present quarters at Broadway and 63rd street to the four-story building on the corner of 62nd street. The new location brings the line to the same side of the "Row" as the Cadillac, whose establishment it adjoins, and one block above the Packard.

Streett Now Represents Klaxon

E. G. Streett has been appointed southern representative of the Klaxon Co. Constantly increasing sales in the district have led to the establishment of the position. Streett will have offices in Atlanta, Ga.

Johnsron Advances with Peerless

C. S. Johnsron, for many years with the Peerless Motor Car Co. of New York City, has been appointed district sales manager for the Company in New York, Connecticut and New Jersey. Johnsron was an attache of the American embassy at Berlin from 1910 to 1914.

SAYS DEALERS CAN'T SOLVE THE PROBLEM

Secretary of Pittsburgh Dealer Body Puts Used-Car Solution Up to Makers —Suggests Associations Devote Time to Legislation—Touches Discounts.

Formal discussion of the used-car problem has been reopened by the Pittsburgh Automobile Dealers' Assn. through the medium of a noteworthy communication sent to all its members. In this letter, Secretary W. A. Richwine makes the recommendation that dealer associations devote their efforts toward better automobile legislation and wait until elimination or necessity compels the manufacturers to solve the used-car problem for their own protection. His letter in its entirety follows verbatim:

> Our Association has been very hard at work this year trying to solve a lot of vexing problems for our members. So far, I am sorry to say, we cannot report much progress.
>
> In conversation with a leading dealer I asked him to help me to analyze the situation. He smiled and said, "Dealers' Associations trying to regulate used-car problems is one grand big joke. You know your Association membership was large until you put a maximum allowance at which used cars could be traded. The reason you lost those Dealers was due to the fact that Manufacturer's discounts on new cars range from 15 to 50 per cent. The Dealers you lost were the ones on the 50 per cent end."
>
> When the used-car problem is cared for it will be done by the National Automobile Chamber of Commerce (The Manufacturers). That body might succeed in having their members sell their product at a uniform discount, and when this takes place it will be easy to get local associations to agree on used-car prices.
>
> From the information I have, I am led to believe that the National Automobile Chamber of Commerce (The Manufacturers) function about on the same line as most Dealers' Associations, namely, they hold Annual Shows. I would advise you if you want to make your Association a success you give your efforts toward better Automobile legislation and wait until elimination or necessity compels the manufacturers to solve the used-car problem for their own protection. Is this sound analysis?

Sudrow Joins Hathaway

F. G. W. Sudrow, for many years zone manager for the Chevrolet Motor Co. of Kansas City and more recently identified with the Gardner Motor Co. of St. Louis, has resigned to become general sales manager of the Hathaway Motor Co. of Kansas City. Hathaway is Durant and Star distributer for Kansas City and the Southwest.

Charles O. Britton

Charles O. Britton, a well known Hartford, Conn., automobile dealer, died at his home in that city on September 19. He was 54 years old.

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EQUIPMENT BUSINESS TO BE STILL BETTER

Reeves So Tells M. A. M. A. Convention —Paints Glowing Picture of Industry As It Now Is—Employs 2¼ Million —Economic Value of Cars Stressed.

Even better business may be looked for than the parts and accessory manufacturers are now experiencing, is the belief of Alfred Reeves, general manager of the National Automobile Chamber of Commerce, based on the growth of the equipment furnished with cars and desired by the public where not so furnished, not to mention the increase in automobile output looked for next year. This prediction for the equipment market was made by Reeves in telling the Motor and Accessory Manufacturers' Association convention at Buffalo, September 14, of the present gigantic size of the automotive industry.

With characteristic enthusiasm, Reeves began painting his picture of the industry by saying that the present prosperity in the automobile business means employment for two and a quarter million people. "In addition to the 200,000 men working in the automobile plants, to the hundreds of thousands of professional chauffeurs and drivers and of retail garage employes," he went on, "there are about 250,000 accessory factory workers, 150,000 tire dealers and salesmen and thousands more in allied retail trades.

"One can realize also the effect on other industries by the fact that 22 per cent of the aluminum supply, 4 per cent of the annual production of iron and steel, 20 per cent of tin, 16 per cent of the copper output and 30 per cent of plate glass manufacture are used in the making of motor cars and motor trucks. This effect of the public demand for increased modern transportation naturally is very prompt stimulus to the business of those factories making parts and accessories.

"Sales for the past four months have been the largest for any similar period on record, due to the keen competition on the part of manufacturers, each endeavoring to get a large amount of business by giving the most value for the money. In fact, more value for the money is being given today in motor vehicles than any previous time in the business. This is reflected in the accessory market by the increase in the equipment and apportionments supplied with the finished product and the creation of a public desire to get the last word in motor improvement.

"This year's production should exceed 2,000,000 cars and trucks. I believe it is safe to say that next year, with export demands increasing, more than 2,250,000 motor vehicles will be sold. In this year's production, about 10 per cent are trucks, but truck production will keep on increasing as general business gets better. Of the cars produced this year, probably 70 per cent will sell at $1,000 or less.

"Shipments from the factories during August were the biggest in the history of the industry. Preliminary reports indicate a production in August of 270,000 vehicles, of which 22,000 were trucks. This is 20 per cent more than July and only 25,000 less than June, the biggest month in our history.

"Parts and accessory makers may look for business even better than they are doing this year. But I believe there are additional possibilities open to those firms which can develop new and useful devices. This is fully as true of the foreign field as the American. In fact, in some countries, such as Argentina, owners will sometimes use several types of horns on one car.

A STITCH IN TIME—

IN my opinion, the automobile business is the finest business in the world. Present conditions in the trade are more than satisfactory to us and I would have no hesitancy in predicting an even greater general prosperity in the future were it not for the one fatal menace which threatens the industry today; namely, the growing tendency of automobile distributors and dealers to place an exorbitant value on cars accepted in trade and to overestimate their ability to dispose of these cars at their fabulous prices. If this condition continues, the resultant suffering must be shared by the entire trade including motor and accessory manufacturers and dealers as well as automobile manufacturers and distributors.—*R. H. Collins, President, The Peerless Motor Car Company.*

"But recently even as critical a mind as that of Roger W. Babson has pointed out that thousands of persons have been buying motor cars and moving into the suburbs. A survey of the various real estate boards by the N. A. C. C. developed the fact that around sixty cities in the Country, there are over 135,000 suburban homes depending chiefly on the motor car and motor truck for transportation. This release of housing pressure on the cities and the settling of families on less expensive land gives promise of lower rentals, a prediction in which many leading economists of the day concur.

"There are about 3,000,000 farmers in the Country owning cars today. A survey of farmer car owners indicated that the use of motor transportation increased the average farmer's efficiency by 68 per cent.

"With these two important points of increased efficiency for the outdoor worker and lower rentals for the city man accomplished through use of the car and truck, there appears to be before us in the long run a continually growing market for motor vehicles and allied products. This progress, of course, is contingent upon adequate servicing of the product, development of highways, constant vigilance for public safety and city planning."

TRUCKS FACTORS IN RAIL RECUPERATION

Termed One of Chief Mediums in Putting Carriers on Their Feet Financially— Fenn Learns It from Rail Executive —Urges Operator Organization.

Motor trucks are among the chief factors in putting the railroads on their feet financially. To the many who have erroneously viewed the truck as a competitor of the railroad, whereas it is in reality an ally, this statement of F. W. Fenn, secretary of the motor truck committee of the National Automobile Chamber of Commerce, will furnish something of a surprise. In driving home this fact to a joint meeting of the Elmira (N. Y.) Chamber of Commerce and Traffic Club, Fenn gave as the source of his information one of the Country's great railroad executives.

Primarily the purpose of the meeting was to urge truck operators of Chemung County to pool their interests for the sake of group insurance and other benefits, all of which would reduce operating costs. Organization, Fenn says, is the great need of truck operators today.

"Few people realize," said Fenn, "that trucks are among the chief factors in putting the railroads on their feet financially. I have this on good authority from one of the Country's great railroad executives. There is a great significance, therefore, to the statement issued a short time ago by President Harding in which he said there could be no doubt as to the position of the good roads movement in the solution of our distribution problem."

In his arguments for organization, he remarked that the present importance of truck transportation demands that truck operators everywhere organize to reduce their operating costs. In New Jersey this has already resulted in a saving of 20 per cent in insurance charges alone. Chambers of commerce can be of very great help in this work. The Akron and Syracuse chambers of commerce have already actively entered the field in behalf of their truck operators."

He then reviewed how trucks have reduced delivery cost of various products —milk in Milwaukee, shoes in New England, cotton, corn and wheat in the South and West, and so on. For all these benefits, it was pointed out that the cost to every individual—man, woman and child —in the Country last year was only one cent after subtracting the money which the automobile industry and owners paid toward building the highways. As a typical illustration of the widespread use to which trucks are being put, Fenn said that normally less than three per cent of the milk coming into Cincinnati arrives by rail.

It's a real selling Table, kept alive for alert selling men by weekly revisions. See pages 555-7.

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NEW TYPE OF ENGINE ANNOUNCED BY BENDIX

Gernandt Invention Self Igniting—Requires Neither Electrical Ignition Nor Fuel or Lubricating Pumps—Uses Forces of Compression.

Preliminary disclosure has been made in automotive circles of an entirely new type of internal combustion engine concerning which the highest expectations are entertained. It is a super-compression, fuel injection pattern, employing "self ignition" of the fuel charge, as does the Diesel engine, but developed along entirely original lines. The engine is to be introduced and exploited by Vincent Bendix, president of the Bendix Engineering Works, Inc., of Chicago, whose identification with the Eclipse-Bendix drive, employed in connection with the electric starters of approximately ninety-five per cent of all American automobiles, has made his name almost a household word.

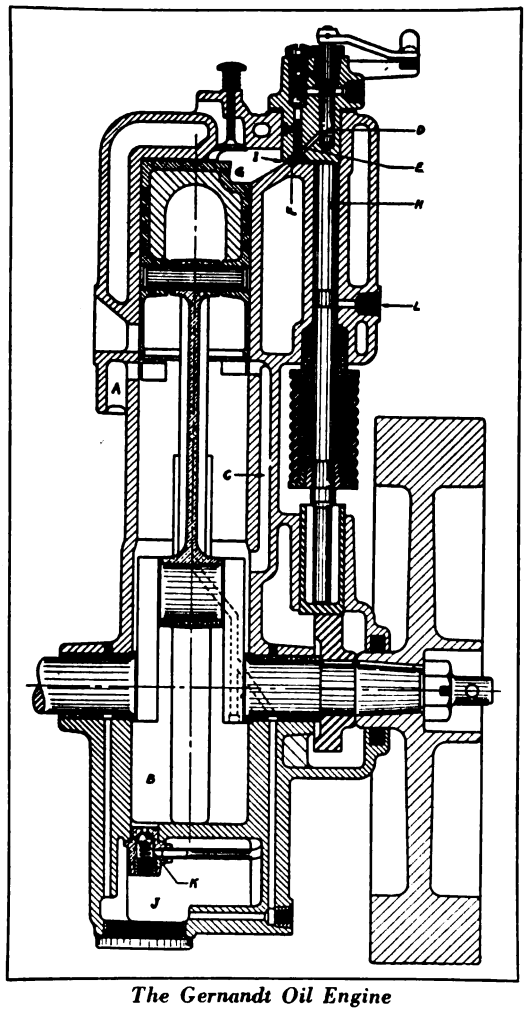
Up to the present the engine itself has been closely guarded, although it has been known to the trade that Bendix and his associates were interested in original work of this character, and were devoting a great deal of time and money to it. Nevertheless the general nature of the project has been more or less discussed by engineers and others who have been taken behind the closed doors, and these express the utmost interest and confidence in it. During the past few days, Bendix has discussed the engine in detail with a number of executives and engineers associated with leading concerns. More complete disclosure and semi-public demonstrations are to follow shortly.

In the meantime it may be said that the Gernandt engine, as it is known, embodies the novel principle of compressing small quantities of the exhaust products of combustion, by which the fuel is atomized and with which it is injected into a compressed charge of pure air. Vaporization is promoted by the heat of the exhaust, while compression carries the mixture up to the ignition temperature. The engine thus becomes self igniting.

Because of its operation, the engine requires no electrical ignition appliances, such as magneto, battery, coil and spark plugs. Furthermore, such good use is made of the pressures developed within the engine itself that auxiliaries such as fuel pump, lubricating pump, and so on, are entirely obviated. The unit thus becomes exceedingly simple and is entirely self contained. Coupling up into multi-cylinder units follows naturally, and so far as experiments have indicated, with absolute success.

Units have been built in single- and multi-cylinder forms, both two cycle and four cycle in operation, and in both water- and air-cooled forms. In each case the operating principle and injection mechanism is the same. It has operated on gasoline, kerosene and distillate. It is said there are possibilities of using heavy oils for fuel.

Operation of the engine may be readily described by the aid of the illustration shown herewith. The two-stroke type is pictured. Pure air enters through the air inlet port A into the crank chamber B, and by-passing it through air by-pass port C into the cylinders when the piston reaches its point of lowest travel, at which time fuel is metered through a suitable regulator D and a check valve E, and deposited in a small pocket F between the combustion chamber G and the



The Gernandt Oil Engine

injection plunger H by means of a combination of suction and a slight pressure maintained on the fuel tank.

On the upward stroke of the piston, the by-passed air is compressed to a pressure of about 350 to 400 pounds per square inch, at which time the fuel is injected into the combustion chamber G. During the compression stroke the fuel becomes heated and pressure rises in the fuel pocket F which is in direct communication with the combustion chamber G through the spraying slot I. When the piston nears the top of its compression stroke the products of combustion previously trapped between the spraying slot I and the injection plunger H, are super-compressed by means of a small plunger H and forced through the fuel pocket F and spraying slot I into the combustion chamber G, carrying with it the fuel in a thoroughly atomized condition.

As the products of combustion, with which the fuel is compressed, contain no oxygen, combustion is impossible until the fuel charge is mixed with the charge of compressed air in the cylinder. At that point, however, it becomes self igniting.

Fuel feed, injection and rate of injection are mechanically timed, so that the engine functions uniformly throughout its speed range. This, by contrast with other types of engines embodying the super-compression idea, has proved astonishingly wide. A speed range of 200 to 2,000 revolutions has, in fact, been maintained with the small, single-cylinder unit, it is asserted.

Features indicating the thoroughness with which the development work has been carried out are embodied in the fuel and oil feeds. For example, pressure from the cylinder, in which the injection plunger works, is carried to the fuel tank, thus obviating the need of a special fuel pump. In the same way, air pressure from the bottom of the crankcase is employed to feed lubricant to the moving parts.

Waldo G. Gernandt, who developed the engine, has had a long and creditable experience leading up to the point, in 1917, when he became associated with Bendix and concentrated on this work. A graduate in engineering of the University of Michigan, his experience in automobile engineering dates back to 1904. He was motor designing engineer for the Packard Motor Car Co., in 1913. From 1914 to 1917 he was associated with the Cadillac Motor Car Co. in engine design. His earlier experience involved numerous excursions outside the field of standard design, and led him definitely toward the point from which the present undertaking sprang.

From the beginning of the present connection, complete shop and laboratory facilities were at his command, as well as a trained and experienced staff. Because of his long and extensive experience in the designing and building of commercial engines the services of Charles Bathrick were added to the organization later.

Besides numerous forms and much conclusive information, the work to date has yielded a list of eight United States patents, which are considered to be of absolute protective power. Others are pending.

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NEW YORK TO ENFORCE NEW HEADLIGHT LAWS

Revokes 60 of 100 Certificates of Approval of Lenses as It Announces Latest Policy—Will Make Strenuous Effort to Uphold Regulations.

New steps taken this week by the New York State Tax Commission in its campaign for stricter enforcement of the motor vehicle law included a bulletin issued on September 18, containing the regulations regarding lights. AUTOMOBILE TOPICS, under date of September 16, presented in an article the high points of the new rules. The Tax Commission states that no headlight lens or device may hereafter be used unless it conforms with the specifications as set forth in those regulations.

Striking the attention of the reader of the bulletin is the assertion that more than 60 of the 100 certificates of approval of certain lens types issued by the State heretofore have been revoked in consideration of the adoption of the new regulations. A hearing on the matter of these 60 will be held at Albany on September 26.

The commission declares that a strenuous effort will be made to enforce the law. The authorities in New York are seeking, through the Interstate Conference of Motor Vehicle Administrators, to establish uniform rules and regulations on the subject in the various States. New England, New Jersey, Pennsylvania, Maryland and New York are united in this Interstate Conference and are working to this end. If all headlights have substantially the same candlepower and give similar results, the Tax Commission states, the danger of driving at night will be largely eliminated.

The second bulletin makes a careful analysis of the courts and judicial officers having jurisdiction over violations of the motor vehicle law in cities, towns and villages. It calls special attention to the provisions of the law relating to the suspension and revocation of licenses. The commission no longer has the power to suspend or revoke licenses, but this power has been turned over to magistrates in cities and county judges in all counties except those in Greater New York.

The commission points out that conviction for speeding for the third time makes revocation of the speeder's license mandatory. The judicial officer has no discretion in the matter and must revoke the license. Furthermore, no new license may be issued to such a person for at least six months.

The Tax Commission alone has the power to restore or reissue licenses after suspension or revocation. In this connection the commission states that it has adopted the definite rule that licenses revoked for operating a car while in a state of intoxication will not be reissued for the period of one year. The commission urges magistrates and county judges to make use of the power of suspension and revocation in punishing chronic violators of the motor vehicle law.

"This power," the commission states, "will be effective, if wisely exercised, in keeping off the public highways reckless and intoxicated drivers, who are so great a menace to the safety of the motoring public. It is the strongest weapon that can be used against the chronic violators of the law."

Hydro-United Tire Continues

Business of the Hydro-United Tire Co., of Pottstown, Pa., is being continued under the receivership of John T. Hill and Ephraim Lederer, appointed by the United States District Court at Philadelphia. The move on the part of petitioning creditors is said by friends of the concern to have been engendered by false reports concerning its condition, and these anticipate that it will soon work itself out of its difficulties, which are believed to be more fancied than real. According to officials of the Company present indebtedness amounts to $734,000, whereas assets invested in plant alone are worth upwards of a million and a half of dollars.

Dividend for Old LaFayette Stock

Stockholders of the LaFayette Motors Co. (of Delaware) were notified this week that the reorganization plan under which the Company's assets were transferred to the recently formed Company of Maryland, has proceeded to the point of final distribution of a liquidation dividend. The dividend is one share of second preferred stock in the new concern for each share held in the old company. There is nothing available for the common stock, the Commonwealth Trust Co., transfer agent at Boston, points out.

Jersey Spreads Truck Courtesy Drive

As the first step in teaching motor truck drivers the meaning of the phrase "road courtesy," the Motor Truck Club of New Jersey has just distributed more than 5,000 circulars provided by the National Automobile Chamber of Commerce entitled, "Common Sense on the Highway." The elimination of unnecessary noises will be the next move on the program of the Club, which hopes to help eradicate the prevalent disfavor with which most residents and passenger automobile drivers regard the truck.

Detroit to Test Drivers' Mentality

Police Commissioner James W. Inches of Detroit proposes to install an automobile driving school when the new central police headquarters are finished. Conditions approximating those to be found in the streets in the way of signals, pavement marks and roadways will be reproduced and traffic officers designated to take charge. Drivers suspected of some mental delinquency will be put through their paces at this school when applying for licenses.

ENGINEERS DECLARE AGAINST 12-HOUR DAY

Investigations Lead to Decision That 8-Hour Shifts Mean Better Workmen and Greater Production—Tendency of World to Abolish Long Hours.

Practically every plant in the major continuous industries that has turned from the 12-hour to the 8-hour day has increased its output by at least 25 per cent. Thus reports the American Engineering Council of the Federated American Engineering Societies in summing up its findings after a lengthy investigation of the value of the 12-hour shift as compared with the 8-hour system.

"The tendency throughout the world is towards the abolition of the 12-hour shift," the Committee finds. "Outside the steel industry the total number of employes on eight-hour shifts is now considerably larger than the total number of employes on 12-hour shifts. Taking into consideration all continuous industries between one-half and two-thirds of all workers on continuous operation are on shifts averaging 12 hours.

"There are upwards of 40 continuous industries operating more or less completely upon a shift system. They employ between 500,000 and 1,000,000 wage-earners on shift work. Their families constitute from 1,500,000 to 2,000,000 persons who are dependent upon earnings from shift work.

"There are 300,000 wage-earners working on 12-hour shifts. They and their families number more than 1,000,000 persons.

"The logical alternative to the two 12-hour shift system is the three eight-hour shift system, and this is the usual procedure. Nevertheless, other shift systems have been resorted to in a limited way, in changing from the 12-hour shift.

"The effect of the eight-hour as compared with the 12-hour shift operation on the quantity and quality of production, absenteeism and industrial accidents has been satisfactory where good management and cooperation of labor have been secured. In practically every major continuous industry there are plants which have increased the quantity of production per man as much as 25 per cent. In a few exceptional cases the increase has been much higher. Evidence shows also an improvement in quality of production."

The Stoughton report, which deals with the steel industry alone, finds that the 8-hour day makes better men physically and mentally, attracts a better class of men to the industry, improves conduct of operation, makes operation more uniform, betters the quality of product, uses less fuel, involves less waste and less repairs to equipment, and lengthens the life of apparatus.

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As They Pass

Not so long ago even the boy on the street played the game of identifying automobiles as they passed. Points of construction, particularly radiator and hub-cap design, furnished ample means of determining the name of the car. Then, as many companies sprang into the trade, the game became more difficult. Later still similarity of body design took the pastime from the hands of the general public and it therefore languished. Unless one could make out the name-plate on the radiator the identity of a swiftly moving automobile, they remained in doubt save to the few.

Now comes one concern with a name-plate placed on the rear of the car, as well as on the front. There is no reason why the idea should not spread. It is a good one from the standpoint of the manufacturer and if the owner can be convinced all will be well.

Recommended Equipment

"Recommended Equipment" is a phrase new to the industry. Standard and optional, as well as extra items in that line have been encountered before and are entirely familiar. Aside from being novel, the idea involved is not so bad.

Growing Better

When the taxicab industry stops to look about itself, it finds that it has grown to a position in the life of the Nation that brings to it responsibilities it has hitherto been able to side-step. Time was when the high price of riding in taxicabs made general the impression that the service was a luxury. The evils of marketing a luxury followed. Even today persons not familiar with tariffs of cab companies in large cities believe riding in a taxicab is paramount to admitting companionship with the "sports."

But that day is passing, indeed has been relegated to the limbo of forgotten things in some instances. Taxicab rates of the organized, self-respecting, large fleets are cheap. The brigand still flourishes but the personnel of the chauffeur element grows better while the management passes from the old order to the new. But recently, the taxicab owners passed resolutions which might have been written by "Billy" Sunday so filled were they with earnest desires to be decent.

The taxicab industry and service is now ranked almost a necessity of modern life. Let those who direct its destinies watch carefully that the duty it owes the public, the manufacturer and itself be cleanly and squarely met, for the future holds its best rewards only for those industries who do maintain a clean house.

Law Breaking

Breaking the law seems to be a matter of expediency in these days. "Admiral" Lasker, however admirable from a business standpoint his wetting of the Merchant Marine, connives at breaking Volstead's imitation. And now we learn of a certain automobile dealer of San Francisco transporting 60 gallons of whisky from the government warehouse to Jackson, Cal., where the Red Cross served it to the weary miners who worked so frantically but vainly to release their comrades entombed in the depths of the Argonaut mine. Likewise, three policemen accompanied the dealer as he broke all speed records in making the trip.

The whole affair is worthy of highest praise. None is stinted here. But something must be wrong somewhere nevertheless.

Coming Into Its Own

Surely and with constantly growing momentum, the truck business is coming into its own. And the medium of the growth, lack of which in time past has caused many to seek far for a reason, is the fleet owner. Whereas twelve years ago a certain list of 500 business men used between them but 60 trucks, on the first of this year the same five hundred operated more than 18,000. One firm using 13 trucks in 1910 now owns 31. Another had 81 in service in 1914 but now boasts 1,177.

The great deterrent to truck sales in the past has been the man who owned but one. He might have cast aside 2 one-horse trucks for one 5-ton motor truck. But his business might not have been extensive enough to keep the truck busy. The many problems of upkeep, fixed charges, overhead, and what not, made the truck a losing proposition. He and his thousands of brothers could not but form a poor opinion of the truck considered as such.

But the fleet owner, becoming more and more ubiquitous, may be likened to a forward moving wheel equipped with a ratchet—the ratchet of experience—that forbids slipping back. His experience, compounding itself, builds up satisfaction with the truck.

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Another Link Added to Chain of Motor Wonders

Gigantic Acme Trailer Comes to the Front as Home Saver



OVER a quarter of a century ago, because of the vast timber lands, the Mitchell Bros. Lumber Co. founded the village of Jennings, Mich., employed five hundred men, mostly Swedish immigrants, and built homes for them. Then came the dreaded day when the last tree was cut and activities must needs be centered elsewhere



WHEN news came to W. A. Kysor, president of the Acme Motor Truck Co., of the hard task confronting Jennings, Mich., of moving the entire village to Cadillac, he conceived the idea of transporting the 75 to 100 homes by a gigantic trailer, built especially for the purpose. Above is a typical street scene in the village taken before the removal

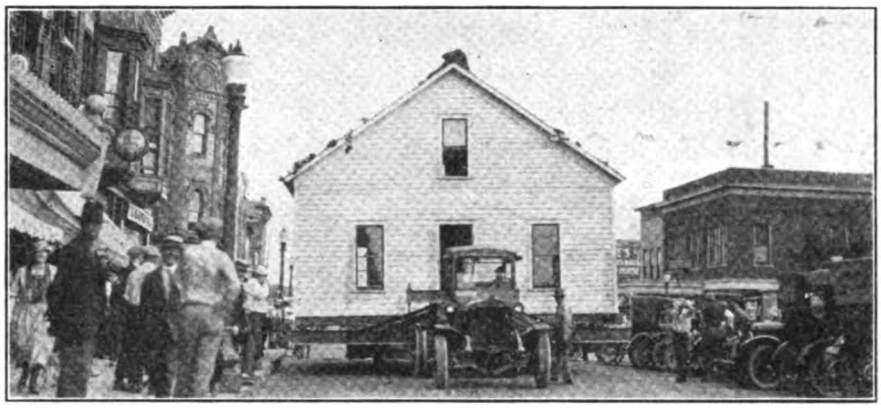
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Wherein a Trailer Doubles for a Magic Carpet

Jennings, Mich., Moves to Cadillac, 11 Miles Away, When Business Calls—100 Homes and Lumber Mills Involved

PHILOSOPHERS frequently echo the age-old saw that there is nothing new under the sun. Perhaps there isn't, but it is not a wild wager to assert that when the town of Jennings, Mich., puts its houses, its saw mill, its chemical and flooring plants and itself on a motor-driven conveyance and moves to Cadillac, 11 miles south and east, the Prophets might well be astounded.

Jennings was founded a quarter of a century ago by the Mitchell Bros. Lumber Co. Five hundred men were given employment, homes were built for them and a little community sprang into existence in a typical way that has made the United States the dream of congested and restricted Europe for centuries. Many of the workers came directly to Jennings from Sweden. Their only knowledge of American life has been the almost ideal existence in the little village. Many came with their brides and there reared their children, who in turn became home owners and the heads of prosperous and happy families.



One of the smaller houses that once rested in the town of Jennings, Mich., being hauled through the main street of Cadillac on a busy afternoon

But gradually the land that was once thickly timbered became more and more thinned of its forests. Finally all the standing trees had been cut. Twelve miles inland, the products of the mills and the chemical and flooring plants had to be shipped out by a branch railroad. The traffic became too little to warrant continuing the operation of the plants. The village faced abandonment.

The Mitchell company, canvassing the situation, found its holding in Cadillac extensive. It wanted to centralize its manufacturing operations. The idea of moving the town of Jennings to Cadillac sprang into the minds of those managing the concern. Many of the old inhabitants of the town were loath to leave their simple surroundings and feared the outcome of life in so complex a civilization as obtained in Cadillac. Living would be different and they doubted whether life would be as pleasant.

But from a commercial standpoint, moving the village was the only practicable thing to do. A great many different projects were considered but nothing feasible was worked out until W. A. Kysor, president of the Acme Motor Truck Co., of Cadillac, conceived and brought to a successful termination the truck and trailer idea.

Kysor's first task was the designing of a trailer capable of performing so herculean a duty as moving between 75 and 100 homes, each weighing many tons, along the eleven-mile stretch to Cadillac. He submitted a report to the lumber company which was accepted and the huge trailer illustrated in connection with this article was constructed. It was so large that it was necessary to build it out-of-doors.

President Kysor retained charge of the project until the first of the workmen's homes had been successfully brought to Cadillac. Then he turned the matter into the hands of the lumber concern for which the trailer had been built. The work is now going on and will be completed early next year.

The houses to be moved vary in size from 24 x 30 feet to 24 x 40. Many of them have hardwood floors, all are

MODERN ARABIAN NIGHTS

DEVELOPMENTS of the past ten years in the automobile industry are almost startling when one reviews them as a lay citizen. Tasks that a few years ago would have been termed impossible have been successfully accomplished time and again. The truck and the trailer have performed in a manner that in other and older days would have bred legends as startling in their way as any to be found in that frequently abused collection of ancient lays, the Thousand and One Nights.

Fellaheen, gathered about the wayfaring story teller of the Arabian deserts would be enchanted by a tale of a whole city moved by the genii. Yet here in America, in the woods of Michigan, a tractor and a trailer are today carrying, house by house, store by store, mill by mill, the town of Jennings eleven miles to Cadillac. Truly a subject for an epic if it were not happening in America.

The story of how it is being done provides material for deep reflection. It has been no uncommon sight to witness houses being painfully pried along on rollers from street to street in our cities. Los Angeles even sees a high office building of brick, concrete and stone, and steel, moved a matter of blocks. But to move an entire town eleven miles over highways not especially prepared—that is really astounding and would attract a great deal more attention than it does were Americans not used to wonders as a part of their daily lives

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a story and a half, well-built, comfortable and arranged for convenience. The weights vary from 15 to 35 tons.

Many considerations were involved in the building of the trailer. The windows had to be left in the homes yet it was planned that none should be broken despite the possibility of many jars and stresses. It is to be recorded that with the exception of a few, smashed by limbs of shade trees as the caravans passed through the streets of Cadillac, no damage has been done, so perfectly did the trailer function in eliminating jars.

The eleven-mile trip, it is found, consumes about four hours. Included in this schedule are waits for traffic to pass before entering on a stretch of highway too narrow to permit opposing vehicular streams to get by the moving house. Actual running speed is from five to eight miles an hour while in the "country." Within Cadillac, the speed must be reduced because it is found necessary at times to remove telephone and lighting wires and even poles to allow the houses to pass beneath.

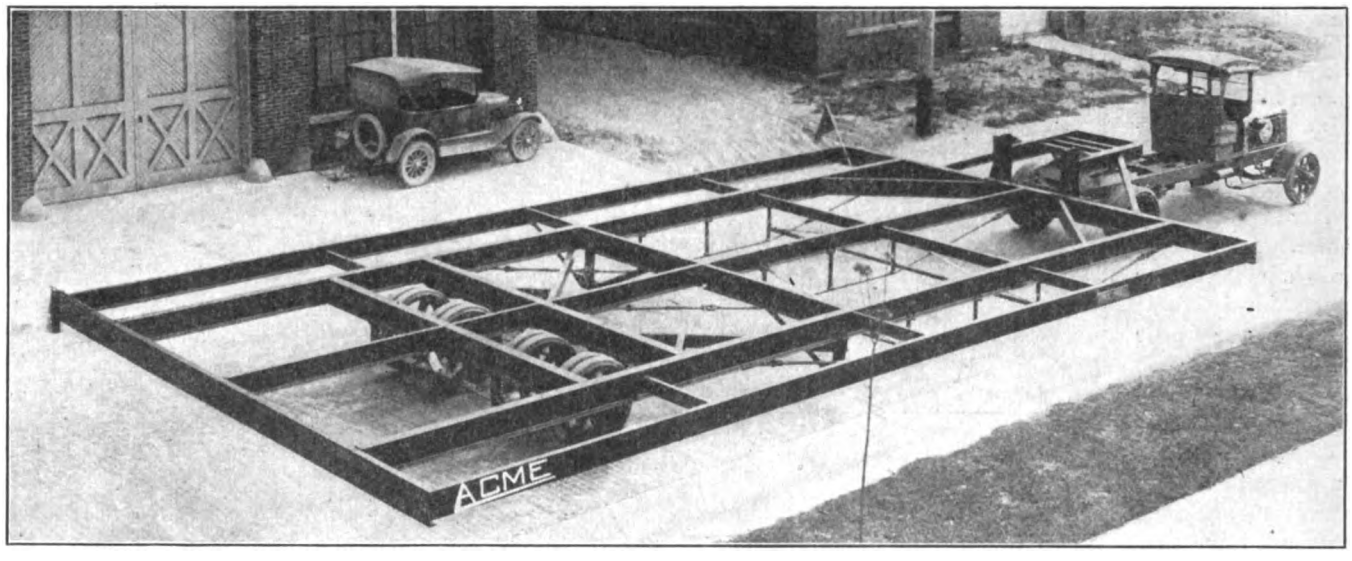
Preparation for the journey is comparatively simple. The house is raised on jacks to a sufficient height to allow the trailer, from which the two outside longitudinal members have been removed, to be packed beneath it. The house is then lowered until it rests evenly on the trailer's frame. The side members are then replaced, if it is found necessary, and the unit is ready for its journey.

At present, the rate of moving the houses is about two every three days, or four a week. As the workmen become more accustomed to the job it is believed this schedule can be speeded up to a house a day. The flooring and chemical plants will be brought to Cadillac when the homes have been transported, so that by the first of the year Jennings will have ceased to exist and Cadillac will have grown by 75 to 100 new homes and from 500 to 1,000 in inhabitants. For the lumber company plans to house more of its employes in the new community that thus has sprung up in the Michigan woods.

While exact data as to the cost of the moving of a house as compared with that of building a duplicate in Cadillac is not available, it is said that it is cheaper to move. The costs are expected to average from one-half to two-thirds of the outlay that would have been needed to construct new homes. In this estimate is included, of course, the excavating necessary to provide basements for the houses in their new locations, cement work, the installation of furnaces and plumbing and other modern improvements contemplated by the Company and the home owners themselves.

Likewise the cost of the houses is not ascertainable from present sources but it is pointed out that many of them are being sold to the resident at very reasonable prices. It is declared that a man receiving average wages is able to own a very confortable one with all modern conveniences for considerably less than $2,000. Some of the homes are being retained by the Company for the use of their employes since housing in Cadillac, as in most other towns and cities in America, is a problem.

Turning to the technical description of the moving factor in this commercial drama, a drama only possible in America, it seems, a number of interesting points in connection with the construction of the trailer are found. The trailer is constructed with a framework of heavy structural steel beams. A channel and I-beam platform, raised 18 inches above the trailer frame and rigidly connected to it, transfers the load at the forward end of the trailer to a rocking fifth wheel mounted on the truck. This construction eliminates all twisting stresses from the trailer proper.



Showing details of the construction of the trailer that is accomplishing the work and its connection with the truck

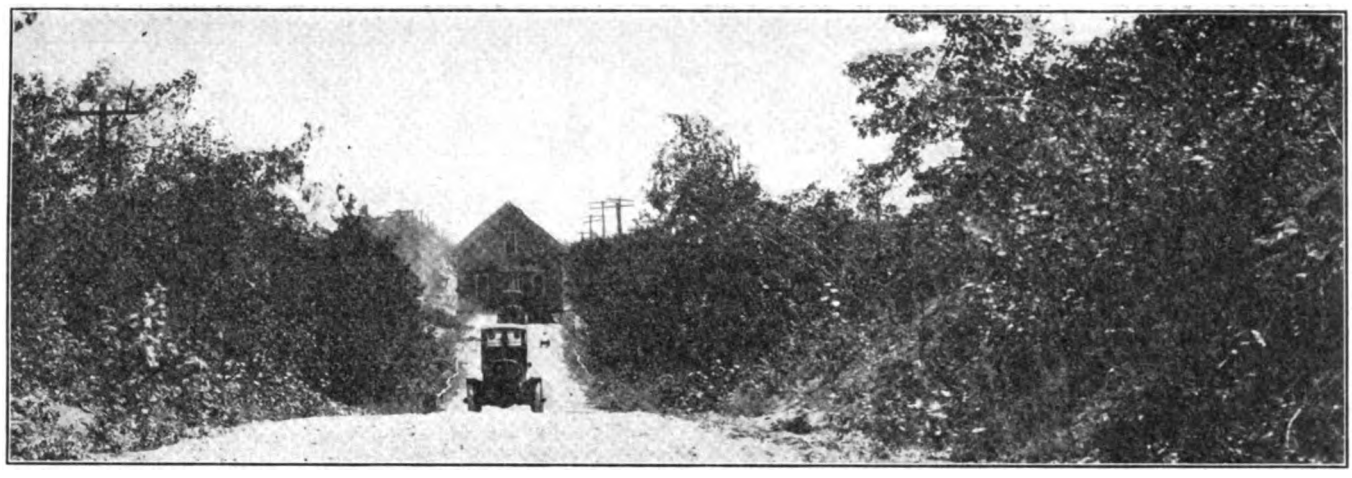
The trailer frame is supported at the rear by four steel truck wheels abreast, equipped with solid rubber tires. The wheels are placed under the trailer in such a position that approximately 75 per cent of the weight of trailer and load is carried there, thus making it possible to carry a very heavy load without overloading the truck used for motive power.

The trailer is designed to safely carry a maximum uniformly distributed load of 35 tons. The complete unit weighs approximately 5 tons.

The trailer proper is 24 feet wide by 42 feet long. It consists of five longitudinal members of heavy section structural steel, securely held in place by two main and four supplementary transverse beams. Diagonal cross braces are built into the frame to distribute the stresses where excessive weaving and twisting would occur. To give added rigidity and strength to the structure, the three center longitudinal members at each end are supported at equal intervals by cast iron struts. The tension in these rods is equalized by a series of turnbuckles. All frame connections, gussets, braces, etc., are hot riveted.

The platform at the forward end of the frame is raised

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Bringing a 35-ton house, 25 feet wide and 40 feet long, through the country lane by trailer and truck. A second truck runs in the van to warn oncoming motorists and prepare the way for that part of the village which follows

18 inches above the trailer. It is constructed of channels, I-beams, and plates, and substantially braced with diagonal members to the forward transverse member of the trailer proper in order to eliminate side sway. This platform is connected to the trailer frame by means of heavy gusset plates and channels of sufficient strength to safely transfer approximately 25 per cent of the weight of the trailer and load to the rocking fifth wheel mounted on the truck.

At the rear the trailer is carried on four cast steel wheels, all abreast, equipped with 40 x 6 dual truck tires. The wheels are arranged in pairs, each wheel operating on tapered roller bearings supported by a tubular steel axle shaft. The shafts of each pair of wheels are bolted together at the center through a large steel casting which is supported by an extra heavy wrought iron pipe extending through it and at right angles to the shaft. Heavy steel pillow blocks at either end of this pipe support the weight of the trailer and load through coil springs, attached to the trailer frame.

This unique construction not only cushions the load but successfully provides for road inequalities, which is very essential when taking into consideration that the distance between the outside wheels is approximately 11 feet.

To relieve the springs from driving stresses a radius rod with flexible connections is provided for both sets of wheels, the forward end of which is secured rigidly to the trailer frame. The rear end is fastened to the end of the wrought iron pipe through a swivel connection.

In order to maintain perfect alignment of all four wheels, the wrought iron pipes supporting the axle shafts are tied together by a system of flat bars secured to the trailer frame and so arranged as to compensate for spring deflection. The distance from the top of the trailer frame to the ground is approximately 40 inches when the trailer is loaded.

Acme Model 125 chassis is furnished with the trailer. It is equipped with a continental motor which develops 55 h.p., actual brake test. This power, together with a gear reduction of approximately seventy-one in first speed, delivers a tremendous torque at the rear wheels, which is proven by the fact that it is able to negotiate a six per cent grade 600 feet long over a gravel road with a 35-ton load on the trailer. The 71 to 1 ratio is arrived at by multiplying the rear action reduction of 13 2/3 to one by the transmission of 5.2 to one.

This equipment has made possible an undertaking that but a few years ago would have been deemed impossible.



Residence of the village marshal of Jennings, en route from that town to Cadillac. No report has been made as to whether the village marshal has a job now that there isn't a town

It lays added emphasis to the tremendous developments that have been witnessed in the automobile industry and gives rise to the thought of "what next?"

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SATISFACTION—
THE GOAL OF EVERY CUSTOMER

* By GORDON M. MATHER, President, Mather Spring Company

SATISFACTION makes a purchase an investment. But the lack of it makes it an expense. People who are satisfied with what they buy, enjoy certain values in the results that the article yields. These values represent the equivalent of a reimbursement of the purchase price—at least once, and, in some cases, several times over.

But people who are not satisfied have a reason. It is because the article did not live up to their expectations. They had to forfeit certain anticipated values in results. Thus they got no, or very little, satisfaction. It is perfectly reasonable, in such a case, that they should feel they did not get their money's worth—that the article did not pay for itself through the values expected in service.

SATISFACTION in service is more vital than satisfaction in price. Cheap goods cannot satisfy because it takes money to put into goods the one supreme element which makes satisfaction. That element is quality.

Low prices and high qualities don't usually associate together—on the same principle that a diamond sells for more than a piece of glass; that a fine, silk oriental rug sells for more than an ordinary piece of matting; that a high-grade tailor-made suit of clothes, made by the best tailor in the city, sells for more than a cheap, ordinary, hand-me-down suit bought from a store.

The article that does not satisfy is an extravagance. The article that does satisfy is absolute economy. Too much of a desire to cash the economy at the time of purchase—through a low price—is responsible, more than anything else, for the extravagance of dissatisfaction.

There are many wonderful inventions in the world—a tribute to the genius of man—and these inventions, marvelous in their operation, doing things that surpass the limitations of the human hand, have displaced old, slow, cumbersome, inefficient methods in manufacture. But there is one invention that has never yet been made—and never will be made—and that is: something that will take the place of quality, save quality's cost to produce, and still give 100 per cent satisfaction!

There never has been, and never will be, a substitute for satisfaction. The world is full of substitutes for practically everything else—but not for satisfaction. And that is so because satisfaction is the supreme test of all things. The value of a thing is not based just on what we pay for it—but on the amount of satisfaction we get out of it.

IF the average buyer were as particular about the specifications of his satisfaction as he is about the purchase price, then the lure of the lower price would instantly cease to have an influence. Mere talking points, snappy sales-arguments, sky-high promises would all go into the discard—and soon be but a memory of an age when purchase-price economy held a spell over the average buyer.

Satisfaction is worth many times more than any mere difference in purchase price; for the article which does not satisfy is expensive even if sold at half the price—and, very often, it is expensive even as a gift.

PEOPLE who always use the best of everything usually have a sunny spirit. They are progressive—they're go-getters—they're successful. Consult your own experience on this.

The reason for their sunny spirit is because their lives are free from disappointment in the use of the things which enter into their daily activities. The things they buy live up to their expectations. Though they pay more for the quality things they buy—and it may seem to some people like extravagance—yet they pay far less in the end; and, it must be remembered, it is the end-cost that really counts—not the starting-cost composed of the purchase price. They are successful because things of quality actually cooperate with one's personal effort.

Wisdom in buying consists of making satisfaction the golden goal, and not permitting mere price to induce us to put so important a requirement on a speculative basis—with the odds all against us in winning!

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SELLING GOODS AT RETAIL

GOOD morning.
Your windshield has been cleaned.
Your seats have been dusted.
Your car has been brushed out.
Your radiator has been filled with water.
—a Part of Our Service.

Thus does the Winton Garage in Cleveland inform the car owner and the world in general that it is in business to serve. A neat paster placed on the windshield of each machine handled bears the welcome tidings.

Nor is it a message destined to pass unheeded. Its presence is made the more conspicuous by the lack of attention to such details in every-day shop practice.

Who can say but that in this same inattention to certain details may be found sufficient reason for the constant ebb and flow among shop and service organizations?

* * *

NEW YORK'S automobile trade has introduced a novel note into show publicity. It has stimulated interest in its coming Closed Car Show by inserting in the metropolitan dailies individual advertisements for each dealer, in which he is quoted as urging "Don't miss it!" A picture of himself with the car he handles adds further emphasis to the appeal.

It is an idea that may well be given serious consideration by other dealer bodies which are anxious to secure the greatest benefit from every inch of advertising space.

To such is recommended a close inspection of the following pages on which are to be found certain interesting details of the publicity campaign of the Automobile Merchants' Association.

* * *

SPACE for which the accessory dealer and garage man are paying out their good money is far too valuable to be littered up with greasy gloves, old caps and discarded tools. In their place should be salable goods.

Those dealers who are alive to the value of the "Ask 'Em to Buy" idea are quick to appreciate this fact. Accordingly they are "askin' 'em to buy" with places that are cleaned up systematically once in so often and kept in that condition 365 days each year.

* * *

"THEY ain't doin' any harm," was the come-back of one dealer whose attention was directed to the crowd of "hangers-on" about his showroom. "People'll come in to buy just the same."

It is easy to fool yourself in the same way. And there is just one cure for such a delusion. That is, to send the bunch about their business and then watch sales begin to pick up.

AS "SID" SNYDER SAYS

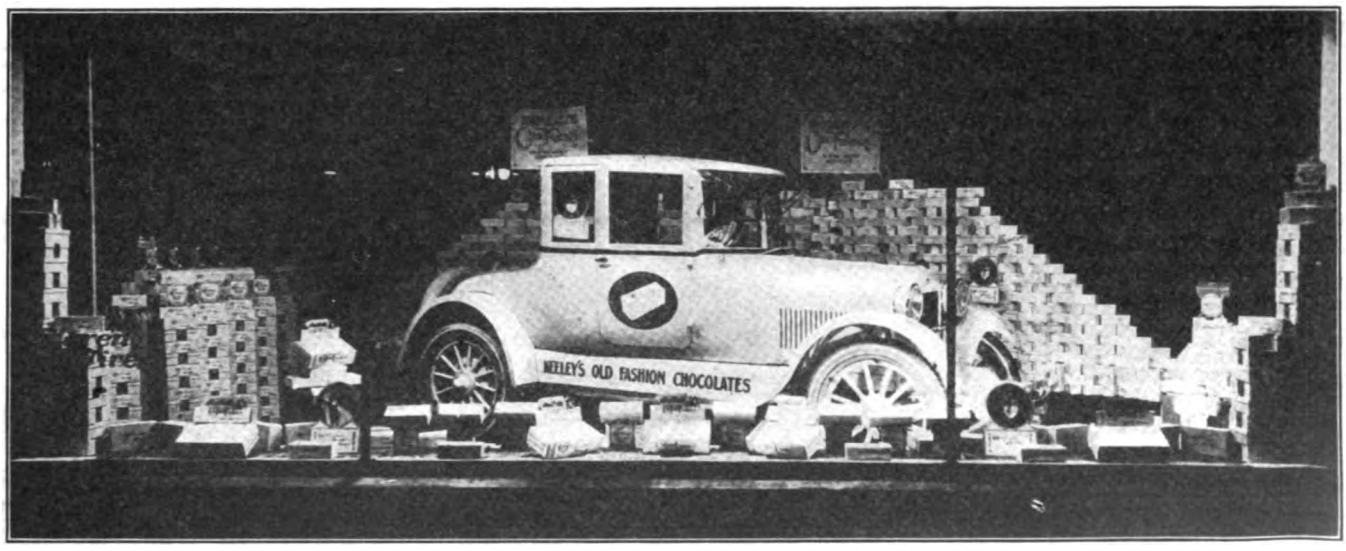
YOU got to choose the tune that'll best fit the fiddle, if you want people to listen. "It's a trick of the trade," any good salesman'll tell you.

* * *

A man goes in to buy a hat. The salesman puts a bunch in a row but points to one. "There's the model for you," he'll say. "You'll see more of 'em than any other style."

But how would that tune sound if he was sellin' hats to women?

Candy Car Arouses Interest in Reo Dealer's Window



Four thousand people feasted their eyes on the Keeley Candy Car in the window of the Reo home in Madison, Wis. The background was made up of 2,000 pound boxes of Old Fashion chocolates stacked one on the other

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"Don't Miss It," Urges New York Trade

Informs Public of Closed Car Show by Novel Appeal —And Makes Sure of Not Missing Any Business

DON'T MISS IT," is what dealers along Broadway's automobile row have been saying to the public in general during the past week. For the benefit of those who are not in touch with doings in metropolitan trade circles it may be added that what is referred to is the



Closed Car Show which is to be held September 23-30 in the Grand Central Palace under the auspices of the Automobile Merchants' Association.

Whereas in itself there is nothing unusual in such an admonition, the wide circulation given it during the week immediately preceding the exhibit marks it as an innovation in arousing public interest in an automobile show. For it was an individual invitation that each dealer extended the public to drop in and satisfy any curiosity that might be felt in the matter of Fall styles in automobiles.

As he glanced through the sheets of his newspaper, Mr. New Yorker's eye happened to glance at a small column advertisement headed "Don't miss it." Living up to his established reputation of never missing anything, he took a second look.

He found that someone was saying it—evidently the gentleman whose picture appeared directly beneath. The handsome closed car reproduced about where the gentleman's feet should be, aroused his curiosity still further. Whereupon his eye struck the words "Closed Car Show."

Having finished consuming all the news on that particular page he turned over to the next. The first thing that greeted him was an exact replica of the advertisement he had just read.

"Don't miss it," flashed before his eyes. "A duplicate ad" was his first thought. He looked again, and found it was nothing of the sort, for the gentleman pictured was fat whereas the other was thin, and the car was a coupe where the other had been a limousine. What is more, he did not have to look twice to see that it was a different make altogether.

Just then he turned to the opposite page. First thing that met his eye was another. And with each new page he turned he met the same kind of display. "Guess they mean what they say about not wantin' me to miss it," he grumbled to himself. "Swell chance, with it facing me everywhere."



Thus the purpose of the campaign was fulfilled. The Automobile Merchants' Association did not intend to have anyone miss it. And it chose a very clever way of accomplishing its purpose.

Practically every dealer along the "row" was represented. His picture was shown together with that of the car he handles. Moreover, in each instance his name was given, followed



by a few words of quotation.

Some examples follow: "Don't miss it!" says W. O. Wilson, showing the newest Cleveland models—"You'll be glad you came."

"Don't miss it," says J. B. Hulett, exhibiting the latest Chandler models —"Come on over."

"Don't miss it," says C. B. Warren, displaying the newest Nash models— "You'll learn a thing or two about closed cars."

"Don't miss it," says F. C. Mattern, who has all the latest Dort models on display—"P. T. Barnum said it— 'Greatest show on earth.'".

"Don't miss it," says J. A. Clark, exhibiting all latest Peerless models— "It's the greatest show ever."

Every dealer represented had something to say about the show. Just enough to add to the force of the display.

The value of such a presentation may easily be seen. In the first place,

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as has been emphasized before, its constant recurrence before the eyes of the newspaper reader added to its force. He was never once permitted to overlook the fact that he "should not miss it."

Then again he was enabled to get a line on each dealer. The chances are he never knew before, the name of the man that handled the car he was particularly interested in getting a line on. Right there it was before his eyes, and in addition a picture of the gentleman with whom he was to do business.

"Sort of serves as an introduction to some of these fellows," one interested reader was overheard remarking. That he intended making the most of the opportunity afforded him was evidenced in the way he was tearing several advertisements out, folding them up and putting them carefully in his wallet for future reference.

In saying "Don't miss it" in such a unique way, the New York dealers are destined to make for themselves many new friends. For it is just another way of declaring that for their part they don't intend to "miss it"—that is to say—Business.

Sales Contest Proves to Be Powerful Elixir

Competition Provides Necessary Incentive, Landman-Griffith Co. Finds

A LITTLE incentive applied judiciously now and then to the selling organization performs wonders in injecting new life into the business. That is the way the Landman-Griffith Co., Maxwell-Chalmers distributer in Toledo, Ohio, looks at it. That, too, is why it has become a firm advocate of sales contests.

How it goes about this matter of keeping the interest of every one of its salesmen stirred up to the point where every minute is made to count, and every effort is employed to swell the list of customers, is shown by the description of a contest the organization has lately inaugurated. An unusual feature is the fact that it extends over a period of eight months—considerably longer than the time generally allotted such competitions.

Eight retail salesmen and one used car salesman make up the Landman-Griffith organization. The latter, however, is given the same position in the sales contest as a new car salesman.

This personnel of nine men is organized into three teams of three men each. To the three high men of these three teams a monthly prize is given in the form of a gold signet ring bearing a suitable inscription. These high men become automatically team captains for the following month.

As pointed out before, the contest extends over a period of eight months with a grand prize of a chest of Community Plate silver going to the individual salesman, regardless of his team standing, who makes the most consistent and best records in the time designated. In addition, prizes are given each month and new captains of teams are appointed on the basis as outlined.

Credits for the standing of the salesmen are computed as follows: New list price of car delivered is averaged together with the amount of cash taken in on the sale and the stated unit value, which has been arbitrarily fixed. Unit values are: Maxwell touring, 500 points; Maxwell Roadster, 500 points; Maxwell coupe, 750 points; Maxwell sedan, 800 points.

SUPPLYING A NEED

THAT the sales contest fulfills a real need in supplying the dealer's organization with proper incentive has long been realized by those merchandisers who have employed it in one form or another. The question, therefore, remains one of determining what kind of competition will produce the best results.

Out in Toledo, considerable success has met the efforts of the Landman-Griffith Co., Maxwell-Chalmers distributer in getting the most out of each member of its sales force. This has been accomplished by means of a sales contest which extends over a period of eight months. A grand prize is offered, in addition to smaller rewards to those contestants coming out ahead each month.

The Company purposes, however, to make every department a sales-getter. So each month the service and sales divisions together with the office are given a number of cars to sell at retail. Whenever the sales amount to the quota given, a celebration takes place.

It is incentive well distributed that the Company offers. And it is to that, it attributes its increasing business

Contest standings are posted daily on a large blackboard in the lobby. This does not show the Company's exact business in dollars and cents but gives the average unit credits to which the salesmen are entitled on the above basis.

Straight sale of a touring car at $935 gives the salesman a credit of 790 units. This is arrived at as follows: $935 represents the amount of cash taken in. To this is added $935 as the delivery price and 500 as the unit value. This totals 2370, which when averaged gives 790, the credit units allowed for the sale.

Example of a trade-in transaction follows: $935 again represents the list price. Cash turn-in is placed at $635. To these is added 500 as the unit value. This totals 2070, which when averaged gives 690 as the credit units for the sale.

The Company goes still further, however, in keeping everyone thoroughly interested. This further incentive offered takes the form of an organization plan that has been incorporated into the sales work.

Each month the departments of the entire organization—sales, service and office—are given a number of cars to sell at retail. Whenever the retail sales amount to the quota given, a celebration takes place in the form of a picnic or dance. This has resulted in the entire organization taking a part in the sales work.

Results of this system of giving everyone something to work for outside of the weekly pay envelope are manifest in many ways. Perhaps they are best told by using the Company's own words.

"Our business is written up better by each individual" it states, "and the amount of the cash turn-in of each sale has a value. Straight business is given preference to trade-in. We have individual competition, team competition and our contest does not end at the end of each month, but its interest is carried over from one month to the other, and each salesman is driving constantly for the grand prize."

With every man driving constantly ahead there can be little doubt but that the business growth will be marked. That's the way the Landman-Griffith Co. has found it. And that's why it sees to it that incentive is generously distributed.

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BETTER CARS AND COMPONENTS FOR THEM

Cadillac Features Two Improved Closed Cars

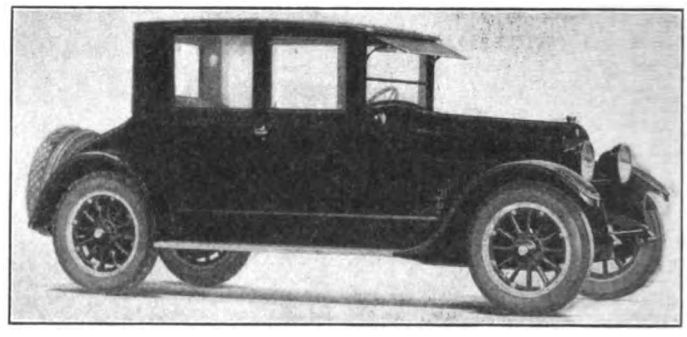
New Four-Passenger Victoria and Five-Passenger Coupe Prominent in Dealers' Closed-Car Week Displays—Both Bodies Roomier

TWO improved closed models were featured during the week just ended by Cadillac dealers in this Country and Canada in their observance of the national closed-car week sponsored by the Cadillac Motor Car Co., Detroit. They are the new four-passenger victoria and five-passenger coupe.

Appearance of the new victoria has been greatly enhanced by a change in dimensions which gives the effect of greater length and less height. The new body is considerably enlarged to provide more roominess for all occupants, and at the same time all seats have been lengthened.

The driver's seat is now placed in such a way that it is directly behind the steering wheel. The auxiliary folding seat, which is beside the driver's seat, is so arranged to give added leg room for the person occupying it. The rear seat, which accommodates two persons with ease, has been both lengthened and widened.

CHANGES in the Cadillac victoria give the impression of greater length and less height. More room for all occupants has been provided



New pull-to handles on the doors and other fittings are numbered among the interior refinements. Many desirable details of the former victoria have been retained, as for example, rear corner lamps, parcel compartment directly behind the driver's seat, folding foot rest, cigar lighter, leather-paneled sun visor, and the large rear deck compartment.

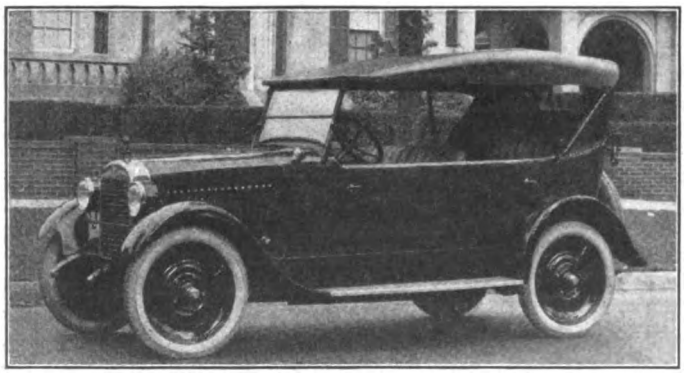
The five-passenger coupe has also been given more roominess. Otherwise the most important refinement is the use of the folding seat beside the driver. This new arrangement replaces the tilting seat formerly used in the five-passenger coupe model.

Columbia Shows New $1,095 Special Phaeton

Generous-Sized Body and Equipment Featured—Thermostatically-Controlled Shutters on Radiator—Light Six Chassis Used

FEATURING more than the usual equipment found on cars of its price, a special six phaeton has been disclosed by Columbia Motors Co., Detroit, to retail at $1,095. It is a five-passenger model with a body of generous proportions. Finish is distinctive.

The chassis used for this model is the same as the light six chassis. The body, however, bears no resemblance to the light six touring. Among other things, it is larger and better upholstered. The rear seat is 46 inches wide, and the upholstery is of real leather, machine-buffed and laid over deep, coiled springs.



NICKELED radiator with thermostatically-controlled shutters is one of the high spots of the new Columbia special six phaeton offered at $1,095

Prominent among the equipment is a nickel-plated Harrison radiator with thermostatically-controlled shutters. Other details that are not found on the light six but which are furnished with the special phaeton, include a semi-permanent top, Moto-Meter, cowl ventilator, barrel-type cowl lamps, robe rail and foot rail.

The body is finished in suburban blue with an ivory stripe. Wood wheels and cord tires are standard. The disc wheels shown in the illustration are $30 extra. Barrel-type headlights and heavy, deep-drawn crown fenders add to the body's appearance.

The light six chassis used is powered by the Continental "6Y" 3⅛ x 4¼ engine. Other chassis units include Timken axles, Auto-Lite lighting and ignition, Stromberg carbureter, Durston gearset, Spicer universals and Gemmer steering.

Midwest Goes in for Passenger Car Engines

Offers Three Four-Cylinder, Valve-in-Head Models—Reciprocating Parts Lighter for Car Service—"Floating" Bearings Used

THREE passenger car engines are now offered by the Midwest Engine Co., Indianapolis. They are all four-cylinder, valve-in-head types as follows: model "410" 3⅜ x 4½, with thermal circulation; model "411" 3⅝ x 5, with thermo-syphon water circulation, and model "412" 3⅝ x 5, with water pump.

General design follows that of the Midwest truck engine, now well known to the trade. This means that they are two-bearing crankshaft jobs, made, however, with large crankshaft and other components. For passenger car installation the principal changes have been the lighten-

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ing up of reciprocating parts, such as pistons, connecting rods, piston pins, etc. The valve timing has been changed to peak the performance at a higher speed than is usually necessary in commercial car work. These engines have high torque at low speeds and large horsepower at high speeds, the torque peaking at 1,000 r.p.m.

One of the outstanding features of the Midwest design are the large bearings with neither shims nor oil grooves. All bearings are from .003 to .005 inches larger than the shaft and camshaft. This clearance provides for an oil cushion which is claimed to eliminate approximately 50 per cent of the internal friction sometimes found in engines using tight bearing fits.

This construction Midwest terms "floating" bearings. Furthermore, the bearings are burnished so as to eliminate any edge or surface which could possibly scrape or break the oil film. This lubrication plays an important part since the engine speeds run up to 3,000 r.p.m. on the "410" and 2,400 to 2,700 r.p.m. on the 3⅜ x 5 models "411" and "412" engines.

In the cooling system, cold water is first conveyed direct to the exhaust valve seats through passages cored in the cylinder block and head. This maintains



Crankshaft of Midwest car engine

the lowest possible temperature at the valve seats and valves.

Lubricating system is termed a constant delivery type. Oil is delivered to every bearing, except wrist pin bearings, continuously and under pressure, regulated in proportion to the load on, instead of speed of the engine. Regulation is by means of a by-pass valve located over a groove around the front bearing, this valve being operated by the vacuum in the intake manifold above the carbureter throttle.

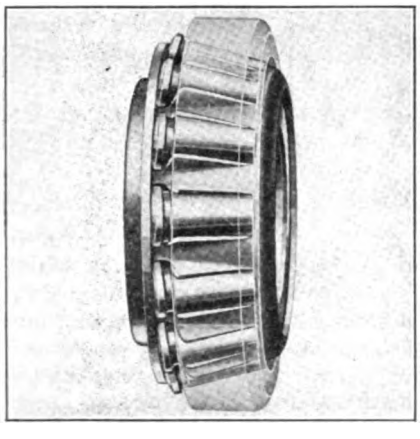
Crankshaft is drilled with a continuous passage for oil from center of front bearing to center of rear bearing. Oil is taken from the sump by geared pump and forced into the circular groove around the rear bearing, from which it enters the crankshaft no matter in what position it may be, the oil from that point passing through the shaft in large volume and at high speed to all bearings constantly. Oil on reaching front bearing, is allowed to escape into the gear case cover from under the by-pass valve when the pressure is greater than 50 pounds, or when the vacuum is greater than the spring tension which normally holds the valve closed.

Performance tables are interesting. The 3⅝ x 5 engines develop maximum torque of 132 lb. ft. at 1,000 r.p.m. (horsepower at this speed 25.2) and maximum horsepower of 52.5 at 2,400 r.p.m. (torque 115 lb. ft.). The 3⅜ x 4½ develops maximum torque of 103 lb. ft. at 1,000 r.p.m. (horsepower 19.6) and maximum horsepower of 35.6 at 2,400 r.p.m. (torque 78 lb. ft.).

Bock Producing Roller Bearing with Improved Cage

New Design Embodies Cage and Rollers Assembled with Cone as One Unit

MARKING a decided improvement in its taper roller bearing, a new cage was recently put into production by the Bock Bearing Co., Toledo, a subsidiary



Improved Bock taper roller bearing

of the Standard Parts Co. This new cage is said to fulfill in every way the ideal of efficiency with greater ruggedness and simplicity, for which Bock engineers have been striving.

In the new design, the cage and rollers are assembled with the cone as one unit, the cup being the second unit in the complete bearing. This makes for greater convenience in handling, and leaves less to the discretion of the mechanic. Formerly the bearing consisted of three parts, cup, cage and cone.

Along with the development in the design of its product, the Bock company has made notable improvements in its bearing plant equipment. Automatic gauging machinery has replaced the old hand method of gauging rollers, and automatic taper grinders and head grinders, which have been in process of development for a long period, are now being installed to replace the semi-automatic machines previously used.

Robert Bosch Opens Chicago Branch

Direct branch office has been established by the Robert Bosch Magneto Co., Inc., New York city, at 1302 South Wabash avenue, Chicago. Lee C. Carlton is executive head of the new office.

Olds Improves California Top

Changes in window and top construction have been made by the Olds Motor Works in its 1923 California top model. A drip molding has been put on the roof, this being continuous around the entire top with the exception of the rear. Drains have been put on both sides, sufficiently back of the rear door to do away with splashing of water against side windows. Glass in rear windows has been changed to a double-glass type, which may be opened at will.

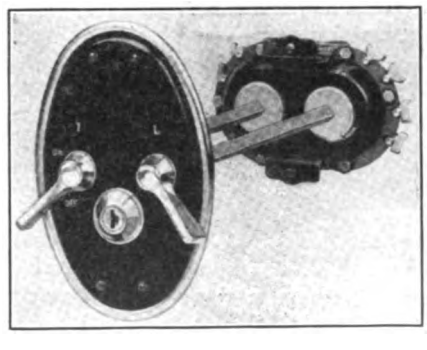
Basco Extended-Handle Switch an Efficient Design

All Ignition and Lighting Switch Connections Are Placed Under the Hood

AN interesting development in lighting and ignition switches is to be found in the Basco extended-handle switch recently put on the market by the Briggs & Stratton Co., Milwaukee. Its operating levers are placed on the ends of long rigid rods, by means of which the actual mechanism is operated.

These extended handles make it possible to mount the face plate of the switch and levers on the dash, while the switch mechanism itself is placed under the hood, usually on the bulkhead where the switch terminals are easily accessible. The construction frees the space immediately behind the dashboard of the usual conglomeration of wiring.

With all switch connections under the hood, trouble in the ignition or lighting system can be readily located—fuses renewed or necessary changes made in a fraction of the time it frequently takes to "trace out" wiring on cars equipped with usual switches. A big advantage to the car maker is that the chassis can be



Basco extended-handle switch

wired complete before the bodies go on, thus saving both in time of assembly and amount of wiring required.

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GREATER PROFITS FOR THE SHOP

Mr. Motorist Looks, Reads—Then Acts

MR. MOTORIST: An automobile mechanic, if he is one, is a clever chap. He must master nine crafts, develop a high degree of mechanical instinct and hand dexterity, cultivate extreme patience, use his brains, and like dirt.

"We are not only proud of our skill, but able to help you solve your transportation problems and protect your investment in motor vehicles.

"Ask us—we can help you.

"Phone Circle 1670, 0211, 5368."

In such language is Ralph C. Rognon & Co., New York city, soliciting the interest of owners of passenger cars and motor trucks in the Automotive Service Shops. Judging from results already attained, the message hits the mark.

Ralph C. Rognon during a long and varied experience in shop work has been confronted with the same problem as faces every other shop proprietor—What kind of a letter can I get out that will convince the car owner that I'm anxious to help him eliminate his maintenance troubles?

"I've tried all sorts of appeals," says Rognon, "with little success. At times I've almost been ready to believe that it was impossible to get up a letter that would arouse sufficient curiosity on the part of the motorist to cause him to give us a trial.

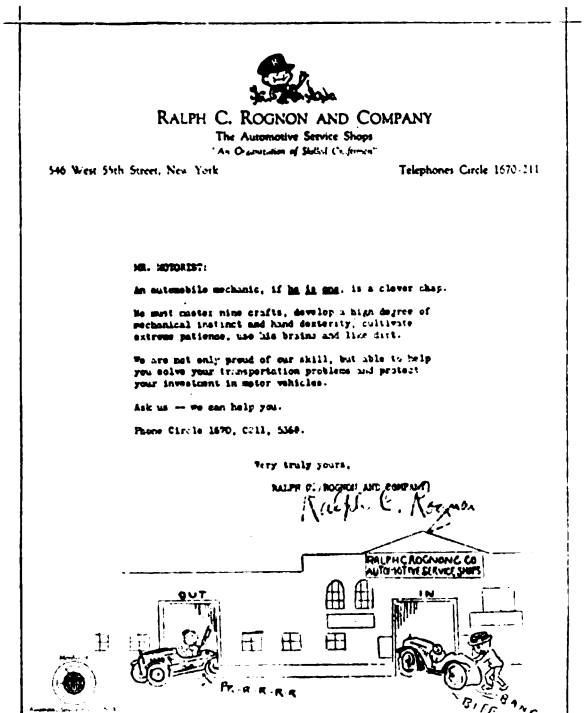
"But I determined to stick at it until I got an appeal that stirred 'em up. Now I'm convinced I've got what I've been looking for."

Rognon's experience has lead him to believe that the car owner has been overworked with appeals to "let us be of service to you," and phrases to that effect. Accordingly he determined to tackle him from another angle.

"We'll tell him what the automobile mechanic is, if he really is one," he argued. "We'll tell him what we can do for him; but we won't ask him directly to let us do it. Better leave that to him. If he's interested at all in what we say, we'll hear from him."

Having got thus far in outlining his appeal, there came up next for consideration the matter of form. The more he thought the matter over the more convinced he became that what the sales letter needed above everything else was individuality.

Just about this time his attention was directed to some clever sketches on some advertising matter. He was told where the work was done, and advised to look into it.



One glance, and Rognon's message gets over

By this time he had made up his mind that an illustration or rough sketch of some sort would be the thing to put that letter across. "I'll tell you what you do," he said to the young lady artist. "Just draw a picture of a car owner pushing his machine in the door of my shop. Give him the appearance of having a hard time getting it in.

"Then show him coming out the other door, seated at the steering wheel, with a smile of contentment on his face, waving his hat. Let it illustrate the before and after idea."

Just how successfully his instructions were carried out is seen in the accompanying reproduction of the letter in its finished form. At one glance the whole story is revealed.

But Rognon was skeptical at first, even though he felt sure it possessed the necessary qualities to get it across. So he determined to give it a test on a mailing list of 1,000 names.

It took exactly one week to convince him that he had struck it at last. "Why, the response has nearly knocked me flat," he states; "telephone calls, letters—I can't begin to tell you what it has done in stirring up inquiries. Surest thing you know,—I'm having 10,000 struck off now. I'm convinced at last there is such a thing as a letter that will bring business to the shop."

Because Rognon's present success in the way of getting out a shop letter that pulls is due to many less fruitful efforts along the same line, he was asked to describe for the benefit of others who have not yet reached a solution to the problem, some of the essential qualities of such a message.

"You've got to start the motorist thinking," he explained; "you've got to get him wondering what it's all about. You've got to tell your story in just as few words as possible.

"That's where the value of the illustration comes in. The owner doesn't have to read a word. He gets the whole thing at a glance—the man pushing his machine in with great difficulty—then driving out satisfied.

"Then again, he's interested by the different tone used in the appeal. Instead of being told that a representative of the company will be glad to call on him, he reads 'Ask us—we can help you. Phone Circle 1670, 0211, 5386.'

"He's got the whole thing right there before him. He follows it up.

"You can sum it up like this: Tell your story as briefly as possible. Don't forget, either, that the more individuality you put into the telling the more conspicuous will be your success."

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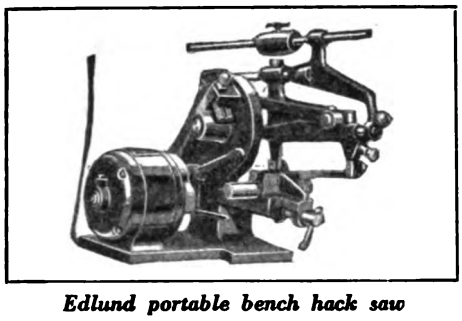
PRODUCTS THAT AID IN QUICK REPAIRS

EDLUND BENCH HACK SAW IS PORTABLE DEVICE

Stock up to 1¾ x 2½ inches is cut by the Edlund portable bench hack saw which is being produced by the Edlund Machinery Co., Inc., Cortland, N. Y. This machine is belt or motor driven and is constructed for long life and ease of operation. Moreover all parts subject to wear are easily replaced.

Motor rating is 3.3 amperes, 110 volt, A. C. or D. C., 1750 r.p.m., power being transmitted through cut gearing. Machine is portable and can be attached to any electric light socket.

Cutting is done on the backward stroke, the saw blade being relieved automatically on the forward stroke, which diminishes the wear and greatly prolongs life of the blade. An adjustable vise is provided for holding the stock



Edlund portable bench hack saw

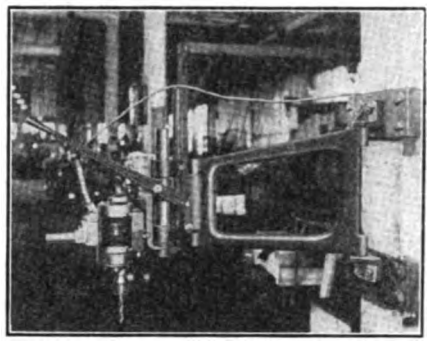
being cut. Weight of the device including the motor is 80 pounds.

VAN DORN OFFERS SPECIAL RADIAL ARM DRILL

Attached to the wall or column, the Millwright's radial arm drill which the Van Dorn Electric Tool Co., Cleveland, has lately added to its line, is used for jobs of a heavy stationary nature, where rigidity and accuracy are required. This tool comes completely encased in an aluminum housing and is also arranged for quick dissembling for greasing and cleaning.

The powerful and durable construction which has distinguished other types of Van Dorn tools is evidenced in this new member. Motor is of the universal type, for either A. C. or D. C. circuits. Proper ventilation is secured by an aluminum fan on the rotor shaft. A special drill chuck permits use of drills up to ⅝ inch diameter for drilling holes in iron and steel. Much larger wood bits, however, can also be used.

Two large pivot brackets bolted to the wall or column support the entire arm. At the opposite end of the main arm casting is a second pivoted joint on which the short forearm swings. Outer bearings of the forearm form a support and guide for the drill bracket column.



Van Dorn radial arm drill

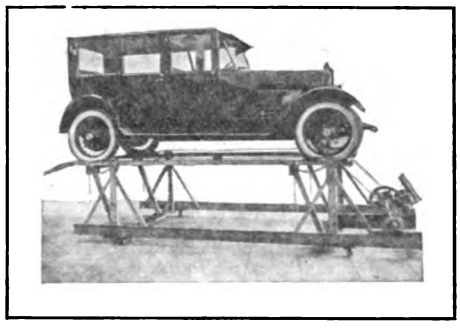
The drill bracket or sliding member is raised and lowered by means of a long lever and toggle link mechanism. A secondary drill lifting arrangement is also provided in the form of a strong tension spring attached to the lower part of the drill bracket and hung from an extension rod above the forearm.

Entire scope of the arm with the drill attached covers, it is said, a radius of 31½ inches from drill center to wall pivots. The auxiliary forearm permits a secondary radius of 10½ inches to be swung for locating the drill.

DAVIS LIFTER RAISES CAR FOUR FEET

Raising the car four feet from the ground is made possible through use of the Davis lifting device which has lately been offered the garage proprietor by the Davis Auto Lifting Co., 500 Auzerais avenue, San Jose, Cal. This raising process may be accomplished either by hand or electric motor.

The Davis lifter consists of two "U" shaped steel run-ways upon which the automobile is driven. An ingenious gear and pulley arrangement makes it possible for the car to be lifted quickly to a



Davis automobile lifter

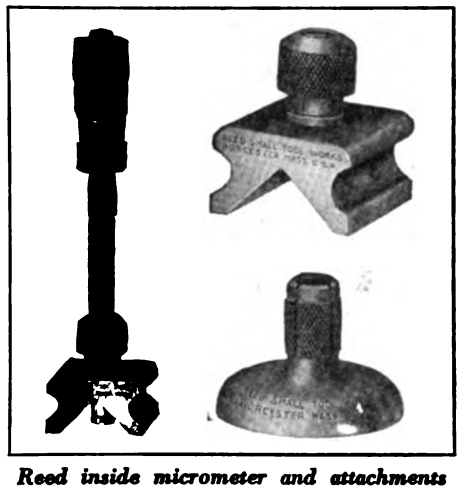
height of four feet or less by merely turning a crank.

Emphasis is laid by the maker upon the care taken in the construction of this lifter so as to assure safety to the mechanic. Through its use he is enabled to work comfortably on the machine without having to crawl into a pit, or hold himself in tiring positions.

REED INSIDE MICROMETER HAS LOWER RANGE

Low range is the feature of a new inside micrometer which has been placed on the market by the Reed Small Tool Works, Worcester, Mass. This tool is graduated to read to thousandths of an inch and has the usual half-inch run of spindle with a measuring range from two to 32 inches.

Like the Company's previous style tool it retains the regulation diameter of



Reed inside micrometer and attachments

barrel, spindle and thimble, and the extra large surfaces which allow for figures of generous size. Rods are fitted with hardened tool steel anvils adjustable for wear. These are interchangeable on the threaded stud at end of micrometer head and can be used in combination. A detachable handle is furnished and so arranged that the tool may be used for right or left-handed work.

Standard set, packed in a pocket-size case consists of micrometer head, an adjusting wrench, five rods and one-half inch spacer, the capacity afforded being two to seven inches. When five additional five-inch spacers are used the maximum range of 32 inches is secured.

In connection with this micrometer the Company is offering a height gage and alignment attachment known as No. 6. By attaching a rod of proper length to the micrometer any desired range from three to 32 inches can be obtained. The rod is inserted downward through the steel case-hardened base until the

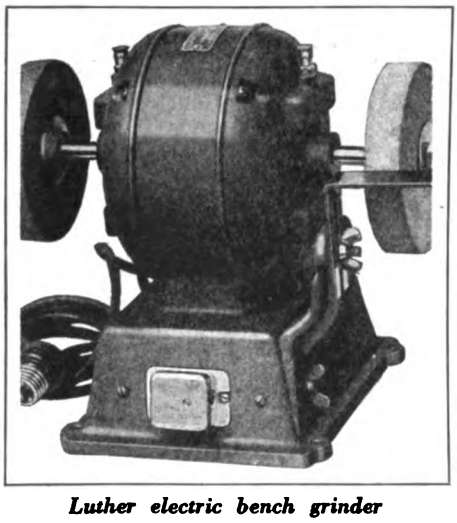
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anvil finds the surface from which measurement is taken. A quick clamping knurled nut, easily operated by the fingers holds the measuring rod perpendicular.

Another attachment intended mainly for height gage purposes is offered in the round base attachment No. 7. This has a larger base area. The reamed hole fits the measuring rod and the upper end of the support is split vertically at right angles to afford a sliding friction as the rod is inserted. It also holds the base and micrometer measuring rod intact when the tool is lifted from one surface to another.

LUTHER GRINDER ADAPTED TO TIRE REPAIRS

A flexible shaft attachment that can be purchased as extra equipment makes the electric bench grinder produced by



Luther electric bench grinder

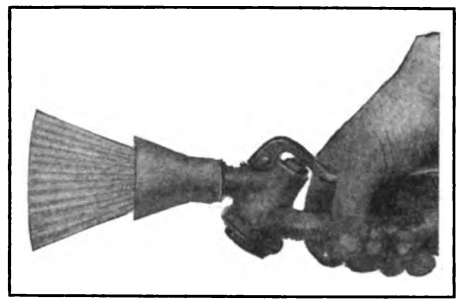
the Luther Grinder Manufacturing Co., 285 S. Water street, Milwaukee, Wis., particularly adapted for use in garages and tire repair shops. This shaft can be equipped with a small grinding or wire wheel enabling it to act as an efficient buffer for tires, inside and out. It is also well designed for all awkward grinding jobs.

Motor used is ¼ h.p. single phase, 110 volts, 60 cycles—1750 r.p.m. Grinder is of the clutchless, ventilated, protected type with split phase windings that cut at full speed. Bronze bearings are used with wick filled oil wells. A Cutler-Hammer switch is included in the specifications, and an adjustable work rest.

Dimo-Grit wheel and 5x1x1-inch felt polishing wheel are supplied together with ten feet of cord with plug. Weight of the grinder is 37 pounds.

BRANFORD WATER NOZZLE HAS SPRAY ADJUSTMENT

A spray adjustment incorporated in the design of the Branford water nozzle makes it possible to control the flow from a fine spray to a heavy stream. This device is being manufactured by



Branford water nozzle

the Malleable Iron Fittings Co., Branford, Connecticut.

To release the flow of water through this nozzle a lever is pressed. When the pressure is withdrawn the water is cut off. This positive shut-off feature operates without changing the spray adjustment. Through its action puddles are kept from forming on the floor and there is no waste of water.

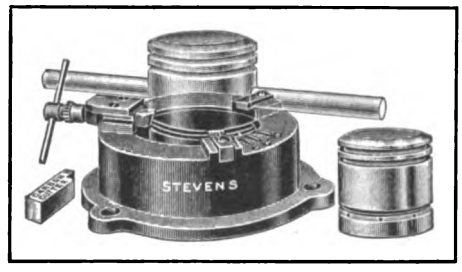
Price of the Branford nozzle is $5. It weighs one pound, 11 ounces.

Fits-All Wrench Is Handy Tool

Ten different size openings in one wrench is the distinguishing feature of the Fits-All socket wrench which is the product of the Fits-All Wrench Co., 4 Flint street, Providence, R. I. This fits hexagon sizes 5/16 to 1⅛ and square sizes 5/16 and ⅜. It also fits all standard spark plugs. It is made in one solid piece and requires no adjusting. Heavily nickeled, it is priced at $1.

STEVENS PISTON TOOL DOES DOUBLE SERVICE

Where it is found necessary to chamfer an oil groove on the piston, the Stevens piston oil-groove tool, which has been designed for Ford use particularly will be found convenient and efficient. It is a product of Stevens & Co., 375 Broadway, New York city, well known



Stevens piston oil-groove tool

as makers of "Speed-Up" tools. Design of the tool is such that it also serves as a jig for drilling the oil-return holes.

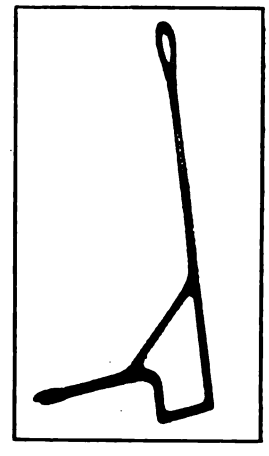
Lower edge of any groove in the piston may be chamfered by this tool at exactly the correct angle, according to the claims of the maker. Cutter is made of an excellent grade of tool steel and has proper clearance to obtain a smooth, clean cut. Feed screw has a stop to prevent an accidentally deep cut.

A bar is furnished for turning the piston. When the tool is fastened to the bench the piston is inserted disassembled. When the tool is clamped vertically in a vise, piston may be inserted with the connecting rod and turned by passing the bar through the connecting rod bearings. Carbon cutter is also provided.

One of the steel jaws is designed as a jig to drill the oil holes. Face of the tool is marked with spacing divisions for locating the holes at any desired intervals. Price of the tool complete is $9.50.

ROY'S VALVE LIFTER MADE IN TWO SIZES

To lift the valve it is necessary merely to insert the forked end of Roy's valve lifter under the valve seat with the right hand. The valve is held down with the left hand. A slight outward pull at the handle raises the valve spring seat, the cupped fork being very thin at the bottom, allowing ample space to extract pins.



Roy's valve lifter

This device, which is being made by the J. D. Roy Tool Co., Willimantic, Conn., is made in two sizes, namely a Dodge Brothers special, and a Ford special. It has been designed for use around the water pump, over top of ignition system and in such places where a lifter is usually employed.

Cupped sides are used to facilitate placing the tool under the seat, which can be done, according to the claim of the maker, without watching. These cupped sides also strengthen the fork.

Whereas the device has been designed for use on the cars above mentioned, it can also be used on other "L" or "T" head engines. Dodge Brothers special tool sells for $3. Ford special size is $1.25.

K. & B. Wrench Is High Grade Tool

Heavy, rigid construction is a feature of the K. & B. combination wrench which is manufactured and sold by the Kilborn & Bishop Co., New Haven, Conn. This is an open end, adjustable monkey and pipe wrench combined, instantly adjusted for pliers and has also a screw driver point. It takes eighteen bites on one revolution of a hexagon nut without releasing the hand grip, according to claims made by the maker.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

MASSACHUSETTS—GREENFIELD.—Star distribution for this section has been taken over by the Weldon Garage.

HOLYOKE.—Olivier Brothers have contracted for Ford and Lincoln distribution for this territory.

NEW YORK — BROOKLYN. — L. Silverstein has taken over the garage lease of the General Service Garage at 25th street and Fourth avenue for nine years at an aggregate rental of $103,000.

JAMAICA. — Queens Vehicle Corp., located at 292 Hillside avenue, has been made representative of the Peerless for this territory.

NEW YORK.—George H. Shaffer has sold his two-story garage building, 100 feet east of Park avenue at 108 East 83rd street. The building has a frontage of 25 feet.—A two-story garage on a lot 25 x 124 has been sold by Ida B. Flower.—Aetna Auto Engineering Corp., has leased the garage at 217-219 West 64th street from Mrs. Grechan Boyman.

A garage at the northeast corner of Ninth avenue and 207th street has been leased to Harold Jones and Louis Anker for ten years at a rental of $60,000.—Leo Markel has taken over for fifteen years the garage at 1028 Freeman street.—Montauk Garage Realty Co., Inc., has rented for fifteen years the garage now under construction at the corner of Bergen avenue and 153rd street. The building will be 86 x 100.

SCHENECTADY.—Due to increased business Fred. Van Demark, Buick dealer, has started work on the erection of a new building at State street and Waldorf place. It will be two-stories high in one part with a capacity on the main floor of 130 cars. The second floor will be devoted to stock and store rooms.

PENNSYLVANIA — PHILADELPHIA.—A five-story sales and service building will be erected for Joseph J. Greenberg at the southeast corner of North Broad and Thompson streets.

SOUTH

NORTH CAROLINA — CHARLOTTE.—W. M. Moore, John Moore and Benj. Paschal have purchased the D. and R. Service Station on Tryon street. They will conduct the business under the new name of the P. and M. Service Station.

GEORGIA—ATLANTA.—A tire store has been established here by Patton & Gay, Inc., comprised of Edward S. Gay, Thomas V. Patton and Vance Hunter. Although the new shop will specialize in Kelly-Springfield tires, it will also carry several other lines.

TENNESSEE — MEMPHIS. — New quarters at 300 Monroe avenue have been obtained by the McCreery-Phelan Co.—Jerome P. Parker-Harris Co. has leased for five years the building at 444 Monroe avenue, formerly occupied by the Cleveland Motor Car Co. The Parker-Harris company will make use of the new building as a location for its used car department.

MIDDLE WEST

OHIO—DAYTON.—A branch of the Bishop Motor Car Co., Cincinnati distributer of the Jordan and Liberty, has been established at this place. E. D. Hensley is sales manager.

ILLINOIS — DUNDEE. — George Schroeder and J. E. Haverkampf have formed a partnership to conduct a garage, specializing in repair and storage. Work is almost completed on their garage building.

KENNEY. — Stoutenborough & Son have sold their business to J. D. Farnsworth, formerly employed as mechanic by the Motor Sales Co. He plans to handle accessories and conduct a repair and storage business.

KEWANEE—W. H. Wortmann has taken on the agency for the Traffic truck. He has secured a location at 349 Payson street.

MOLINE.—Gorman Motor Sales Co., of which W. A. Gorman is president, has bought the H. & S. Overland store, located at 519 14th street, where, in addition to the Overland and Willys-Knight lines, it will also distribute the Studebaker.

MICHIGAN — FENTON. — Fire destroyed the garage conducted by Carl Warner.

MILAN.—A petition in bankruptcy has been filed by the Johnson Tire Repair Shop, dealing in tires, repairs and accessories.

PULLMAN.—A garage is now under construction for William H. Wesbey. The building will be erected at a cost of $10,000.

SPRINGFIELD.—W. G. Miller and W. A. Thompson have formed a partnership operated as the Standard Motor Service Co. at 223 East Monroe street. The new firm will distribute the Oldsmobile in the Sangamon county.

WISCONSIN—CATAWBA.—John A. Cronce, of Prentice, has purchased the Makie & Jakela Garage.

CHIPPEWA FALLS.—Roscoe Kirby and J. C. Dicker have purchased the Forcier & Courvisier Garage.

EAGLE RIVER.—A new sales and service building is under erection for Strong & Manley. The structure will be 60 x 120 and built at a cost of $20,000, equipped.

EAU CLAIRE.—Willard Enge and George Amentorp have taken on the agency for the Haynes car, operating under the firm name of the Reliable Service Co. They have secured sales and service quarters in the Fisk building at Farwell and Eau Claire streets.

FOND DU LAC.—William Frank, formerly associated with the Huelsman-Dodge Co., has organized the Fond du Lac-Velie Motor Co.—Motor Inn Garage has been established by Paul A. Jaffke and Joseph G. Wagner as a service and repair shop. It is located at 17-19 South Macy street. Wagner was formerly associated with the Crescent Motor Car Co. and the Raymer Garage as shop superintendent.

GILLETT.—Fire damaged the Stromer Garage to the extent of $10,000. Work will soon be started on the rebuilding and reequipping of the structure.

HARTLAND.—John H. Pessing has established the Hartland Auto Supply Co. opening in the Opera House block as dealer of equipment, tires, accessories, etc.

JEFFERSON.—Raymond & Edward Probst have opened their new garage here.

(Continued on page 544, first column)

ACTIVITIES OF THE WHOLESALERS

John Nicols Co., located at 2210 Michigan avenue, Chicago, Ill., has taken on the agency for the distribution of the Liberty car in addition to the Saxon line, which it has handled for some time. The company has also obtained the services of A. S. Johnson who will act in the capacity of sales manager.

L. R. Filgo, former Dodge Brothers agent in Cleburne, Tex., has acquired the distribution of the Marmon and Oldsmobile lines for fourteen counties in the Cleburne district.

Gertrude Motors Co., Inc., has opened its show and salesrooms at 3030 Locust street, St. Louis, Mo., having obtained the agency for the Paterson car in eastern Missouri and southern Illinois.

Mead-Ray Motor Co., has contracted for the distribution of the Cleveland in the Denver, Colo., territory.

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IN THE TRADE

(*Continued from page 543, third column.*)

KENOSHA.—Buick distribution for this city has been taken over by H. W. Johonnett & Son, formerly of Beaver Dam.

MANITOWOC.—H. A. Brandenburg has opened his painting and trimming shop in his new building at Fourteenth and Franklin streets.

MEDFORD.—H. A. Fischer has purchased the tire and repair business owned by Charles Jary.

MILWAUKEE.—A retail branch of the John G. Wollaeger Co., Milwaukee, state distributer of the Studebaker, has been opened at Kenilworth and Prospect avenues, under the management of Charles H. Jackson.

NORTH FOND DU LAC.—Jelinski Brothers have opened the Arrow Garage at Jefferson and Oshkosh streets in a new fireproof building, 40 x 120.

SARONA.—Fire destroyed the Hinderson garage.

SOUTH MONROE.—Herman Meyers has opened a garage in the rear of the Meyers Block on West Summit street.

STABLEY.—Helmuth Duyesen has purchased the business of William J. Summerfield and sons.

IOWA—DES MOINES.—Laurence Auto Co., used car dealer, has moved into the building formerly occupied by the A. G. Graben Co. at Locust and Twelfth streets.—Larger quarters have been obtained by the Chase Nash Franklin Co. at 120 Locust street.

MISSOURI — COLUMBIA. — Cook Brothers have purchased the lease of the Tavern Garage, from Fred. Whitesides. They will conduct the business as the Cook Brothers Garage.

CONCORDIA.—Concordia Auto Paint and Sign Shop will soon be opened for business.

DE SOTO.—Kirk Jones has opened his new garage and Ford service station at the corner of Main and Sewart streets.

HARRISONVILLE.—I. S. Austin, of Kansas City, Mo., has opened a new Buick service station and garage on the east side of the Square.

KANSAS CITY.—An automobile top and repair shop will be opened by A. G. Lange in the storeroom at 3013 Main street. A two-story sales and service building at 1527 Oak street, which was recently partially destroyed by fire, is being remodeled for the Connely Motor Co.

ST. LOUIS.—Orthwein Motor Corp. has taken over the business of the Chevrolet Motor Co. The store it has been operating at Boyle avenue and Forest Park boulevard will be conducted hereafter as an independent dealer establishment. Norman Devey is manager of the business.—C. W. Pfrinnler has organized the Bevington Motor Car Co. to succeed the Schubert Motor Car Co. as Chevrolet dealer. The firm is located at 1645 South Grand avenue. Pfrinnler will act as president and treasurer of the firm.—Newell Motor Car Co. has discontinued the distribution of the Stearns line and will in the future concentrate exclusively on the Paige and Jewett agencies. The company is located at 2907 Washington avenue.

SEDALIA.—George Bartlett has purchased the interests of W. C. Cain in the M. and S. Tire & Rubber Co., located at Seventh and Ohio.

SWEET SPRINGS.—Walter Pinkepank has bought the interest of Hugo Pinkepank in the Pinkepank Brothers Garage on Main street.

KANSAS—ANTHONY.—Work will soon be started on the remodeling of the Bosc Garage.—Kern Brothers have moved their battery station into the Cornick building on West Main.

ARKANSAS CITY.—Charles T. Hill and Ray Hill have purchased the Buick agency at this place.

ATCHISON.—J. T. Berridge & Son have opened a battery department in connection with their garage.

CLAY CENTER.—Ivan Lyon has sold a half-interest in his battery business to B. L. Cuddy, of Lucas.

COLBY.—A new garage, 35 x 65, is now under construction for Carpenter & Shafer.

ELDORADO.—An automobile repair shop will soon be opened by Fred. Bady and G. W. Wilson at 110 West First street, the location formerly occupied by the Osburn Tire Shop. The firm will be conducted under the name of the Bady-Wilson Auto Repair Shop.

EMPORIA.—A Chandler and Haynes service station has been opened at 518 West Fourth avenue.

FREDONIA.—Floyd R. Barrick has sold his garage to Fred. Mitchell.

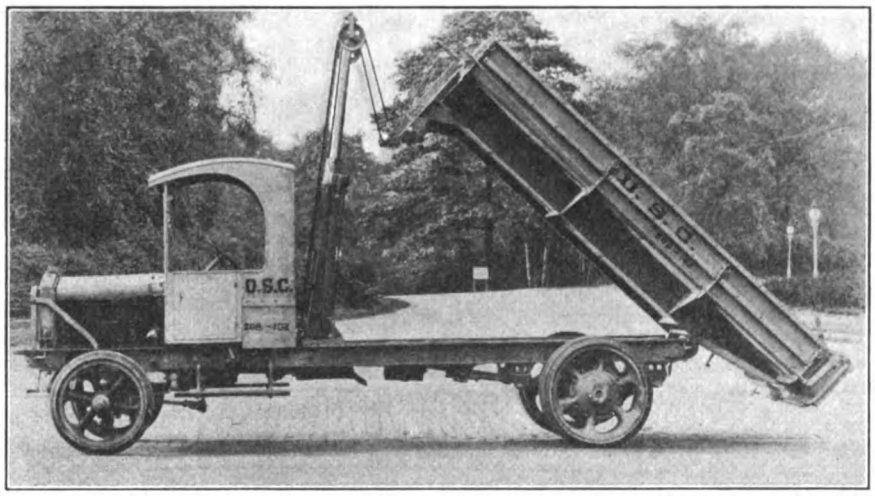
GOFF.—C. S. Goodrich has taken over the local agency for distribution of Durant and Star cars.

LEAVENWORTH.—A new fireproof garage and filling station has been opened at Fifth and Olive streets by the Enright Motor Co.—A. B. Auto Wrecking Co. has purchased the building at 210 Delaware street where it has located.

OAKLEY.—Chevrolet distribution for this section has been taken over by Garth McNeil.

PLAINVILLE.—V. I. Holcomb has purchased his partner's interest in the Reliable Tire Shop.

Street Cleaning Department Employs More Trucks



A CONTRACT for 128 five-ton White trucks has been awarded by the City of New York, following a previous order for 212 trucks some time ago, giving the street cleaning department of the metropolis the largest known fleet of standardized heavy duty trucks. Power dumping bodies developed especially for refuse collection will be installed on 120 of these trucks; six will be provided with winches and two equipped with apparatus for handling wrecks

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THERE'S a good deal back of the U. S. Tire Dealer's attitude of seeming to know just where he's going in a business way.

The knowledge that the public identifies him with the standard in tire values, for one thing.

A complete line—that gives him a tire for every need of price and use—for another.

United States Tires are good tires.

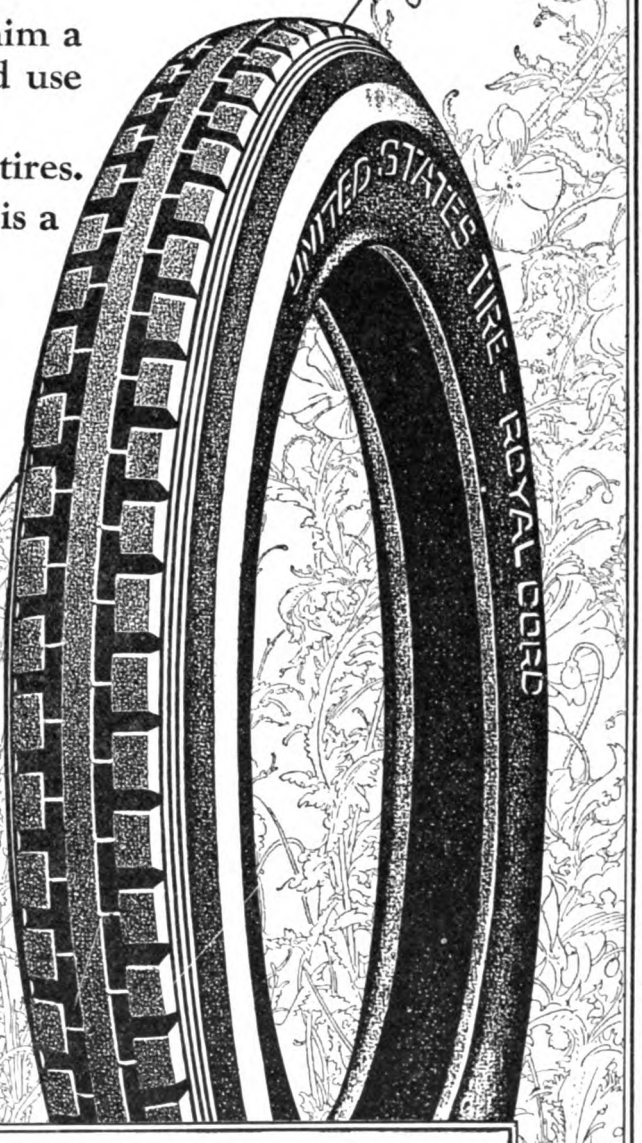
The U. S. Sales Relationship is a good relationship.

The U. S. Sales Relationship brings to the dealer's store the most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

Isn't this the kind of Franchise the tire dealer needs?



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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ST. PAUL.—Paul O'Bryan has disposed of his interest in the B. O. S. Garage to Harold Whelan.

SALINA.—Luthy Battery Co. has opened a battery station at 149-151 South Fifth street.—Bert Breen has purchased the Chevrolet agency here.

TOPEKA.—Peers Battery Co. has moved its battery and electric departments from 113 West Seventh street to 629 Jackson street.

VALLEY FALLS.—Buick distribution for this territory has been granted the Wadsworth Motor Co.

WICHITA.—C. L. Carlock has moved his garage and used car business from 226 North Emporia street to 140 North Lawrence, where he will occupy quarters with the Murry Mack Tire Co.—A $20,000 stone and brick garage building, with 150-foot frontage, will be erected for N. F. Farha at 615 West Douglas.

WINFIELD.—Osage Electric Co. has moved to 213 East Ninth street.

NEBRASKA—BAYARD. — Moore's Service Station has taken over the business of the Parker Filling Station.

BUTTE.—Eklund & Rumsey have purchased the Peterson Garage and are now in charge of the business.

HOWELL.—George T. Fiala and Emil Matejka have purchased the interest of their partner, Jerry Vacha, in their automobile repair business.

NEWMAN GROVE.—Strand & Halverson has been dissolved, Julius T. Strand having bought the interest of his partner.

PERU.—Sultzbaugh & Fisher, of the Service Garage, have contracted for the distribution of the Ford car and accessories.

VALLEY.—William P. Lewis has leased the repair shop at the Lincoln Highway Garage.

NORTHWEST

SOUTH DAKOTA—MITCHELL.—With F. W. Hays in charge, the Hays Radiator Co. has been established at 216 East street.

SOUTHWEST

ARKANSAS — ARKADELPHIA. — Handling Buick cars, the Arkadelphia Buick Co. has been opened with Irving Rudolph as manager.

MENA. — Work has already been started on the construction of a fireproof building, 72 x 25, on Pickering avenue. The building when completed will be occupied by Robert Connally as an automobile repair shop.

RISON.—J. E. Harrison & Son have moved their garage from the Smith building to the Russell Garage.

OKLAHOMA—HENRYETTA. — At Twelfth and Main streets, C. H. Reich has opened the Oklahoma Garage.—A. Lach has sold his interest in the Oklahoma Tire & Supply Co. to his partner, A. Sanditen.

OKLAHOMA CITY.—A new Ford agency has been established by Fred. Jones with temporary quarters at 218-222 West Reno avenue.

POTEAU.—James T. Little has sold his interest in the Little & Hinton Garage to T. A. Miller.

TULSA.—Roth Motor Co. has taken over the business of the Day & Night Garage which is located at 624 East Third street.

TEXAS—CLEBURNE.—Oscar Jones, of Weatherford, has purchased the Dodge Brothers agency and has put Norrell in charge.—Grover Hart has purchased the Atkins filling station at 318 East Henderson street, which was formerly owned by James Gaither and the Independent Oil Co. The station will also carry tubes and other accessories.

DALLAS.—W. E. Z. Grimes has opened an automobile accessory shop in the Postoffice Garage at Commerce and Prather.

FORT STOCKTON.—Pfeister and Peters, proprietors of the Stockton Garage, have sold their business to Charles Kirkland and C. S. Garrett.

HENDERSON.—Urias and Kirksey Dowell have opened a garage in the Ash building.

HONDO.—Roy Carter and O. J. Bader have purchased the business heretofore conducted as the Yantis Motor Co. from R. M. Yantis.

HOUSTON.—Rupley Motor Co. and the League Electrical Co. have occupied a new building at 1212 Polk avenue. F. A. Pidgen and J. Inglis are the owners of the Electrical company and R. H. Rupley, proprietor of the Motor company.—H. H. Collins has formed the Collins Chevrolet Co. to distribute the Chevrolet. He will have his salesrooms and offices on the ground floor of the new Henry House building at Capitol avenue and Milam street.—R. L. O'Bryan has purchased an interest in the Curtis Co., dealer of tires, tubes and accessories.

With headquarters at 1800 Tracy avenue, Earl B. Smith has established the Smith Chevrolet Co. to distribute that car in this section.

MARSHALL.—James Mattingly has built a new garage and has opened for business with a stock of accessories and filling station supplies.

WACO.—Larger quarters have been obtained at 714 Austin avenue by the Hellmuth-McNutt Motor Co., formerly at 611-613 Franklin avenue.

NEW MEXICO — RISON. — Fire, causing a loss of between $7,000 and $10,000, destroyed the St. Louis, Rocky Mountain & Pacific Co. Garage at the Gardiner camp. Thirteen cars and six coke oven carts were burned.

ROCKY MOUNTAINS

COLORADO — PUEBLO. — Due to constantly increasing business, larger quarters were needed by the Willard Battery Service and Sales. As a result the building at Sixth and Court streets has been secured and James S. Cowenis placed in charge of the new station.

PACIFIC COAST

CALIFORNIA — LOS ANGELES.—A two-story building at Eleventh and Los Angeles streets has been occupied by the Liberty Tire & Rubber Co., Star tire dealer.—A garage to be built at a cost of $13,000 will soon be erected for J. C. McFarlane at 1701 South Hope street.—Jack Graham has opened the Wilshire Cadillac Service Station at 112 North Western avenue.

Triangle Motors Co. has been established at 1720 Hudson avenue.—J. G. Bennett Tire & Rubber Co. has moved from Broadway and Tenth street to 1316 South Grand avenue.—E. S. Fuller and G. A. Higginson have purchased the Southland Garage at 5437 South Vermont avenue.—Holley Motor Sales Co., Chevrolet dealer, has opened its new sales building located at 5500 Pasadena avenue.

OAKLAND.—T. W. Parton has purchased the interests of Albert A. Schlueter, his partner, in the Fruitvale Garage, located at 3247 East Fourteenth street.—Fred. Gaine, Frank Elliott and Curtis Schmidt have established the G. E. S. Co. at 23rd and Valdez streets, which they will operate as a repair shop and garage.—A garage will soon be opened by Calvin E. Wright in a new building at 34th avenue and East Twelfth street. The new structure contains 10,000 square feet.

PALO ALTO.—Harry J. Van Harney, formerly employed by Chester N. Weaver & Co., San Francisco, has purchased the Club Garage on the state highway.

PARLIER.—Galle's Auto Repair Co. has been established by R. H. Galle on Main street.

PORTERVILLE.—E. E. Williamson has purchased the L. C. Holland Battery Shop which is located in the Independent Garage at Main and Olive.

ST. HELENA.—Cretzer & Zannolini have opened an automobile repair shop in the Money Block on Hunt street.

SAN FRANCISCO.—H. J. Neeley has sold his interest in the Republic Garage at 3855 Geary street to Rex M. Eaton.—Thomas J. Treichel has purchased the interest of Frank L. Kruse in the firm of Frank L. Kruse & Co., which is located at 724 Golden Gate avenue.

SAN JOSE.—R. H. Fritsch has disposed of his interest in the firm of Fritsch & Molitor to Thomas J. Ross. The business will hereafter be conducted under the name of Molitor & Ross, dealing in Paige and Jewett cars.—Pichetti Brothers & Co., located at 400 South First street, have taken on the distribution of Earl and Liberty cars, DeMartini trucks, Reliance trailers and Hood tires.

WASCO.—Miller, Smith & Miller of the Wasco Garage have taken on the agency for distribution of Ford cars.

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"Earl Owners are all Boosters"

By C. A. Earl

THIS head-line phrase was used recently by Mr. R. J. Woods, Secretary and Treasurer of the Earl Nashville Motor Company, in answer to an inquiry from a prospective distributor, now a member of the Earl organization. Adapting his words, I can truthfully say that Earl distributors and dealers apparently "are all boosters" too—both for the car itself and the factory force behind it.

Every letter received by this new Earl distributor struck the same note of success and satisfaction. Because they review Earl's first selling season and give a picture of the present situation in Earl territories, I am going to print several of them on this page. Mr. Myers of Pittsburgh began the series last week. Mr. Woods continues it.

"So far as the Earl car is concerned," he writes, "a comparison of its specifications with those of any other automobile within $500 of its price, will convince any one that the Earl is in a class by itself. In this country, we have nothing but hills; and the Earl will pull any hill in middle Tennessee in high gear. We have negotiated many hills on which the ———— Eight has fallen down.

"The Earl motor is very smooth running. One mechanic who didn't know the car was unable to tell whether we had a six or an eight cylinder motor under the hood, so smooth and powerful was its operation. We can make 50 miles an hour or 2½ miles with equal ease. One of our owners here is getting 25 miles to the gallon of gas. In your city, even a novice should equal this record.

"Concerning sales possibilities: the Earl is such a beautiful car that it attracts the attention of the casual observer at first glance. Earl cars parked on the streets downtown have brought us numerous prospects. Earl owners are all boosters. One reported a prospect to us the other morning at ten o'clock. We had the man's order and deposit at two in the afternoon; and delivered the car the next morning. He also has been added to the ranks of Earl enthusiasts.

"Really, I am a poor person to ask for information about the Earl, because I am so thoroughly sold on the car, on Earl Motors and on their treatment of dealers, that one might think I am an Earl stockholder—which I am not. Orders for parts are filled the same day they are received and we are enabled to give up-to-the-minute service always. So far, we have not had much call for parts. Our principal sales have been to other firms having cars using the same clutch as the Earl."

That tells the Nashville story. If there is no Earl dealer in your city, why not start a success chapter of your own today. Write or wire for the facts about our contract and the quality Earl line.

President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Gotham Auto Body Co., Manhattan, N. Y., has increased its capital from $15,000 to $50,000.—Shaw Cabmotor Service, Manhattan, N. Y. Capital $10,000. Incorporators: L. Prossen, A. K. Wing, G. S. Wing.—Zarco Manufacturing Co., Manhattan, N. Y. To make automotive parts. Capital $100,000. Incorporators: E. E. Zideck, J. Dorr, S. Dilligan.

Rapid Cycle Delivery Service, Manhattan, N. Y. Capital $5,000. Incorporators: I. Greene, M. Greenstein, W. Greenberg.—Kamil's West 128th Street Garage, Manhattan, N. Y. Capital $5,000. Incorporators: I. L. Kamil, W. Knecht, T. J. Millen.—Greeley Cab Sales Co., Manhattan, N. Y. Capital $25,000. Incorporators: E. S. Johnson, A. L. Gordon, A. Preiss.

Dial Valve Co., Manhattan, N. Y. To deal in automobiles and parts. Capital $50,000. Incorporators: B. Simon, A. B. Levis, M. Elkind.—New Auto Paint System, Manhattan, N. Y. Capital $300,000. Incorporators: M. Weinfeld, R. W. Kerbs.—Owners Motor Sight Seeing and Vehicle Corp., Manhattan, N. Y. Capital $10,000. Incorporators: J. Kearns, J. Martine, L. Rice.

Grand Central Auto Service, Bronx, N. Y. Capital $5,000. Incorporators: M. Feldman, B. Feldman, H. Feldman.—Kranz Motor Corp., Bronx, N. Y. To deal in automobiles. Capital $5,000. Incorporators: I. Kranz, R. Kranz, L. Kranz.

Freeman Taxi Service, Bronx, N. Y. Capital $6,000. Incorporators: R. Ruskin, S. Penman, H. Ruskin.

Kellogg Motor Sales Corp., Niagara Falls, N. Y. Capital $25,000. Incorporators: H. W. Kellogg, G. E. Stockwell, L. Clapsattlex.

Rochester Automotive Equipment Corp., Rochester, N. Y., has increased its capital from $5,000 to $40,000.

NEW JERSEY.—New Jersey Auto-Re-Nu-Corp., Newark, N. J. To engage in an automobile repairing business. Capital $200,000. Incorporators: Maude M. Brown, Herman L. Airy, Clarence I. Hamilton.

DELAWARE.—Gibson Auto Signal and Manufacturing Co., Dover, Del. Capital $200,000.—National Motor Products Corp., Dover, Del. To deal in accessories. Capital $500,000. Incorporators: Charles Moss, Jacques Zaheria, Victor Kenner.

Brown & Gray Cab Co., Dover, Del. Capital $250,000. Incorporators: Leon Brill, Jr., Earl I. Klein, Jacob Dashow.

Ancona Motors Co., Wilmington, Del. To deal in automobiles. Capital $100,000.—Rex Manufacturing Co., Wilmington, Del. To manufacture spark plugs. Capital $300,000.—United Star Fender Corp., Wilmington, Del. Capital $500,000.

ALABAMA.—Posner-Ormand Tire Co., Birmingham, Ala. To engage in a tire business. Incorporators: Banks Ormond, F. O. Denson, N. L. Posner.

KENTUCKY.—Banks Motor Corp., Louisville, Ky. Capital $25,000. Incorporators: C. L. Banks, John B. Banks, S. M. Banks.

OHIO.—Homeier-Whorley Motor Co., Akron, O. To deal in motor cars and accessories. Capital $25,000. Incorporators: A. L. Homeier, Merton M. Whorley, Pierce A. Snyder, Z. M. Whorley, C. H. Stahl.

Canton Auto Sales Co., Canton, O. Capital $10,000. Incorporators: J. A. Warner, A. H. Schaub, R. M. Warner, J. M. Roose, M. I. Warner.

Garage Service Co., Cleveland, O. Capital $20,000. Incorporators: J. J. Anthony, W. H. K. Herron.—Peerless Motor Co., Cleveland, O. To deal in motor cars and accessories. Capital $100,000. Incorporators: D. A. Burke, W. H. Collins, J. F. Porter, F. A. Trester, E. R. Cameron.

Cookson Motor Car Co., Dayton, O. To deal in motor cars and accessories. Capital $25,000. Incorporators: C. R. Cookson, R. H. Brundrett, Roland C. Landis, A. F. Hullinger, Ralph P. Dixon.—Dayton Earl Motor Co., Dayton, O. Capital $20,000. Incorporators: Earl R. Sandoe, Herman S. Sandoe.

Cropper-Kinney Auto Spring Co., Lebanon, O. Capital $50,000. Incorporators: George Cropper, L. H. Kinney.

Electric Service & Battery Co., Springfield, O. Capital $15,000. Incorporators: Louis Kroeck, Charles Kroeck.

Standard Automobile Supply Co., Wooster, O. To deal in automobile supplies and accessories. Capital $10,000.

INDIANA.—Franklin Sales Co., Ft. Wayne, Ind. To deal in motor vehicles. Capital $25,000. Incorporators: C. H. Lines, C. L. Griffith, Simon Ackerman, D. Parsons Goodrich.

Griffith Garage and Sales Co., Griffith, Ind., has increased its capital from $2,000 to $10,000.

Service Auto Sales Co., Logansport, Ind. To deal in motor vehicles. Capital $25,000. Incorporators: John C. Bagley, Carl H. Rehm, H. August Hildebrandt, Harry Ludders, D. Hurry.

Howard Cranfill Co., South Bend, Ind. To deal in motor vehicles. Capital $125,000. Incorporators: Howard Cranfill, William Bender, Claude J. Jackson.

ILLINOIS.—West Side Motor Sales Co., Argo, Ill. To manufacture and deal in automobiles, trucks, etc. Capital $25,000. Incorporators: Joseph Stracelczyk, Stephen B. Burg, Richard P. Lambert, William Bergan.

Day Enameling & Auto Painting Co., Chicago, Ill. To paint and renovate automobiles. Capital $30,000. Incorporators: Mark L. Day and others.—Jackson Park Buick Co., Chicago, Ill. To deal in and paint motor vehicles. Capital $20,000. Incorporators: Robert B. Clark, Harry A. DeWitt, Marshall E. Gallion.—Motor Accessory Sales Co., Chicago, Ill. To manufacture and deal in automobile accessories, etc. Capital $1,000. Incorporators: Ernest E. Lilliander, Jerome J. Bladkey, Walter C. Critchlow.

Motorlife Manufacturing Co., Chicago, Ill. To manufacture and deal in a compound called "Motorlife." Capital $100,000.—New York Auto Supply and Machinery Co., Chicago, Ill. To manufacture and deal in machines, parts, supplies, etc. Capital $1,000,000. Incorporators: Max Rudnick, G. Litka, Joseph Weiner.—Roosevelt-Paulina Garage Co., Chicago, Ill. To deal in and hire automobiles. Capital $4,000.

S. & H. Motors Co., Joliet, Ill. To manufacture and deal in automobiles, aeroplanes, accessories, etc. Capital $25,000. Incorporators: Arthur Selby, Helen A. Campbell, William C. Hammond.

Bob Allen Overland Willys-Knight Sales Co., Kankakee, Ill. Capital $25,000.—Kankakee Tire and Service Co., Kankakee, Ill. Capital $25,000. Incorporators: W. M. Cortlin, E. C. Peters, W. F. Krall.

Leemorr Oil Co., Morris, Ill. To manufacture and deal in gasoline, oil, etc. Capital $28,000. Incorporators: Ann Jane Lee, Minnie Morrissy, Wm. G. Lee, James J. Prindivill.

WISCONSIN.—Tractor & Truck Improvement Co., Merrill, Wis. To manufacture a new design transmission invented and patented by Ross Koile. Capital $50,000.

Associate Motor Industries, Inc., Milwaukee, Wis. Capital $25,000.—Edwards Motor Co., Milwaukee, Wis. Capital $200,000. Incorporator: Frank J. Edwards.

KANSAS.—Commercial Finance Co., Atchison, Kans. To conduct a general automobile financing business.

NEBRASKA.—Eacker Auto Co., Albion, Neb., has changed its name to the Bull-Howell Motor Co.

MONTANA.—Lucky Oil & Gas Co., Great Falls, Mont. Capital $250,000.

OKLAHOMA.—Standardized Lubricating Co., Tulsa, Oklahoma. Capital $100,000.

Oklahoma Climber Motor Co., Oklahoma City, Okla. Capital $10,000. Incorporators: Arthur Mohr, Wallace Mohr, G. L. Converse.

TEXAS.—Travis Storage Garage, Inc., San Antonio, Tex. Capital $20,000. Incorporators: E. E. Jacobs. A. S. Wright, L. S. Whipple.

Twenty-Twenty Tire Service, Inc., Dallas, Tex. Capital $20,000. Incorporators: Wayne Murray, J. D. Pace, C. Ann Murray.—Aermster Co., Dallas, Tex. Capital $300,000.

Day and Night Repair Shop, San Antonio, Tex. Capital $5,000. Incorporators: P. Prove, H. A. Gerloff, L. T. Shockley.

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On a Recent Definition of Opportunity in Business

"Opportunity," a merchant of international standing and experience declared the other day, "is a chance to do in a brand new field something that has already been conspicuously successful elsewhere."

Judged by this common-sense standard, the Stephens franchise in any city or district not now covered by a dealer or distributor contract is a business opportunity you will find it hard to duplicate.

Our distributor in Northern California, for example, joined the organization in 1917, before the Stephens had begun to acquire national prestige. Our shipments of cars to him the first year amounted to only $50,000. In 1920, however, his sales were more than $1,000,000. In 1921 this record was duplicated.

Other Stephens distributors east and west, north and south, have been equally successful. Many dealers, too, have rolled up remarkable totals of sales in their more limited territories.

If the Stephens is not represented in your city, you have an opportunity to duplicate in an untouched field the conspicuous success which these Stephens distributors and dealers have achieved.

The only way to put the matter to an adequate test is to come to Moline and see how the Stephens Six is manufactured—motor, chassis, body and all—from high grade materials by trained mechanics and expert coach workers in the Stephens factories.

A ride in a Stephens—an hour's drive in it—will give you an idea of its extraordinary power, comfort and road performance. But until you see it *building*, you'll have no conception of the intrinsic quality and endurance which put it beyond all competition in its price group. We'll be glad to welcome you at Moline—and to send you beforehand a new catalogue of our various body types, and the facts about our contract terms and open territories.

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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CALENDAR

Buenos Aires, Argentina, September.—Annual Exhibition, auspices of Sociedad Rural Argentina.

Cleveland, O., Sept. 18-28.—Exhibition of Closed Cars during the Merchants' and Manufacturers' Exposition, auspices of the Cleveland Automobile Manufacturers' & Dealers' Assn.; Herbert Buckman, manager.

New York, N. Y., Sept 23-30.—Closed Car Show, auspices of the Automobile Merchants' Assn., Grand Central Palace.

Memphis, Tenn., Sept. 23-30.—Automobile Show, auspices of the Memphis Automobile Dealers' Assn., Automobile Show Building, Tri-State Fair Grounds; H. W. Oseinach, secretary and manager.

Detroit, Mich., Sept. 25.—Society of Automotive Engineers, meeting of Frames Division, Standards Committee.

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of the German Automobile Manufacturers' Assn., Kaiserdamm Hall.

New York, N. Y., Sept. 28.—Society of Automotive Engineers, meeting of Motorboat Division, Standards Committee.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Rochester, N. Y., Oct. 2.—Society of Automotive Engineers, joint meeting of Electrical Equipment Division, Standards Committee, with Automotive Electric Assn.

Detroit, Mich., Oct. 2-7.—Fourth International Steel Exposition and Convention of the American Society for Steel Treating and the American Drop Forging Institute, General Motors Building.

Ventura, Cal., Oct. 4-8.—Automobile Show, in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson, manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

Dallas, Tex., Oct. 6-16.—State Fair.

Akron, O., Oct. 7.—Open Air Automobile Exhibit, auspices of the Akron Motor Vehicle Assn., East Market Street.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, The Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore Hotel.

Toledo, Ohio, Dec. 6-8.—Annual Convention of the Ohio Automotive Trades Assn.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment armory.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Trade Assn.; Claude E. Holgate, manager.

Boston, Mass., March 10-17.—Passenger Car, Truck, and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

NEW LITERATURE

The Goodrich Dealer.—A pamphlet published to emphasize the full meaning and timely significance of permanence in the relationship of the tire dealer and the manufacturer. A statement of assets presents very emphatically why a dealer should sell Goodrich tires.—B. F. Goodrich Rubber Co., Akron, O.

The Hayes Wheel.—A pamphlet containing photographs of various automobiles equipped with Hayes disc and wire wheels. It also records the satisfaction of several dealers with the quick sales of the Hayes Pathfinder.—Hayes Wheel Co., Chicago, Ill.

He's Dynamic.—A booklet containing a reprint from a Cleveland newspaper dealing with the life of Fred H. Caley who for the past two years has been serving both the Cleveland Automobile Manufacturers' and Dealers' Assn., and the Cleveland Automobile Club in the capacity of secretary.—Cleveland Automobile Club, Cleveland, O.

Sales Executive.—A four-page leaflet published exclusively for the sales executives of the members of the A. E. A. containing principally merchandising ideas.—Automotive Equipment Assn., Chicago, Ill.

Wills Sainte Claire Co.—A leaflet describing the highly developed electric lighting system of the Wills Sainte Claire.—Wills Sainte Claire Co. of New York, Inc., New York, N. Y.

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RACINE RUBBER COMPANY

Through its splendid organization of distributors, is able to render a most profitable service to dealers who sell Racine Extra Tested Tires.

Three distinct tires—the famous Racine Multi-Mile Cord, the well known Racine Country Road (fabric) and the Racine Trusty Tread, a fabric tire of high quality and low price.

Racine distributors can show you how to build your tire profits. It will pay you to write your nearest Racine distributor, or communicate with us.

RACINE RUBBER COMPANY
Racine, Wisconsin
Distributors at all convenient points

RACINE Absorbing ShockStrip

It Welds the Tread and the Carcass—Inseparably

RACINE MULTI-MILE CORD TIRES



The Famous Black Tread
Racine Multi-Mile Cord

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PUBLISHER'S OBSERVATIONS

"GIVE 'EM THE AXE"

THINGS are working around toward a point where the problem of the used car is again destined to receive intense, and in some instances agonized attention. A preliminary skirmish, therefore, in anticipation of more serious engagements, may not be amiss.

The moving incident, it hardly need be said, is the conclusion, expressed by the secretary of a dealers' association in an important commercial center, that it is futile for such associations to seek a solution of the used-car problem along the lines of standardized policy. Coming only a few months after the conviction had established itself in many minds that this solution was the only one that would ever work, such a statement as AUTOMOBILE TOPICS' news columns this week convey is, to say the least, arresting.

¶ But apart from the question whether dealer associations have the power, or if so, the legal right, to control the used-car situation there is one fundamental point on which there should be a meeting of minds throughout the industry at large. It may be impossible ever to agree on a common method of handling used cars, because conditions in different localities vary so greatly and because the influences acting upon different lines of goods in the same class are exceedingly variable. Yet even though the common solution be lacking, there ought to be something approaching a general conclusion as to when a used car should cease to be regarded as a used car.

Suppose the proposition be restated in other terms. It is generally understood that an automobile becomes a "used car" just as soon as it has passed into the possession of the customer. Technically every car in private ownership is a used car, for the very fact of private possession takes it from the established market.

It is easy enough to determine when an automobile becomes a used car. But when does a used car become junk? When does a used car pass out of existence, as such.

¶ Unless and until some controlling definition is accepted it would seem to be reasonably clear that the used-car market is without limit, but simply includes all the automobiles in the world. Considering the magnitude of the problem, if judged in terms of the original sales cost of the average car, the idea is literally appalling.

The impulse to establish, by definition, or otherwise, a low limit to the used-car market is by no means new. To more than one student of the industry has come the inspiration of limiting it by rule, by force, or perhaps—as is always the impulse of the unintelligent—by statute. "There ought to be a law against taking money for a piece of junk like that," is by no means a rare sentiment, and it is ill-judged only because it is impractical.

¶ "The manufacturers ought to form an agreement among themselves to buy in every used car that will bring not over $350 and break it up—just take it right out of the market." The gentleman speaking prefers not to be quoted. Let him be heard merely as an authority on automobile sales.

"As matters now stand, it is possible for a man to patch up an old car and keep patching it up almost indefinitely. Many owners have no compunctions whatever about running cars that are an absolute disgrace to themselves and the community. Society, which approves of a man who keeps himself up, as the saying is, and has his lawn mowed once a week, holds nothing against him if he drives a car that is an eyesore, a nuisance and a menace to safety.

"What the manufacturers should do is to buy in all the old cars and break them up—wipe them off the slate—give 'em the axe. All it cost them they would get right back, in sales, while their dealers would benefit, their customers would get better service and the public at large would profit by the advantages of improved motor transportation."

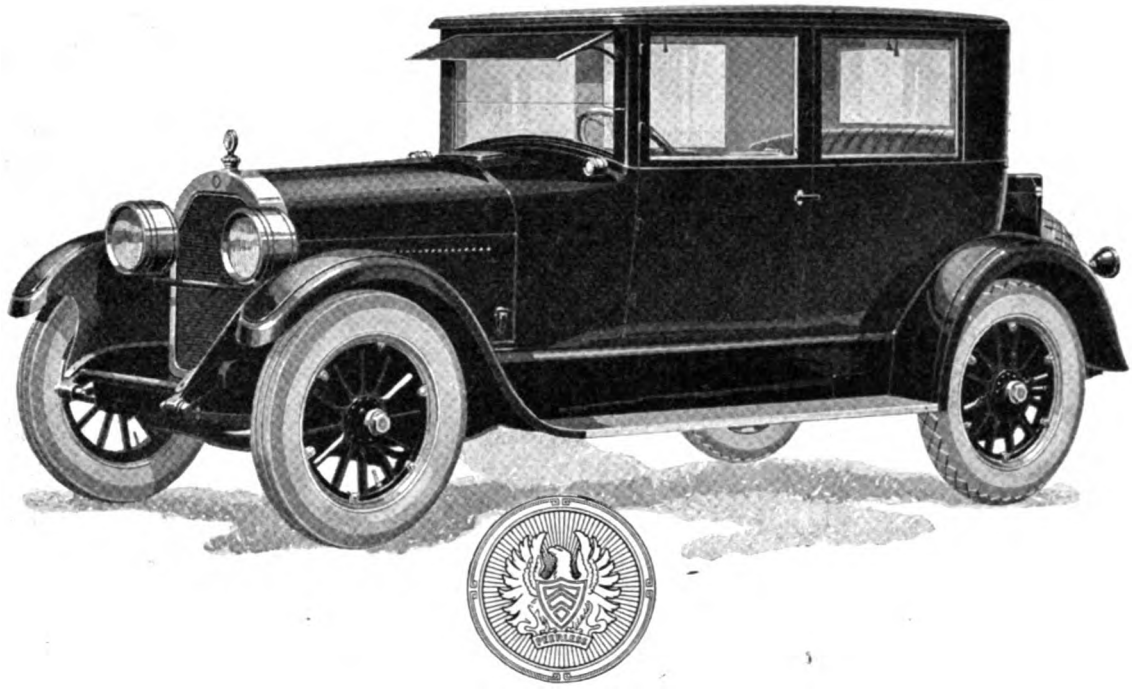
¶ As indicated, the underlying idea is one that crops up periodically. To show its wide application, tire dealers have made demands upon the manufacturers in that line that all casings turned in for adjustment be mutilated, so that it will be physically impossible for them to be retreaded and sold as new.

Of course, self-respecting tire manufacturers in their present circumstances would no more think of foisting reclaimed tires on the market than they would think of establishing a revolving fund to subsidize new manufacturers who might be desirous of entering the field. Yet they find one valid objection to the principle of junking every second-hand tire on which they can possibly lay their hands. That is the objection that to do so would be to encourage, and in the long run deliberately to capitalize waste.

If clothing manufacturers were to advertise, "Don't sell your old clothes, don't give them away, but burn them," they would come in for a good deal of just criticism. It is perfectly easy to see that the public would rightfully resent any steps leading to the deliberate destruction of property value. But that is the unattainable extreme and not to be confused with the discouragement of use beyond economic return.

¶ There are ways in which the automobile industry, through its organizations, or through the initiative and example of individuals, may promote the demolition of automobiles that are not worth running. There should be a point where age and condition render cars obsolete, at least as far as the established market is concerned. What methods may be used, who should employ them, and how, is not for the Publisher to say at this time.

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Eight cylinders that are almost prodigal in their abundance of power—

That give the final touch to all that has gone before in the way of power-pliancy and power-control—

That hold the higher speeds on and on, far beyond previous stock-car capacity.

Such is the new Peerless Eight—so fine and finished in performance that it sets up a new measure for quality among cars of the highest class.

Experienced motorists all over America are amazed and delighted by the abilities of this Peerless—even those who waited for it with eager confidence.

In its grace and dignity of bearing, it would be difficult to conceive a more satisfying car.

But it would be still more difficult to conceive one that would excel it in all the fine shades and phases of motor car behavior.

THE NEW PEERLESS EIGHT IS BUILT IN THE FOLLOWING TYPES:

Four Passenger Touring Phaeton
Seven Passenger Touring Phaeton
Two Passenger Roadster Coupe
Four Passenger Town Coupe
Four Passenger Suburban Coupe
Five Passenger Town Sedan
Seven Passenger Suburban Sedan
Five Passenger Berline Limousine
Four Passenger Opera Brougham

THE PEERLESS MOTOR CAR COMPANY, CLEVELAND, OHIO

PEERLESS

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Why many Good Dealers are turning to The New Oakland Six

Because—in appearance and in performance The New Oakland Six for 1923 completely satisfies every demand of those who want a fine light-six, low in first cost and genuinely economical to maintain.

Because—in the New Oakland Six is combined Oakland's eight years of experience in manufacturing light-sixes exclusively with the unlimited engineering facilities of the General Motors Laboratories.

Because—the New Oakland Six is so good that its manufacturers are enabled to guarantee in writing for 15,000 miles the performance of its powerful and quiet six-cylinder, overhead-valve, Oakland-built engine.

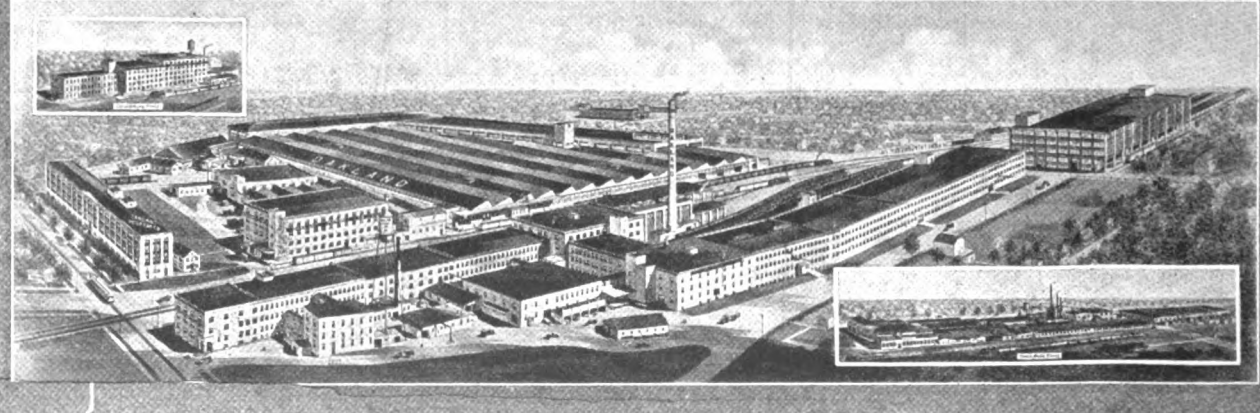
Because—the value and the permanency of the Oakland franchise are assured by Oakland's position as a permanent unit of the General Motors Corporation.

Thus—it is becoming quite common for substantial and progressive dealers everywhere—dealers who represent other cars—to seek the Oakland franchise. There are yet a few desirable territories open—communicate with the factory.

OAKLAND MOTOR CAR COMPANY, PONTIAC, MICHIGAN
Division of General Motors Corporation

New Prices at Factory

Roadster	$ 975	*Sport Car*	$1165	*4-Pass. Coupe*	$1445
Touring Car	995	*2-Pass. Coupe*	1185	*Sedan*	1545



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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter-Dem.Wheels	3¾x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	H	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2		760§	4				3¾x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680§	2	860	5	C	3½x4	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5		3½x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980§	2	1,440	5	C, K, N, P	3 7/16x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3½x4¾	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own-	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3 7/16x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,095‡	5	1,385	5	B	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	1,235	4	1,335	5	C, D, K, P, T	3½x4½	Own	L	H	T	...	Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3 7/16x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D H	895	2	C, D, H	1,095§	2	1,345	5	C, D, H	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5		3½x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Kelsey	985	5		985	2		1,400	3	1,450	5		3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey
Dixie Flyer	995	5	D, G, O	1,095	4	D, E, G, O	1,395	3	1,395	5	D, G, N, O, V	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3 7/16x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C, D, H, N, O, P, T, U, b	3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Essex	1,095	5	B, D, H				1,295§	5				3½x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Oldsmobile Four	1,095	5		1,225	4	C, D, M, P, Z	1,425§	5	1,745	5	P, V	3 7/16x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, O, N P, V	3½x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	5		1,795	4	1,795	5		3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B	1,235	2	B	1,795	4	1,950	5	B	3½x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B						2,195	7	B	3½x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3½x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T	...		Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4			B, D, H, J, L, O, U	4¾x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3 13/16x5⅛	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,585	4	A, D, G, J, L, Z	3,985	2	A, D, G, J, L, Z			4,650	4		4¼x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	5,250	7	B, G, 2I, L	3¾x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				7,000	5	G	4x5½	Own	S	C	P	...	Str	Ber	USL	Own	Own	Own	L	4.25	34x4½	125	Brewster
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D, K¹	975	2	B, D, K¹	1,225	3	1,550	5	B, D, C, G, K¹	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	...	31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4¼	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, V	3½x5	Own	L	H	P	...	Str	A-K	Rmy	Log	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2 13/16x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3 1/16x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4¼	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	112	Premocar "A"
Chalmers	1,185	5	C, K, P	1,185	2	C, K, P	1,595	4				3½x4½	Own	L	C	T	...	Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P				1,450§	4				3½x4¾	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C D, P	1,175	3	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3½x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R	1,395	4	R			2,040	5	D, R, V	3¼x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, K¹	1,250	2	B, C, D, G, K¹	1,875	4	2,050	5	B, D, G, K¹, S	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3½x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z						1,795	5	E, O	3½x4¼	Con	L	C	P	...	Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.										
(SEE FOOTNOTES)	SIX-CYLINDER PASSENGER CARS—Continued																										(SEE FOOTNOTES)
Elgin "K-1"	$1,295	5	C, D	$1,345	4	C, D, H, K, Z	$1,695	4	$1,695	5	C, H, N	3½x4¼	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Moon "6-40"	1,295	5	B				1,595	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, P, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3¼x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, H, K, O, T, Z	1,695§	2	2,095	5	C, D, H, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, O	1,895	4	D, E, G, J, K, O, W	2,275	4	2,345	5	D, O	3½x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3½x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	2,355	4	2,435	5	B, G	3⅛x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4	1,985	5		3¼x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3½x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O, P	1,545	2	D, G, H, K¹, O, P	2,095§	3	2,395	5	D, G, H, K¹, O, P, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3½x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Mitchell	1,590	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Davis "61"	1,595	5		1,695	4		2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	2,550	7	A	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.0	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, K¹, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, K¹, O, S	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K¹, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Hudson	1,695	7	B, D, H	1,645	4	B, D, H	1,745§	5	2,295	7	B, D, H, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y Z	2,145§	5	2,545	5	U	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B, Z	1,885	5	B, X, Z			2,485	7	B, N, U, V	3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,785	5	2,785	5	B, D, Z	3⅛x4¾	Own	L	H	P		Str	Del	Del	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅛x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Y b	1,895	2	F H 2I 2J K R T V W X Y	2,195	3	2,695	5	F H 2I 2J K R T V X Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5							2,985	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3⅝x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, G	2,475	4		3,725	4	3,825	7		3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3⅛x5½	Own	L	H	P	T	Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5⅛	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Roamer "9-N"	2,585	4	A, G, H, L, J, Z	2,850	4	A, G, H, J, L, Z	3,850	4	4,250	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"
Packard Single-Six	2,685	7	C, G, O, M						3,525	7		3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**SIX-CYLINDER PASSENGER CARS—Continued**																											(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X			$3,795	4	A C F G H J K O P T X	3½x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5		2,975	2				4,500	5		3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5¼	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, O	3,300	4	A, B, C, D, G, L, O, X, Y	4,300	4	5,100	7	A, B, D, G, N, O	3⅝x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	33x5	132	Winton "40"
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3⅝x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4	4,800	7		3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z				4,900	3	4,900	5	A C D G H J M O T Z	3¾x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			6,500	5	A, G, H, O	3½x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5							6,825			3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M C Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4½x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X			11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	...	B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z									4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
	EIGHT-CYLINDER PASSENGER CARS																											
Oldsmobile "47"	1,495	5	C, D, O, P, T	1,725	4	F H K O P Q T W Z b	1,995	4	2,145	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, V, Z	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Standard	2,500	7	A, D, G	2,500	4	A, D, G	2,750	4	3,200	7	A, D, G	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4¼	127	Standard
Apperson	2,645	7	A, G	2,620	4		3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A, B, G, M, N, O, X	2,685	4	A, B, G, M, N, O, X	3,385	4	3,685	7	A, B, G, M, N, O, X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3¼x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3½x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2		5,350		6,000			3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132–8	Daniels
Cunningham	6,300	7	A B E G H I J M O X Z	5,800	4	A B E G H I J M O X Z	7,150	4	7,650	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5		6,500	4		7,800	4	7,800	7		2⅞x5	Own	H	V	P	...	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
	TWELVE-CYLINDER PASSENGER CARS																											
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) A—power tire pump; B—theft lock; C—windshield wiper; D—cowl lights; E—front bumper; F—bumpers front and rear; G—clock; H—heat indicator; I—spare tire; J—spare wheel; K—disc wheels; K¹—disc wheels optional; L—wire wheels; M—wheels optional; N—car heater; O—snubbers or shock absorbers; P—pressure chassis lubricating system; Q—spotlight; R—gasoline gauge (dash); S—glove box; T—mirror; U—vanity and smoking sets; V—sun visor; W—windshield wings; X—trunk rack; Y—trunk; Z—color option or special color; a—tilting steering wheel; b—rear signal; c—permanent top.

† **TWO-DOOR CLOSED TYPE:** Regular coupe listed except where low-priced two-door closed model is included in line. Latter is distinguishable by symbol §. ‡ **Four-Door.**

ENGINE: Ans—Ansted; Con—Continental; Due—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lyc—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wel—Weidely.

VALVES ARRANGED: H—in head; L—at side; N—side and head; R—horizontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith.

IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Leece-Neville; N-E—North East; Rmy—Remy; Scn—Scintilla; Sim—Simms; Spl—Splitdorf; S-W—Splitdorf & Westinghouse, 18 plugs; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

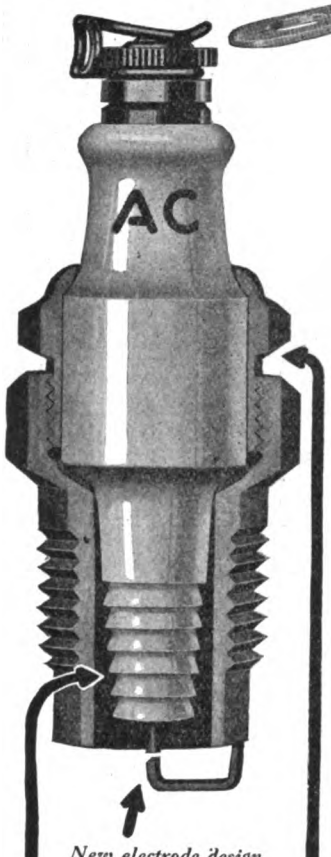
REAR END: Adm—Adams; Col—Columbia; Fln—Flint; GMC—General Motors Corp.; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

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Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost



New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain with its high temperature fins attains sufficient heat to burn oil deposits, thus offering effective resistance to carbon

78 LT



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

SAELT



Long SAE
Durant 4
Oakland
Olds
Saxon

78 DT



Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

78 LBT



Long Body 7/8
Chandler
Willys-Knight

How to Get a Profitable Spark Plug Business

Few car owners realize that hard starting and other motor troubles usually come from old, worn-out or incorrectly designed spark plugs. YOU ARE THE DOCTOR—you can help your customers by inspecting their engines and prescribing the remedy in the following way:

A new set of AC plugs to all car owners whose engines start hard.

A new set of AC plugs to owners who want the original pep restored to their engines.

New AC's when you find old, worn-out plugs.

New AC's when you find incorrectly designed plugs.

Sell a few extras to every car owner, old or new, as every motorist should carry some spares.

Do this and in no time you will find that you are making real worth-while profits out of your sales of AC Spark Plugs.

WE ARE DOING EVERYTHING TO HELP THE DEALER—Now it's up to you to help yourself.

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum—the AC line gives you this opportunity to reduce your plug stock to one line—the best line, the most profitable line. Sell only AC's.

AC 1075

The Best Spark Plug Ever Made for Fords

The AC 1075 is AC's answer to the need for better plugs for Ford engines—cars, trucks and tractors.

In addition to many other unique features, it has the famous AC Carbon Proof Porcelain with its high temperature fins that facilitate starting and avoid short-circuiting.

Every Ford owner who comes into your store is a prospect for a set of AC 1075 plugs.

Think of it—this plug gives you first place in the biggest automotive market. And when you build up an AC trade among Ford owners of your community you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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The Standard Spark Plug of the World

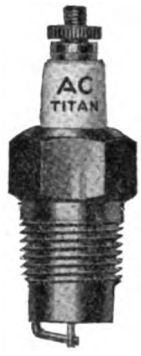
18 MT



Reg. Metric

Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½

Overland 4

SAENT



Extra Long SAE

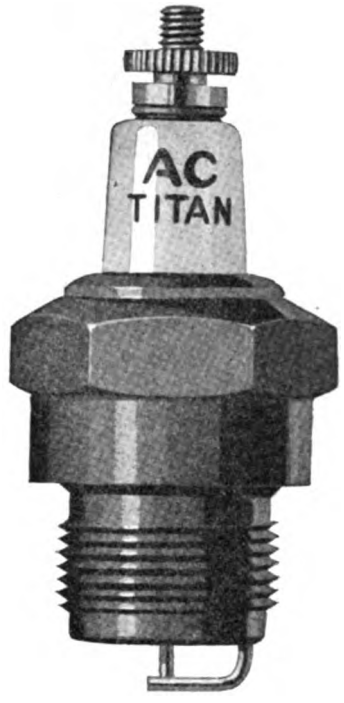
Elgin
McFarlan
Nash

SAET



SAE

Apperson
Durant 6
Mitchell
Marmon
Standard 8



Reg. ⅞ T

Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton

and 170 other makers of cars, trucks and tractors

Why You Should Carry the Full AC Line

More than 200 car and truck makers now use and have for years used AC Plugs as standard factory equipment. Among these:

DODGE BROTHERS cars have been AC-equipped since the company was founded.

BUICK cars have been AC-equipped for fourteen years.

NASH cars, both Sixes and Fours, have always been equipped with AC's.

OAKLANDS for the past fourteen years have been AC-equipped.

CHEVROLET cars have always had AC Plugs in their engines.

CADILLAC, CHANDLER, CLEVELAND, DORT, DURANT, ESSEX, HUDSON, HUPMOBILE, LAFAYETTE, MAXWELL, OLDSMOBILE, OVERLAND, PAIGE, WILLYS-KNIGHT and others are all standard AC-equipped.

The leading racing men use only AC Plugs.

At Indianapolis, Memorial Day, AC-equipped cars finished 1, 2 and 3.

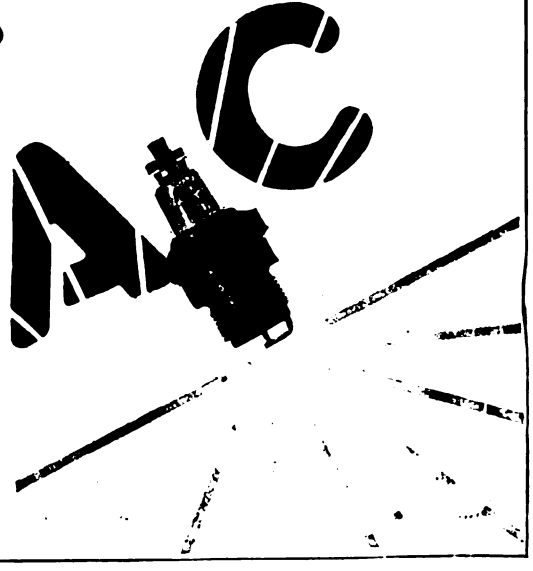
—And There Are AC Plugs For All Other Cars, Too

Of course, the plugs shown here give only a small idea of the many cars that are factory-equipped with AC's. But they give you some thought of the great ready-made market that already exists for the dealer who goes after the AC business of his neighborhood.

And don't forget—there are specially designed AC's for any engine. If you have the complete AC line you can easily meet the spark plug needs of every customer. You need waste no time in "introductions" or long-winded explanations.

ALL YOU HAVE TO DO IS SAY "AC."

Here, then, is a second great market for the dealer who sells AC's, for the opportunity to put complete sets of AC's in cars that were not originally AC-equipped offers an opportunity that should not be passed by. SELL ONLY AC's.



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915. U. S. Pat. No. 1,216,139, Feb. 13, 1917. Other Patents Pending

By the Set

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Rickenbacker Remarkable Record

March, 1919.

Even though the Rickenbacker Six had been planned for years, it was actually and finally in this month that this remarkable product was finally conceived by Captain E. V. Rickenbacker.

March, 1919, to Aug., 1921

After practically three years of constant engineering, the car itself was developed and ready for a road test, the kind of which we believe no other car had ever been put to before.

Approximately half a million dollars was invested in the first chassis alone before we pronounced it O. K. It was even driven over 80,000 miles and put through the most gruelling test before it was finally placed on the market.

August, 1921.

The Rickenbacker Motor Company was incorporated. The following well known men were elected officers and directors of the Rickenbacker Company: B. F. Everitt, President and General Manager; Capt. E. V. Rickenbacker, Vice-President and Director of Sales; H. L. Cunningham, Secretary and Treasurer.

Directors in addition to officers are: R. M. Hood, W. E. Flanders, C. M. Tichenor, E. R. Evans and B. L. Cumber.

With such experienced men as officers and directors the company was destined to a certain and great success.

October, 1921.

A factory was purchased with 500,000 square feet of floor space, ideally located and arranged for the production of Rickenbacker cars.

December, 1921.

Machinery was installed and material purchased for the actual beginning of production which was to take place on January 1st.

During this period of preparation an organization was being rounded out which was to prove second to none in the motor car industry. In addition to B. F. Everitt and Capt. E. V. Rickenbacker such leading figures as Flanders, Hood, Cunningham, Tichenor, Evans, Drumpelmann and Miller were brought into the organization—all men who individually have held first line positions in the motor car industry.

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For Go-Getting Dealers Only

Production and sales figures with increases for each month follows:

Percentage of Increase.

January	27 cars	
February	116 cars	322%
March	307 cars	1037%
April	381 cars	1311%
May	501 cars	1755%
June	533 cars	1874%

LAST WEEK WE PRODUCED AND DELIVERED OUR 3,000th AUTOMOBILE. Without fear of contradiction we can say that never before in the history of the automobile has a company, starting from the ground up, met with such marked success—success from the standpoint of public acceptance of a wonderful product, actual sales and actual deliveries.

We further take pride in the fact that the 3,000 cars delivered have made 3,000 satisfied customers. This is real success.

So, just as the Rickenbacker Six has been successful, so have the Rickenbacker distributors been successful.

While we have a well distributed dealer organization, there are some spots at which we are not represented.

How about your town? If there is no Rickenbacker dealer in your city, we certainly suggest that you write us. Let us give you all of the facts concerning this fast-selling, profit-producing quality automobile.

If you are a "go-getting" dealer, we suggest you get in touch with us without delay.

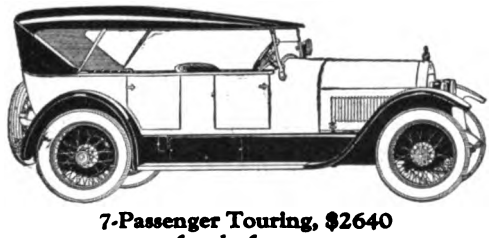
Rickenbacker Motor Company
Detroit, Michigan



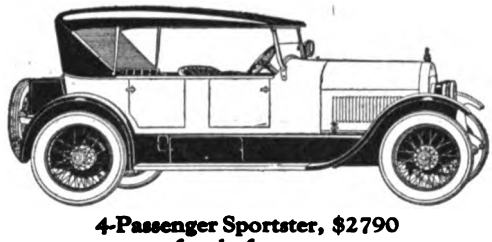
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THE CAR THAT MADE
STUTZ
GOOD IN A DAY

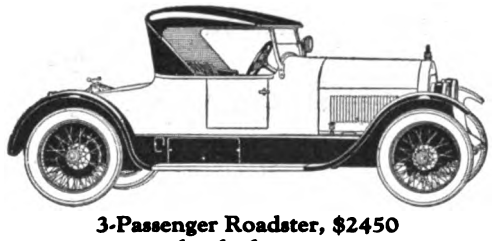
Stutz Performance in a



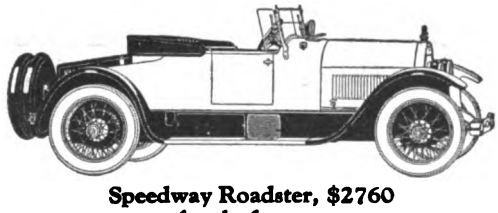
7-Passenger Touring, $2640
f. o. b. factory



4-Passenger Sportster, $2790
f. o. b. factory



3-Passenger Roadster, $2450
f. o. b. factory



Speedway Roadster, $2760
f. o. b. factory

That rare ability in action—the speed, the power, the acceleration and gratifying freedom from service attention traditional with the Stutz—intensified and refined beyond any previous point of excellence, is available now in a complete selection of choicest body creations ot exclusive Stutz design.

The same sturdy, care-free dependability so characteristic of the Stutz mechanically, is typical of the coach work, also. Custom-built throughout, these advanced body styles match fully the acknowledged excellence of the Stutz chassis.

The Compensating Spring Suspension adds the final touch of desirability, endowing the cars with complete tranquillity and composure at all speeds and on all roads, while steering, gear-shifting, brake and clutch action are exceptionally easy and responsive at all times.

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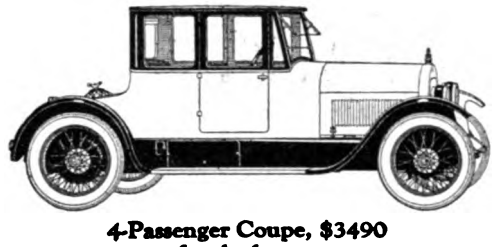
THE CAR THAT MADE STUTZ GOOD IN A DAY

Car for Every Occasion

At their present phenomenal prices, Stutz cars today represent the greatest value ever offered by the company. For prestige, quality and intrinsic worth, they are not surpassed.

To the dealer keen to associate himself with a line of cars of distinctive appeal which enables him to conduct a business of highest character and unusual profit, the Stutz at this time presents possibilities of particular interest.

If you are not familiar with the new, complete Stutz line and are interested in knowing of the many other developments now rapidly maturing, write or wire, and we will be glad to furnish complete information.



4-Passenger Coupe, $3490
f. o. b. factory



5-Passenger Sportsedan, $4450
f. o. b. factory



7-Passenger California Top, $3015
f. o. b. factory



4-Passenger California Top, $3165
f. o. b. factory

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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A PRODUCT OF THE NEW ERA



PERFORMANCE—
that is proving quality the best economy

Fixing a price and "throwing together" a tire to meet it, is a manufacturing policy that is causing high-cost mileage and dissatisfied users.

This policy is not and *never will be* Republic's. In producing the Republic Grande Cord tire, our aim has been simply to build the best tire possible. The price comes afterward: proportioned fairly to the quality and goodness of the product.

That this policy is sound is proved by the ever-increasing sales of Republic (Prodium Processed) Tires. Their wonderful endurance, perfect traction and ease of driving over any and every road is winning new friends and holding old ones among dealers and users alike.

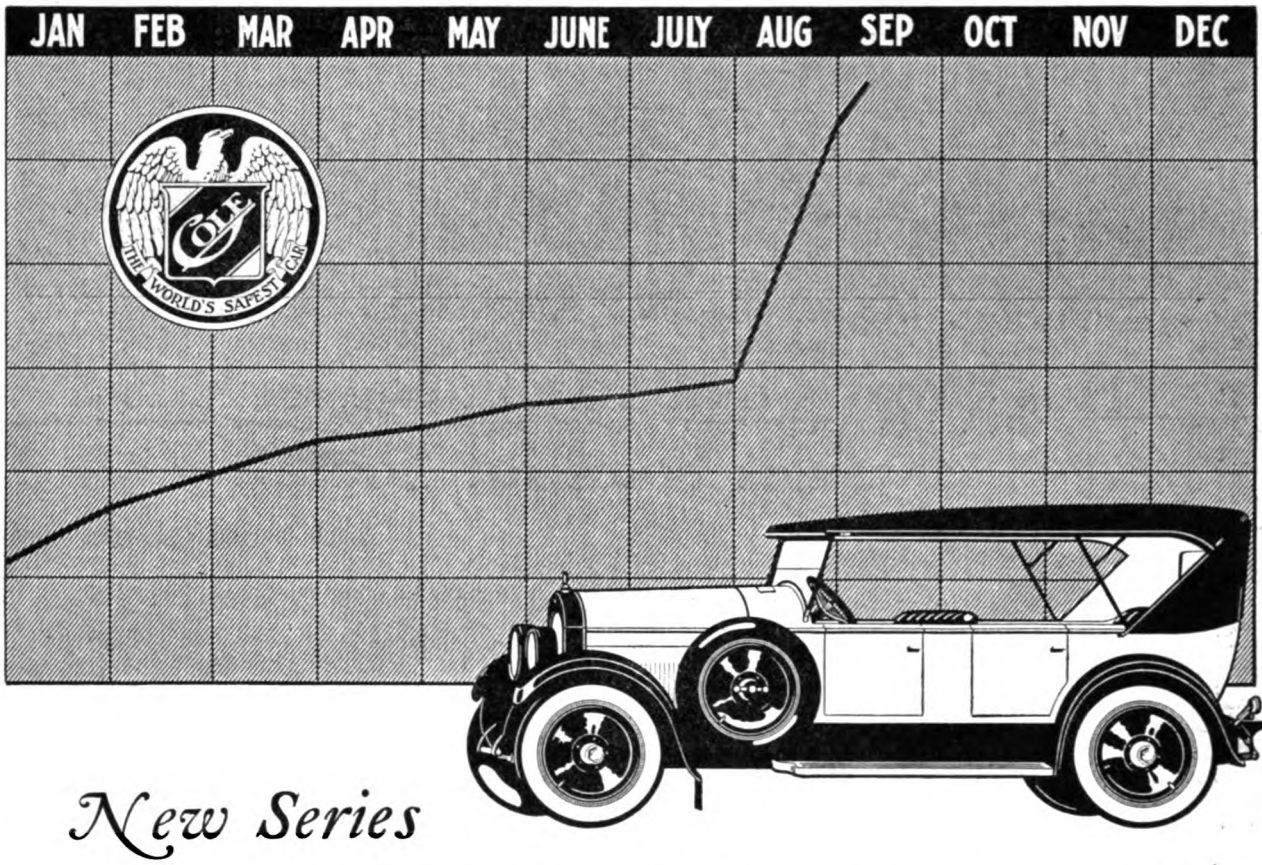
Get in touch with our nearest branch today for our new merchandising plans. They offer you an unusual opportunity for good prices and long profits.

THE REPUBLIC RUBBER COMPANY
Youngstown, Ohio

CHICAGO, PHILADELPHIA, MINNEAPOLIS, ATLANTA
KANSAS CITY, CINCINNATI, NEW YORK, PITTSBURGH

REPUBLIC TIRES
With STAGGARD *Tread*

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New Series

COLE SETS HIGH SALES MARK

Exclusive

COLE

Features

The Etruscan Body
The Ultramite Frame
The Envelope Manifold
Hydro-Cushion
Spring Action

THE marked increase in sales for the month of August is significant of the immediate popularity of the Ultra Series Cole Eight Ninety. At the end of the first month's production sales reached a point over 30 per cent higher than any month since August, 1920.

Built upon the idea of "A FINER CAR," discriminating motorists have placed their immediate stamp of approval on the Ultra Series.

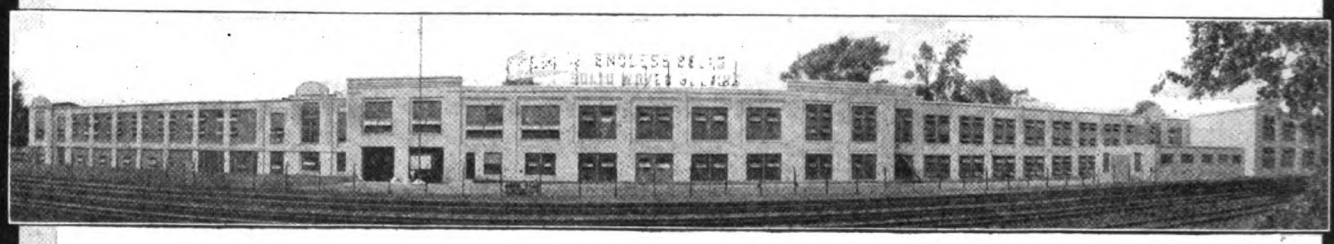
In the engineering and construction of the new Cole, dealers have found the sales appeal that makes the man desiring something really distinctive in motor cars the ready purchaser of the Cole. Riding qualities, operation economy, dependability and distinctive lines have earned the name "A FINER CAR."

Consideration of the sales possibilities on the part of dealers is merited by the popular approval.

COLE MOTOR CAR COMPANY

INDIANAPOLIS, U. S. A.

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This Great Combination of Plants Is a Sales Point for You

PERHAPS you are wondering just how you can use these Gilmer factories in a sales argument for any Gilmer product. The answer is easy.

Do your customers know that Gilmer is the largest manufacturer of woven automotive products? Certainly they *should* know that the three great plants shown here produce an enormous volume that makes possible low prices for a higher quality of merchandise.

Do your customers know that they spend no more for Gilmer products, but get a great deal more in quality? Drive this point home and you have an argument that will clinch many a sale.

The fact that the Gilmer Company is the leader in its line is an impressive sales feature. Point out that Gilmer has always been first in advancing and improving woven automotive products.

L. H. GILMER COMPANY, Philadelphia



It's a Gilmer Product— you can depend on it!



Gilmer



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A SOLID train of forty carloads of Gray Automobiles was shipped August 28 to Boston—only two days production.

Every day twenty carloads are going out to distributors and dealers—production is steadily increasing.

The Gray has made good—in quality—in deliveries—in price and satisfactory performance.

New records for economy have been established—thirty miles to a gallon and greater mileage from each quart of oil. The Gray has proved itself the most economical car ever produced.

With this economy of operation, the Gray is a modern quality car—pleasing in appearance, light in weight, easy riding, roomy body, quick pick up and low first cost.

Sliding gear transmission, Timken axles and bearings, one man top, ventilating windshield, adjustable worm steering gear

GRAY MOTOR CORPORATION DETROIT, MICHIGAN

$490

Touring Car *Roadster*

Coach - $760 *Chassis . $420*

F. O. B. Detroit

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SALESMANSHIP!

is more important to-day than at any time in the history of the automotive industry, and every automobile, truck and tractor dealer in the country needs this new and vital reading course in

Automotive Salesmanship

which has been prepared by some of the leading automotive executives in the country. It has been divided into three parts as follows:

PASSENGER AUTOMOBILES

Course Consists of Seven Books

The subjects discussed in this course include:

Simple mechanical definitions that salesmen should know.

Building methods of factories.

The various inspections each part receives.

Manufacturing procedure in motor car factories.

The work of the engineering department.

How the different assemblies are put together.

The natural laws in automobile salesmanship.

How to deal with competitors.

How to secure a prospect.

How to approach him after you have secured him.

How to interest the prospect.

The steps necessary in selling a car.

Face to face with the prospect.

The points you should emphasize.

What constitutes beauty, comfort, convenience, durability, style, easy riding, etc.

The woman in the case.

How to close a sale, etc., etc.

MECHANICAL TRACTORS

Course Consists of Five Books

The subjects discussed in this course include:

The history of the motor tractor. How it is constructed. Mechanical terms every tractor salesman should know. The different tasks the tractor will perform on the farm. The number of tractors in use in the United States. A survey of the future market. The average life of a tractor.

How to determine the relative values and capabilities of the various makes of tractors on the market.

How to demonstrate a tractor. Five important features to emphasize during a demonstration. The various grades of farm soil and how they are classified.

The Science of Scientific Farming.
Finding the tractor market.
The value of sales vision.
The banker and how he aids in tractor promotion work.
How to approach the farmer.
Handling the question of price.
How to figure horse power.
What draw-bar pull means.
Figuring the cost of farm labor.
The number of acres of hay and grain the horse consumes yearly in the United States.
The year-'round utility of the tractor.
When to close a sale. And how.
Procrastination and how to defeat it.
The use of sales letters.
The worth of "word of mouth" advertising.

MOTOR TRUCK

Course Consists of Eight Books

The subjects discussed in this course include:

The growth of the truck industry.
Truck salesmanship and its responsibilities.
The mechanical units of the motor truck.
The cost of motor compared with animal transportation.
The industrial value of the motor truck.
Its adoption for long distance transportation.
The potential market.
How retail truck business is conducted.
The dealer's relation to the manufacturer.
Retail store salesmanship.
The use of advertising literature in the store.
How to handle the man who comes in to "look around."
How to show a truck to a prospect advantageously.
How to draw out a prospect.
The point of contact.
The time for launching your sales talk.
Encouraging the prospect to ask questions.
Meeting the prospect on his own level.
How to explain the mechanical details of the truck. And when.
Meeting your prospect's arguments.
Using your competitor's claims for sales weapons.
Handling the question of price.
Closing the sale.
The matter of service.
Selling the man who is to drive the truck.
Keeping a prospect file.
How to discover valuable sales leads.
How to systematize your selling efforts.

The whole course of twenty booklets sent complete for $10.00. Parcel Post Paid

ORDER BLANK

.....192....

AUTOMOBILE TOPICS,
1790 Broadway, New York, N. Y.

Gentlemen:—I enclose $10.00 for which please send me prepaid:

....The combined course of twenty books covering passenger car, motor truck and tractor salesmanship.

Name .....

Street.....

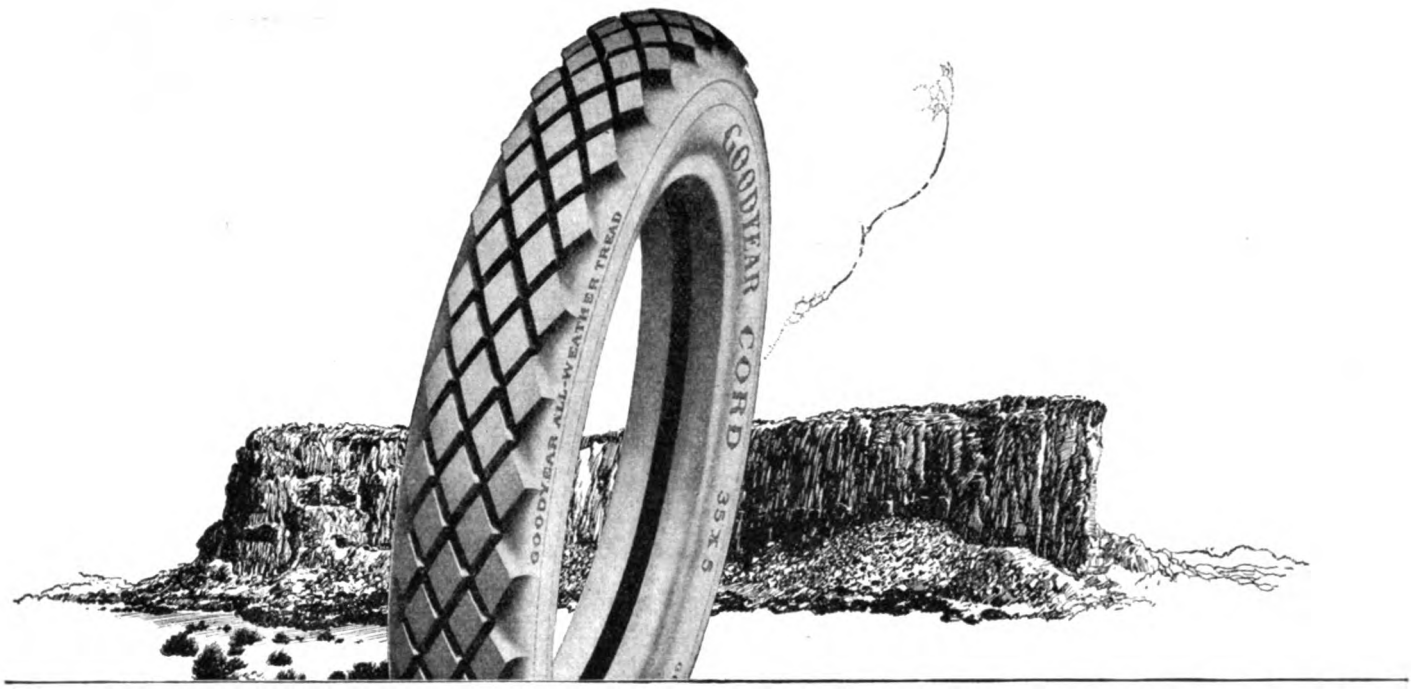
City.....

R. F. D. No.....State.....

You Must Work as You Never Worked Before

Every live dealer in the country needs these books right now. Manufacturers need them. The average salesman is especially in need of this stimulating reading course. It is the first complete sales course to be offered to the automotive industry.

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WHY GOODYEAR DEALERS PROSPER

Every assistance a manufacturer can give his retailers is offered to Goodyear Dealers in fullest measure.

First, the Goodyear Dealer gets a complete line of tires; tires for every car and at prices to match every customer's purse.

The Goodyear Dealer shares in Goodyear's long-established reputation for honest dealing in honest merchandise.

All of Goodyear's effective and consistent advertising works for Goodyear Dealers. Goodyear supplements this strong sales assistance with every sort of auxiliary advertising for the dealer's personal use. Signs and letter service of a type that sell tires are also available to Goodyear Dealers.

But not the least important phase of Goodyear assistance is the sound merchandising counsel every Goodyear representative is qualified and ready to give to his group of dealers.

If you sell, or intend to sell, tires or automobiles, and want to enjoy the advantages of being a Goodyear Dealer, write today to Goodyear, Akron, Ohio, or Los Angeles, California.

Goodyear Means Good Wear

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

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Filling the Gaps

"Standard Equipment" Is Given Away

But 51% of the Leading Lines Carry Added Equipment as a Sales Inducement.

That makes a market for similar goods on every car that is Standard Equipped.

Wideawake dealers sell more cars at higher profits by adding extras of their own selection. Alert manufacturers are constantly studying the demand for new features. A chart of equipment specifications is a map of the market for accessories.

AUTOMOBILE TOPICS'

Table of Passenger Car Selling Points Shows the Alignment of Accessories.

The Gaps in the Columns of "Added Equipment" Indicate Open Territory for the Sale of Products that Are Growing More Popular.

This illustrates but one of many useful and suggestive applications of this new table (see Page 555 of this issue) which appears every week (revised weekly) in

AUTOMOBILE TOPICS
The Trade Authority

1790 Broadway **New York City**

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OFF'N'ON CHAINS



Easy to put on
Easy to take off

Stay Tight—Wear Longer



The Positive Lock

This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No lost chains—no loose chains. OFF'N'ON has a positive locking device.



The Slip-on Link

This patented slip-on link makes it easy to take off worn-out cross chains and put on new ones.

A child can do it. OFF'N'ON Chains, with these special devices, cost no more.

THE patented lever lock makes it a job of only a few seconds to put the chain on so that it will stay tight. The lever action of the lock makes tugging and pulling unnecessary. So simple that a child can do it. A tight chain wears longer than a loose one. No unnecessary noise and no unpleasant labor.

The patented "slip-on" link makes it possible to replace old cross chains in a moment.

Motorists are interested as soon as they see OFF'N'ON Chains.

These new features will make it so easy to be safe that motorists will try OFF'N'ON Chains rather than condemn chains indiscriminately. And the price is no higher than other chains.

Write for circular and price list or order from your jobber today. A complete set of extra cross links can be sold with every chain.

PYRENE MANUFACTURING COMPANY

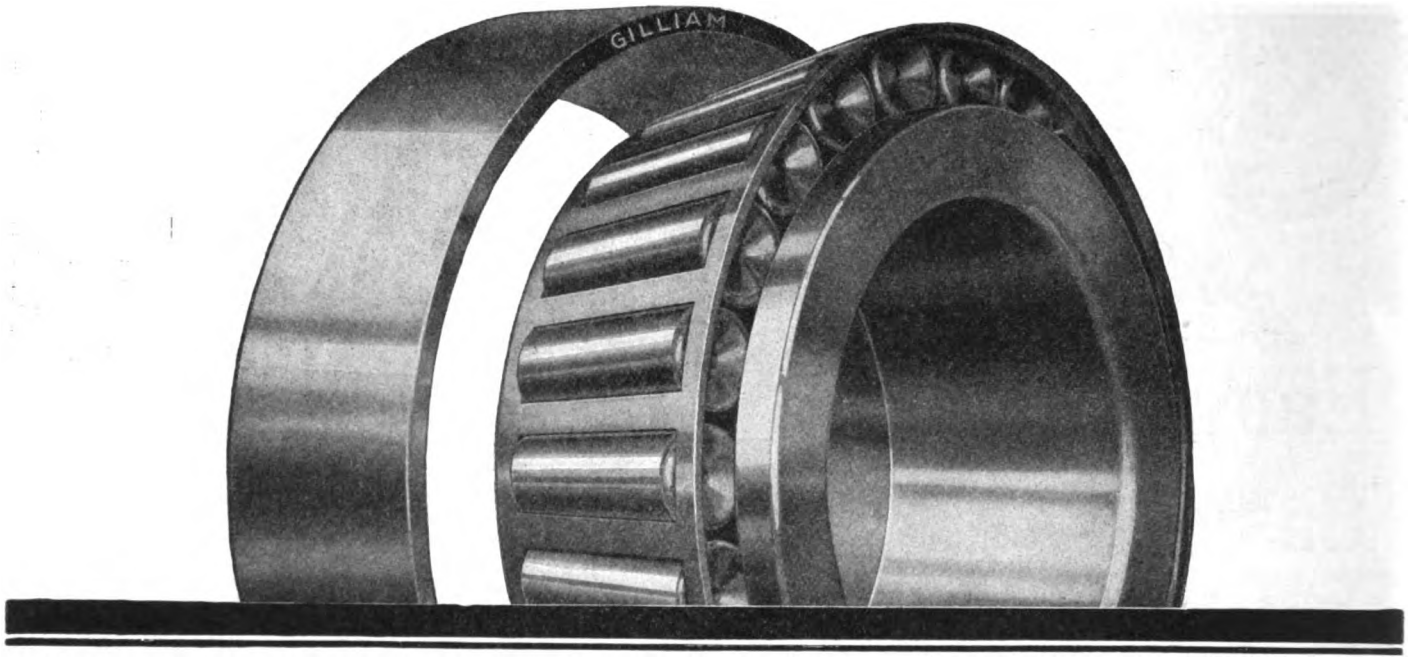
Makers of Pyrene Fire Extinguishers

520 Belmont Avenue, Newark, N. J.

Branches:

CHICAGO 17 So. Jefferson Street
ATLANTA 24 Nassau Street
KANSAS CITY 1712 Grand Avenue
SAN FRANCISCO 977 Mission Street

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You can always recognize the GILLIAM TAPERED ROLLER BEARING by its clean-cut, one-piece steel stamped cage and its maximum number of rollers, without nibs or projections at either end. Remember they are made of Alloy steel throughout

GILLIAM TAPERED ROLLER Bearings

The Gilliam Mfg. Co. - - Canton, Ohio

More than 150 Service distributors in the leading cities in the United States

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VACUUM CUP CHRONICLE

VOL. II JEANNETTE, PA., SEPTEMBER 23, 1922 No. 10

A Desert Tragedy

OUT in the blistering Imperial Valley a couple of months ago, H. M. Bross, Pennsylvania salesman operating from Los Angeles, ran up against a bit of hard luck. Hence this picture, which is not, as might seem plausible at first blush, a demonstration for Pyrene extinguishers or a "set" for an industry quite popular in these parts.



Bross was ambling across the desert regions of the valley when his henford shied at a bunch of sagebresh and took afire. Up to date the origin of the blaze has not been uncovered by Chronicle reporters.

Slinking along behind Bross came another car, its driver equipped with a three folding brownie. So there, on the wide, wild reaches of the mocking desert, the fliv gave up the ghost, with none so good to do it reverence.

When the rear of the doomed vehicle almost was burned to the well-known charred, black mass, the hungry flames savagely licked their red tongues about the six ply V. C. Cords. For many minutes they gnawed and hissed, the tires resisting the extreme heat. Finally, however, their companion spokes burned away, their rims shriveled and warped, with no one offering succor, the faithful Vacs exploded and passed on to that haven of refuge from whose bourne no tire returns, having served until the last, as is their custom, without trouble or complaint.

The moral being, as Salesman Bross points out, that even fire has a hard time snuffing out the candle of a Vacuum Cup.

Important!

—the editorial on page 3 and the announcement on page 4

Brown is Satisfied

J. A. BROWN, of J. A. Brown & Company, Buffalo, N. Y., thinks we ought to know what Vacuum Cup Tires have done for him in the way of service, so he sends in the accompanying letter which we are happy to quote as an example of many received daily:

I want to tell you that I am more than pleased with the results I have received from the Vacuum Cup Tires on my Big Six Studebaker Sedan.

One tire went 19,500 *miles and it did not blow out then, but it had a nail in it; therefore, I took it off and considered that I had my money out of it and didn't put it back on. One other tire went* 20,500 *miles and blew out. Of course, I don't think I had my money out of that one, and the other two went* 21,200 *miles and I took them off and put them on the back of the car for spares. No doubt it will be a big surprise to you to know the results that I have gotten out of these tires.*

Also on my Peerless open car I have four tires on which were run over 14,000 *miles and they look good for the same amount yet; therefore, this will probably be a good thing to show your patrons and let them know that these tires do wear. Nobody can sell me any other than Vacuum Cup Tires.*

Another Bus Line

WE have repeatedly said that any tire which can hold up cheerfully under the severe use a motor bus demands of it can certainly stand right up in meeting when endurance tests are being discussed.

From all parts of the country come enthusiastic reports of the honest ser-



vice being delivered in this line of work by Vacuum Cup Cord Tires. The latest entry is The Blue Bus Line of Warren, Pa. We reproduce a photo of one of their trucks on which the proper tire equipment is used. When this picture was taken, the tires had covered 15,743 miles, without the least suspicion of a mishap.

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VACUUM CUP CHRONICLE

Published monthly by the Pennsylvania Rubber Company of America, Inc. Jeannette, Pa.



VOL. II SEPTEMBER 23, 1922 No. 10

The Ford Classic

WE believe that the announcement of RED SQUARE ■ Vacuum Cup Tires appearing on the opposite page is one of vital importance not only to the tire user and his dealer, but to the automobile tire industry as well.

The dealer himself welcomes opportunity for an elimination of unnecessary sizes, which elimination carries with it a considerable curtailment of investment. For the user, it simplifies wonderfully the buying of tires for the Ford automobile. The 30 x 3½ is readily interchangeable with the fabric casing of like size marking, and the 31 x 4 is interchangeable with 30 x 3½ oversize cord tires, or with 31 x 4 fabric tires. Regardless of the equipment which has previously been a favorite with the Ford owner, he can safely equip any one of the four wheels with a RED SQUARE ■ Vacuum Cup Cord casing with the assurance that his car will not be out of alignment with regard to size.

For the manufacturer, the RED SQUARE ■ Cord Casing works toward the ultimate goal of all manufacturers, be they makers of automobile tires or of hairpins—standardization of sizes, which means a standardization of equipment.

The Pennsylvania Rubber Company of America, Inc., did not introduce the RED SQUARE ■ Vacuum Cup Cord Casing until it was absolutely positive that it was up to the standard which must be maintained on all Vacuum Cup products. For months the test cars pounded over the Lincoln Highway, through the foothills of the Allegheny Mountains which skirt the factory at Jeannette. Announcement to the trade was made only when it could be done with a feeling of entire confidence.

We are safe in predicting that the new tire will prove a very welcome addition to the Vacuum Cup list.

How They Advertised Jamestown Tube Tow



THE PARADE STARTS

at 2:30 p. m.

Tomorrow, Saturday, July 15th

See this unrivaled exhibition of strength. Promptly at 2:30 tomorrow afternoon we will undertake to tow a Dodge Coupe containing three heavy men with a Pennsylvania "Ton Tested" Tube as the only tow rope, over the following route:

Beginnig at our place of business, 42 South Main St., thence going up North Main St. to Sixth St., thence east on Sixth St. to Prendergast Ave., thence south on Prendergast to Main St. and to the place of beginning.

Mr. Murphy Didn't Have a Puncture

Mr. Charles H. Murphy, the genial salesman of adding machines, has just returned from his vacation which he spent in touring though Ohio and Michigan. Although the Pennsylvania Vacuum Cup Tires on his car have seen continuous service for almost two years, Mr. Murphy reports that he has had no tire trouble whatever—not even a puncture, which prompted him to express his conviction that when it comes to service you can't beat Pennsylvania Vacuum Cups.

See the demonstration of Pennsylvania Ton Tested Tubes tomorrow and equip your car with Pennsylvania Vacuum Cup Casings and Ton Tested Tubes—the indispensible combination to the motorist who values real economy.

RODMAN AUTO SUPPLY EXCHANGE, Inc.

42 SOUTH MAIN STREET

THERE'S a saying in advertising circles that you can make an old story new by presenting old stuff in a new dress. Also, that a snappy caption catches the reader's attention and intrigues him into going down deeper into the text of an advertisement.

The Rodman Auto Supply Exchange, Inc., Jamestown, N. Y., evidently appreciate these well-known tricks of the profession. Note that one of their recent advertisements promotes a "Ton Tested" Tube tow. Nothing new in such a stunt, but the Rodman people give it the appearance of newness by dressing it differently. What parade starts? There you get the so-called "teaser" element in advertising. Your curiosity is at once aroused. Who's pulling off a parade?

Later, "Mr. Murphy Didn't Have a Puncture." Who's Mr. Murphy? You're curious to know, and read on. And when you do and learn that Murphy has used a set of tires for two years with nary a puncture, you will, if you're a tire buyer and human, give some serious thought to Murphy's Vacuum Cup choice.

The double-barreled "pull" of the tube and newspaper announcement, as was to be expected, was productive of highly gratifying publicity and sales results.

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Announcing

RED SQUARE ■ VACUUM CUP CLINCHER CORD TIRES

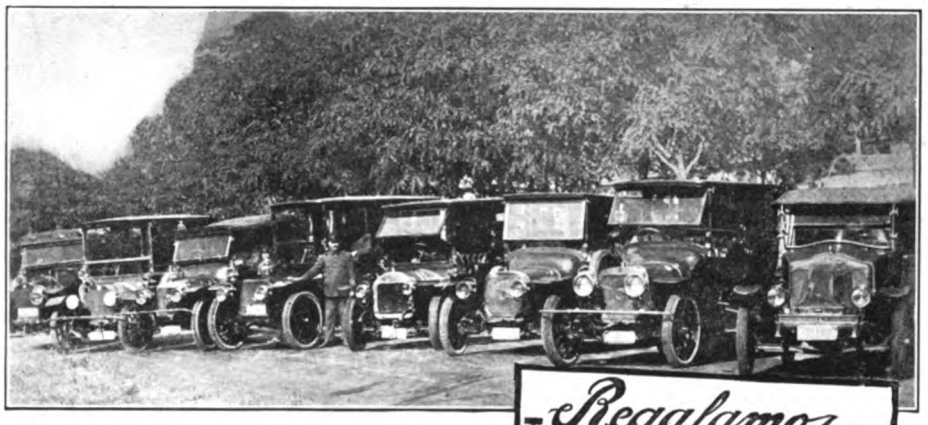
Make your store headquarters for the great army of Ford owners, which represents a generous proportion of the annual tire volume of this country. Red Square ■ Vacuum Cup Cord Tires will do it.

These tires possess the proved quality and mileage delivering goodness of all Pennsylvania Vacuum Cup Cord Tires, at epoch-making prices. Substantial production and economical sales policy account for the astoundingly low users' prices quoted.

Pennsylvania quality strictly maintained.

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Vacuum Cups on City of Buenos Aires Fleet



ROBERT W. PALM, our enterprising South American representative, has "gone and done it again!" Here's his latest triumph, a fleet of official automobiles owned by the City of Buenos Aires, every wheel being Vacuum Cup equipped.

The advertisement which is reproduced is sent us as a good example of how the Compania General de Aceites, Pennsylvania distributors, pull off stunts and, incidentally, sell a good many Vacuum Cup Tires. Our friends below the equator believe in graphic art work in advertising. A translation of this newspaper advertisement reads:

We are giving away three luxurious Special Six cylinder Studebaker Automobiles if you buy a super pneumatic Vacuum Cup or "Ton Tested" Tube.

You will receive a lottery ticket to be drawn on the 31st of the coming April and the 31st of the coming July.

This lottery is authorized by the national government.



On the left of the crossbones, "You pay for quality and durability," and on the right, "Security does not cost you anything." Over the skull is the word "Avoid," and beneath it "By equipping your automobile with the super pneumatic Vacuum Cup. You will economize expenses on tires."

All Cars Look Alike to Vacuum Cups

ENTHUSIASM of the highest degree always is being promoted by the exceptional performance of Vacuum Cup Tires. The latest Pennsylvania distributor to voluntarily write us and tell us of some of the good things that have come under his personal observation is William E. Baily, Baily Tire Company, Oklahoma City, Okla. We are pleased to print Mr. Baily's letter here because it is an accurate barometer of the high esteem in which Vacuum Cup Tires are held by distributors everywhere.

"Since July, 1920," he writes, "we have not had a single adjustment to make nor have we had a tire wear out. We have kept a very close tab on them and have had some wonderful records.

"A Vacuum Cup equipped Buick roadster has made over 21,000 miles without a puncture, and is still going.

"An Oakland made 6,500 miles locally, then went to California and returned last October. It has run locally ever since and is still going. One puncture in Arizona.

"A Hudson Super has made 12,000 miles, including a trip to Colorado. Middle rows of cups still in sight. No punctures.

"A Willys-Knight drove from here to New York City, spent three months in the Adirondack mountains, went north to Quebec, and back home last September. It left here recently with the same casings to make the same trip. Going some!

"We could go on mentioning hundreds of others that have made wonderful records. Will say that we believe Vacuum Cup Cords have the most miles for the money of any tire made."

Free Tube Window

OUR good dealers at Faribault, Minn., T. H. Loyhed and Son, are responsible for this thoroughly well-done window trim, promoting the Free Tube offer, and they are to be congratulated upon the manner in which it is done.



This trim is typical of the many which heralded the reinstatement of the Free Tube offer, and from all sections of the country we have reports to the effect that they were instrumental in giving the "Ton Tested" excellent publicity and in closing a large number of sales for Vacuum Cup Tires.

Service? You Said It!

MORE than a year ago, the Beverly Garage, Beverly Hills, Cal., put Vacuum Cup Tires on the rear wheels of a Hudson roadster belonging to Thomas C. Bundy. Mr. Bundy, it may be remarked in passing, once wielded a championship tennis racquet. He now is a well-known real estate operator in and around Los Angeles.

Proprietor Quinlan of the Beverly Garage is one of those Vacuum Cup dealers who believes that service doesn't end when the purchase price is paid, but only after the tires have lived up to their honored reputation with a record of achievement worthy of that reputation. He therefore asked Mr. Bundy how his tires were behaving. Mr. Bundy told him in a few words:

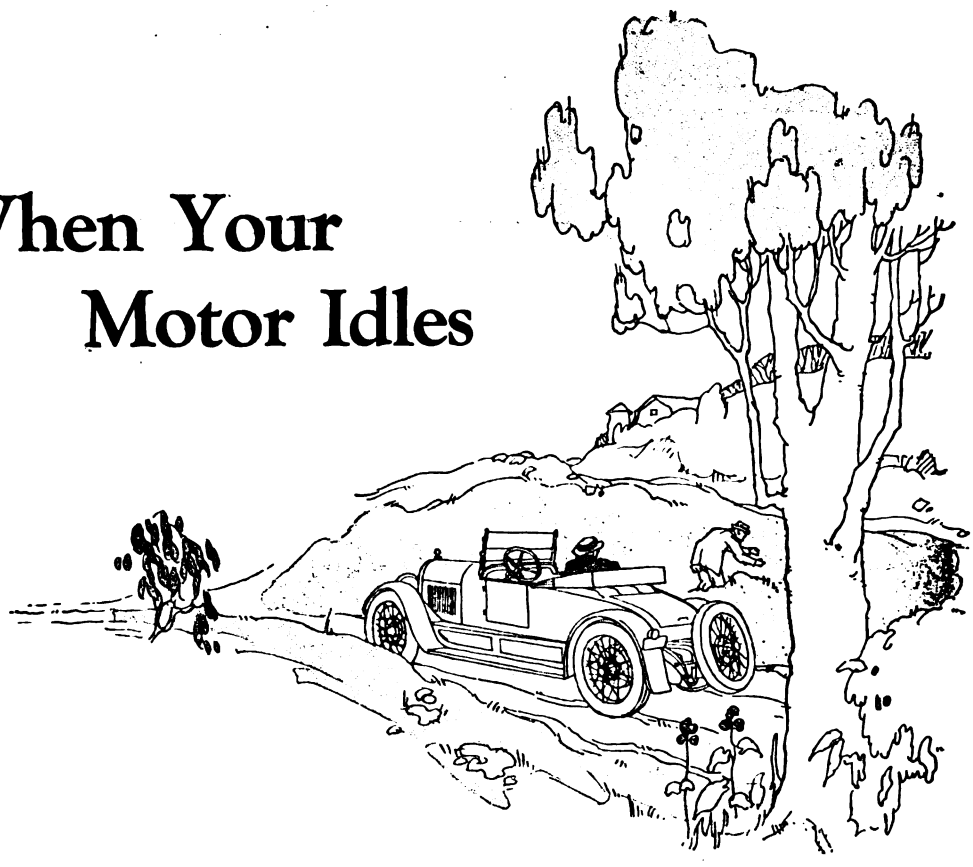
"I have run over 20,000 miles on one and over 18,000 miles on the other," he said. "So far as I can remember, neither tire has ever been off the wheel during this time, and both still look good for another ten or twenty thousand miles."

"The beauty of handling Vacuum Cup Tires," comments Mr. Quinlan, "lies in the fact that, not only are they a profitable line, but they sell themselves so thoroughly through staunch service that they make lifelong friends of even the hardest-to-please customers."

Don't forget to send in YOUR pictures and stories for the Vacuum Cup Chronicle

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When Your Motor Idles



Can the man who drives your car confidently allow the motor to idle, assured that only a soft, smooth, sustained purr will mark its pulse?

That is when the merits of a Morse Silent Chain in the front end of your motor are most impressive. Doing away with clattering gears, it drives cam shaft and accessories quietly—it gives silent testimony to the inherent excellence and refinement of your motor.

Morse Chain does its work thus silently and smoothly because of the technical excellence of its "rocker-joint" design, and because of the rigorous care with which Morse standards of accuracy are maintained in its making.

Refine your motor with this silent, flexible, durable cam and accessory drive.

MORSE CHAIN COMPANY

Main Office and Works
ITHACA, NEW YORK

Sales and Engineering Office
DETROIT, MICHIGAN

MORSE

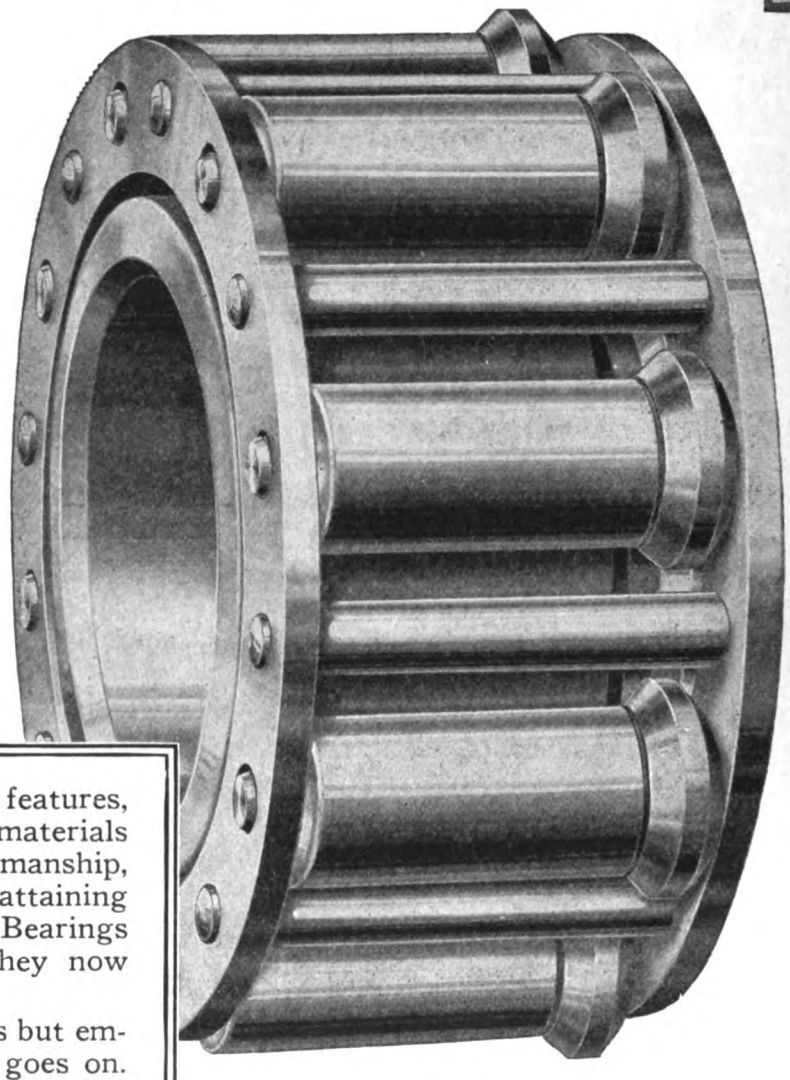
GENUINE SILENT CHAINS

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CARRIES THE LOAD



TAKES THE THRUST



EXCLUSIVE features, high grade materials and careful workmanship, have shared in attaining for Bower Roller Bearings the high place they now hold.

This superiority is but emphasized as time goes on.

BOWER
ROLLER BEARING CO.
Detroit Michigan

"Notice: The Bower Bearing is patented in the United States and several foreign countries and any infringement of the exclusive right to make, use, sell or vend same will be duly prosecuted."

Exclusive Bower Features

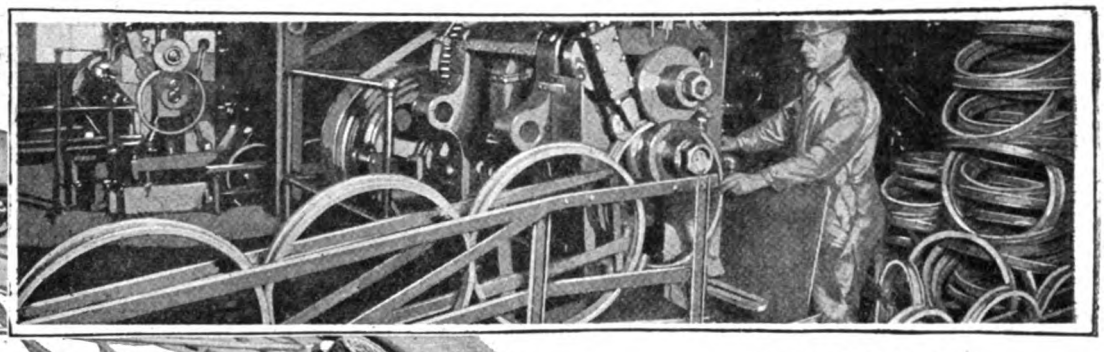
Separate bearing surfaces for load and thrust. Parallel raceways. Self-aligning. Never need adjusting. Does not develop end thrust under loads. Will not bind or end-slip.

BOWER SAVES POWER

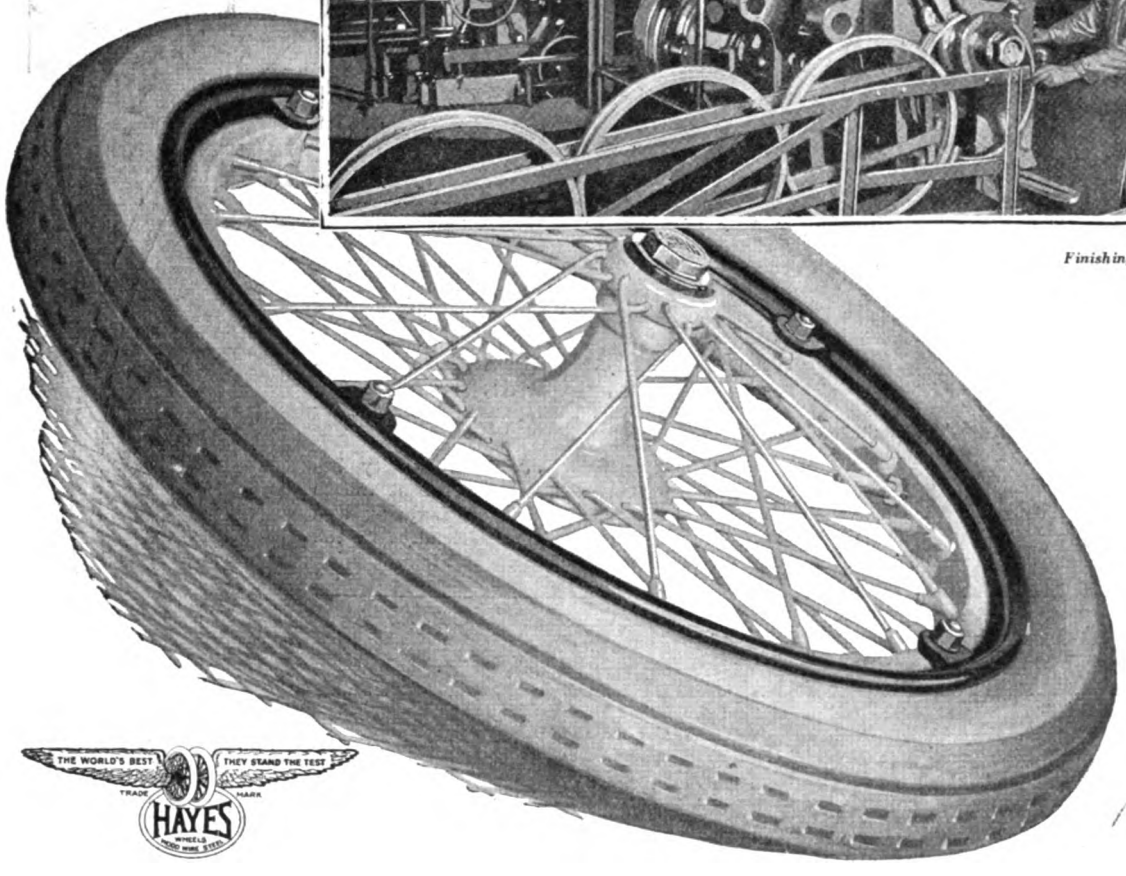
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HAYES

DEMOUNTABLE AT THE RIM



Finishing and Truing Felloes



IMMENSE quantity production on Hayes demountable at the rim Wire Wheels necessitates the most efficient automatic machinery. From morning until night a steady stream of wheels flows smoothly through the factory. Every day 200 complete sets—800 wheels, are transformed from rough steel into the finished product, ready to ship. Not one operation is performed by hand that can be handled as efficiently and economically by machinery. The resulting economies in manufacturing costs are passed on to the motor car manufacturer, who in turn can pass them on to the consumer. Our staff of wheel designing experts is at the service of any manufacturer in designing and planning our product to his particular requirements.

WIRE WHEELS

47

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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Service in *Quality*

The automotive electric equipment manufacturer to be a factor in the business must have a modern plant of capacity to produce and deliver the apparatus of quality in large quantities, but he must not lose sight of the need of maintaining the highest standards in accuracy.

The large Automotive Equipment Manufacturing Plant, which Westinghouse has built in Springfield, Mass., is equipped with the latest types of machine tools and testing apparatus. This plant has at present a normal capacity for manufacturing electrical starting, lighting and ignition equipment up to twenty-two thousand car equipments per month.

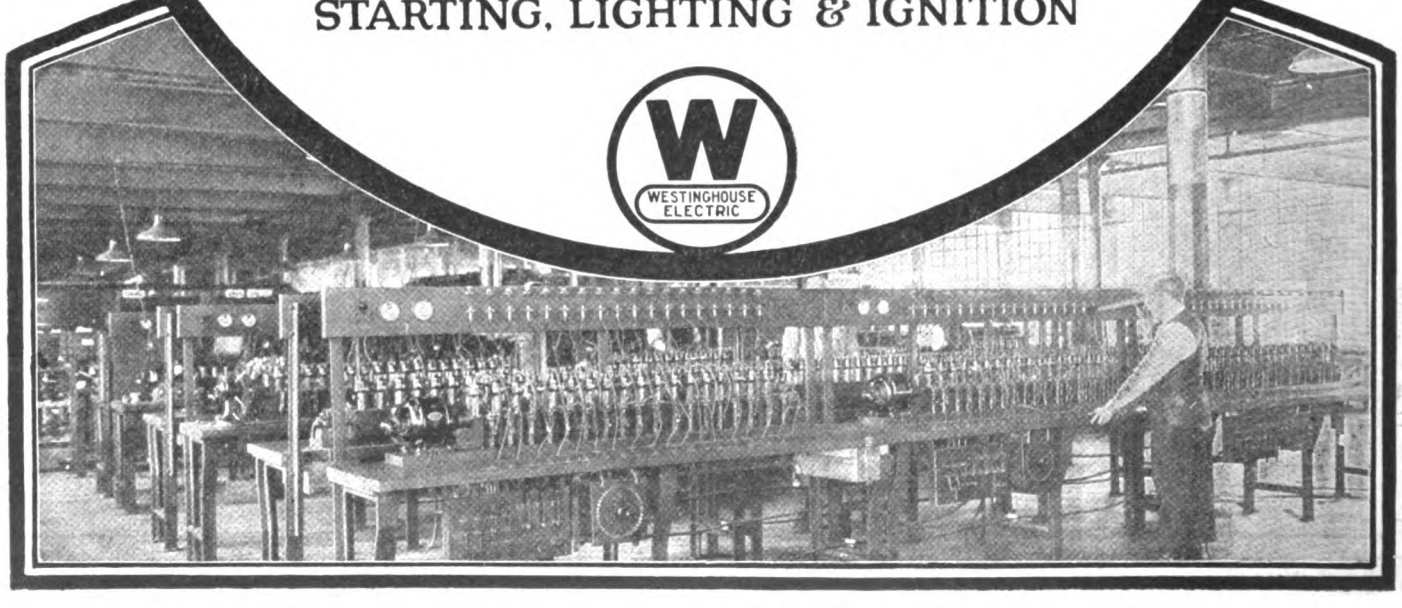
But Westinghouse has gone further and supplemented mechanical excellence with intelligence and a conscience. Experienced Specialized Engineers guide each process in the production of Westinghouse automotive equipment. Under the guidance of these men, skilled machinists and electricians build Service into each electrical unit that passes through their hands.

It is this Service of Quality before and after the sale, that marks Westinghouse Starting, Lighting and Ignition Apparatus as leaders in the Automotive Equipment Field.

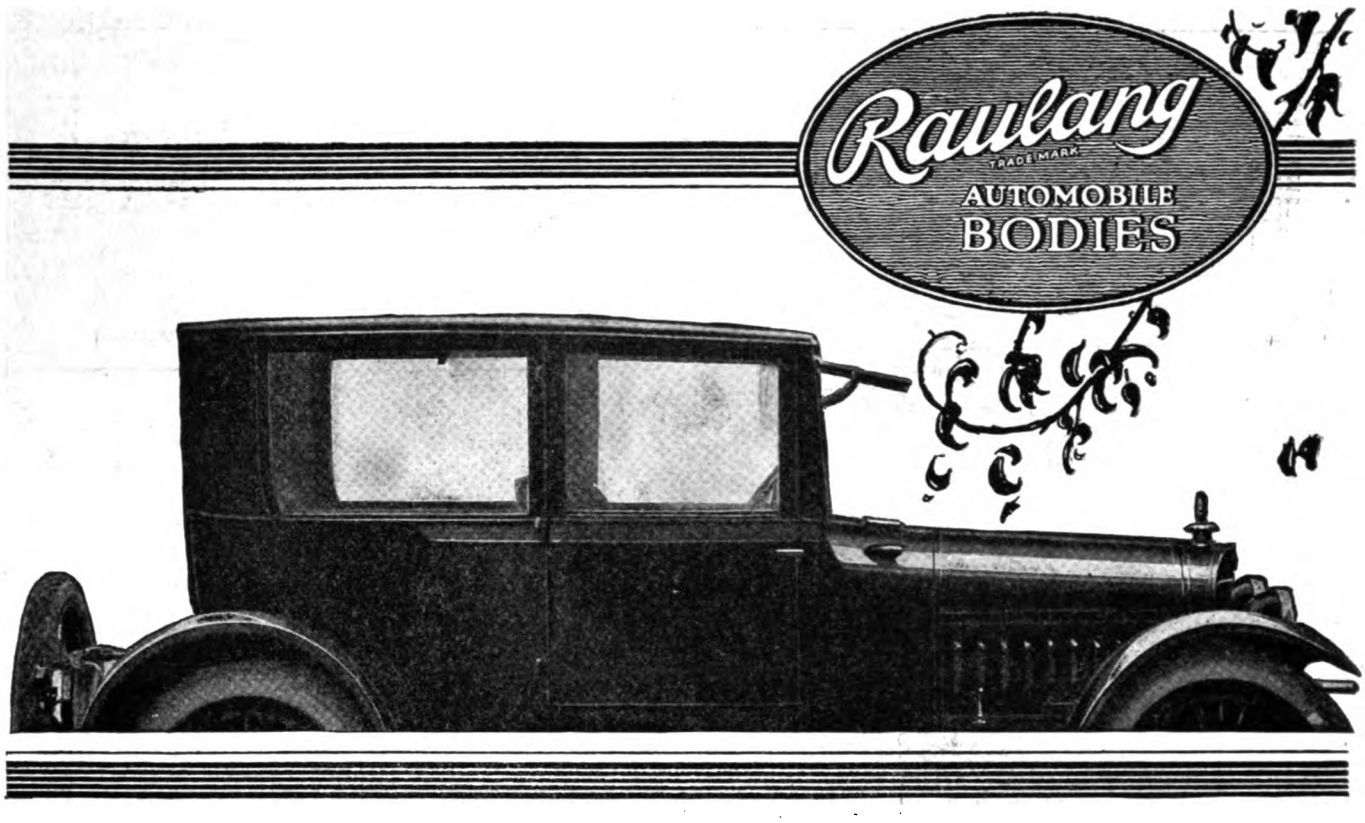
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Automotive Equipment Department
Sales and Service Headquarters: 82 Worthington St., Springfield, Mass.

Westinghouse

STARTING, LIGHTING & IGNITION



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Raulang Coachwork

A Production STANDARD in the Industry



THE RAULANG reputation for fine Coachwork is a "constant" in automotive circles—something solid and stable. Like all enduring things, it grew slowly—nearly seventy years of fine coach building are back of each body we produce.

But today that same superb hand-craftsman effect is being produced on RAULANG Enclosed Bodies **at Quantity prices by Production Methods.**

Don't harbor the idea that Raulang Bodies are in the High Price class because they are in the High Quality class. Just the reverse is true—notably low prices in spite of the fine quality.

The proof is found in the fact that the famous Raulang Enclosed Bodies are found on many popular priced cars.

A Raulang Body helps sell the car—and costs no more than lesser bodies.

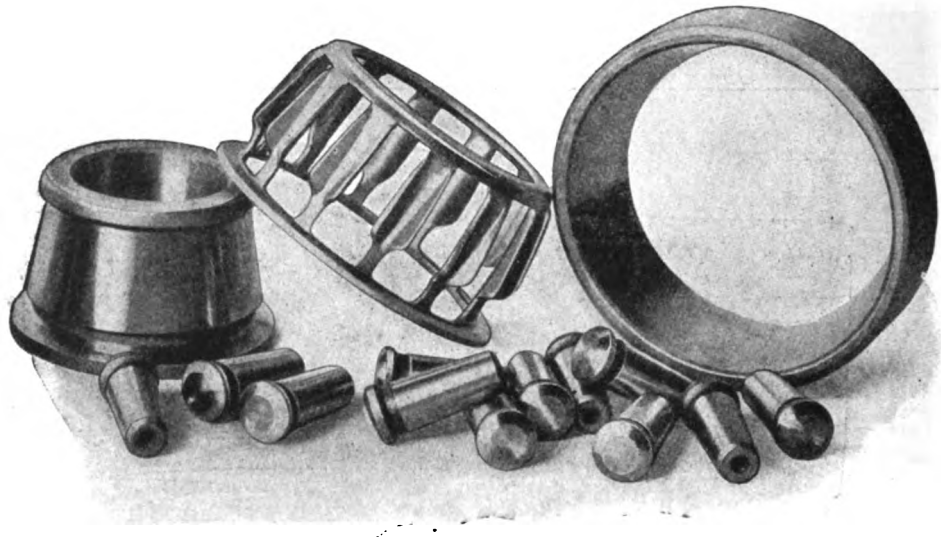
RAULANG BODY DIVISION

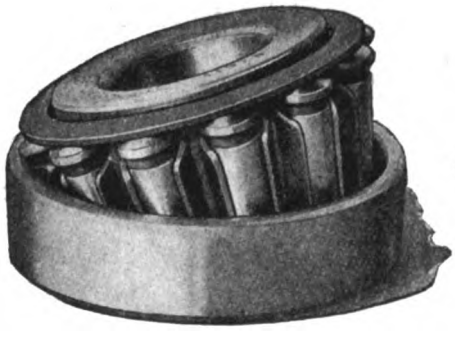
The Baker R & L Co.

CLEVELAND, OHIO. U.S.A.

Raulang enclosed bodies are not supplied to individual customers—only in quantity to motor car builders.

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The Whole and its Parts

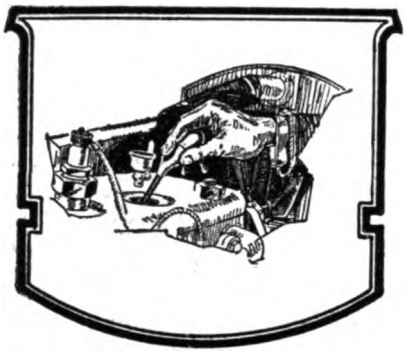
"THE whole is equal to the sum of all its parts." The new style Bock Bearing, with the one piece cage of sheet metal, invites your inspection, as a whole and in its component parts. When you see it, and see its performance, we believe you will agree that this is the "Quality" taper roller bearing.

THE BOCK BEARING COMPANY
TOLEDO, OHIO

BOCK

Quality TAPER ROLLER
BEARINGS

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Sprayed in through the spark plug vents, Motor-Kleen enters the pores of the carbon, disintegrating same into a finely pulverized powder which is blown out through the exhaust.

Every Sale Brings Repeat Orders!

YOU only have to sell Motor-Kleen once—after that it sells itself!

When a customer buys a can of Motor-Kleen—the scientific carbon remover—you win his good-will—much more important than the sale itself.

Motor-Kleen is a product you can safely recommend to your customers. Guaranteed free from acids, alkalies or ether, it cannot injure the engine or interfere with lubrication.

Its economy, easy application and effectiveness in removing carbon make Motor-Kleen a fast-selling shelf article with big repeat sales.

Write for full information regarding attractive jobber-dealer sales proposition.

MOTOR-KLEEN CORPORATION
Factory and General Office
Long Island City, N. Y.

New England Distributor
HARRIS COMPANY, INC.
89 State Street, Boston, Mass.

Southern Representative
THE FAUCETTE-HUSTON CO.
Chattanooga, Tenn.

MOTOR-KLEEN
TRADE MARK
The Scientific Carbon Remover

Pint can (will clean 16 cylinders) **$1.00**

Spray (assuring correct measure and complete distribution within the cylinder) **.30**



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Bethlehem Betterments for Motordom



—they must have been *waiting* for this one!

This "baby" of the Bethlehem Family sold fast before a single line of advertising boosted it to trade or public. Never imagine car-owners can't see quality in a low-priced item! They saw it in this socket wrench—and the dealer sees a sure seller and a clean profit in it.

Quickway
BETHLEHEM

"A Whole Tool-Kit All by Itself"

Built strong; finely machined and neatly finished; attractively delivered in a durable case. FITS 93 PER CENT. OF ALL NUTS ON ANY CAR—including Fords. Looks worth twice its price.

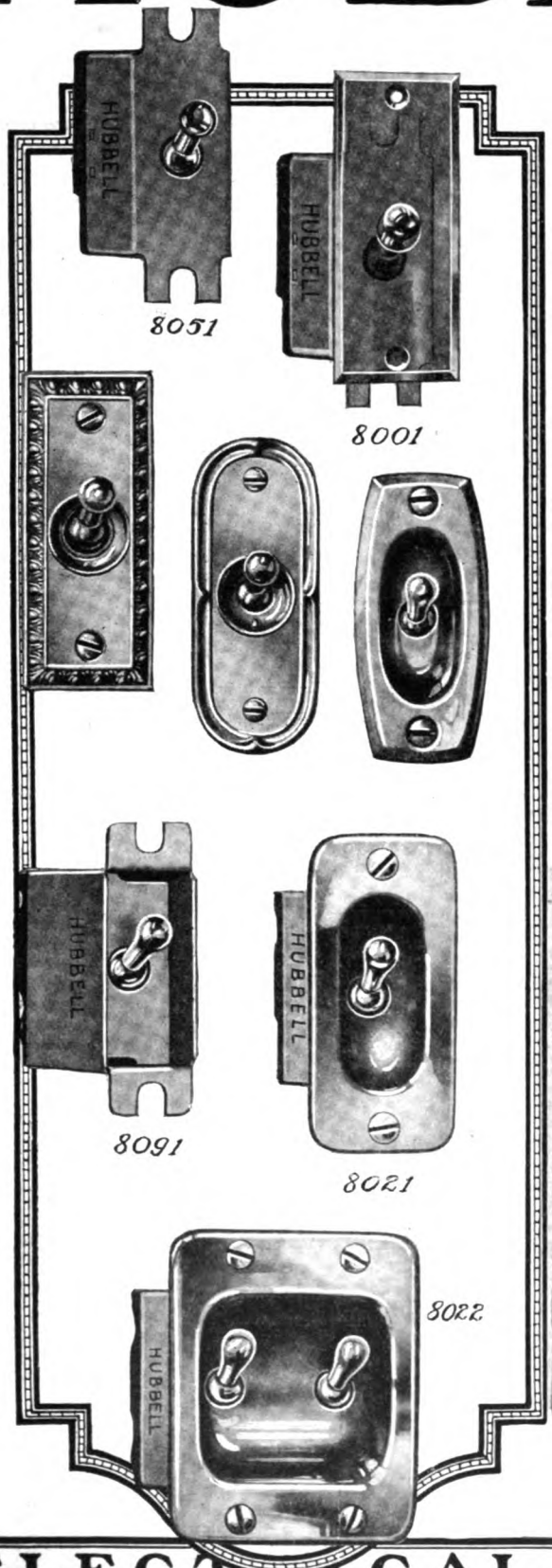
—even before it was advertised it sold—BIG! And now, with a smashing advertising campaign boosting it for dealers, it sure DO move!

Want to have a look at one before you talk to your jobber? Glad to send you one on spec.

BETHLEHEM SPARK PLUG COMPANY, Inc., of Bethlehem, Pa.

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HUBBELL



Toggle Switches

Add character to enclosed automobile Lighting Equipment.

Mechanism is strong, neat and convenient.

Furnished with standard or special plates—any finish.

Specify Hubbell Toggle Switches for enclosed body work.

HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.
2232-U



ELECTRICAL SPECIALTIES

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FISHER BODIES

When the motor car salesman points to the now familiar symbol and says: "You see the body is by Fisher," he feels sure that you will understand that he has paid the highest tribute words can convey.

We are deeply sensible of the responsibility which rests upon us by reason of the high regard in which Fisher bodies are held.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT.

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"Floating Anchorage"

The New Idea in Spring Suspension -Easily Added to Any Car

HERE is a revelation in car comfort. You can see it for yourself. Compare this new way of cradling your car on Eclipse Master Springs with the usual shackle fastening. Note the "Floating Anchorage" every spring has. When you hit a rut in the road you can see what will happen, the car springs will rise and fall gently because the shock is absorbed in these triple-leaf curved springs of steel and their shape makes rebound impossible. Eclipse Master Springs—

Take Up the Task Where Springs Leave Off

They provide *spring suspension for your Springs.* The roughest road shock that surges toward your springs is swallowed up and breaks in harmless ripples, imperceptible to the occupants of the car. The natural resiliency of your springs is not choked off by the counter action of a stiffening absorber. Your springs do their work better and easier. You ride in surprising ease.

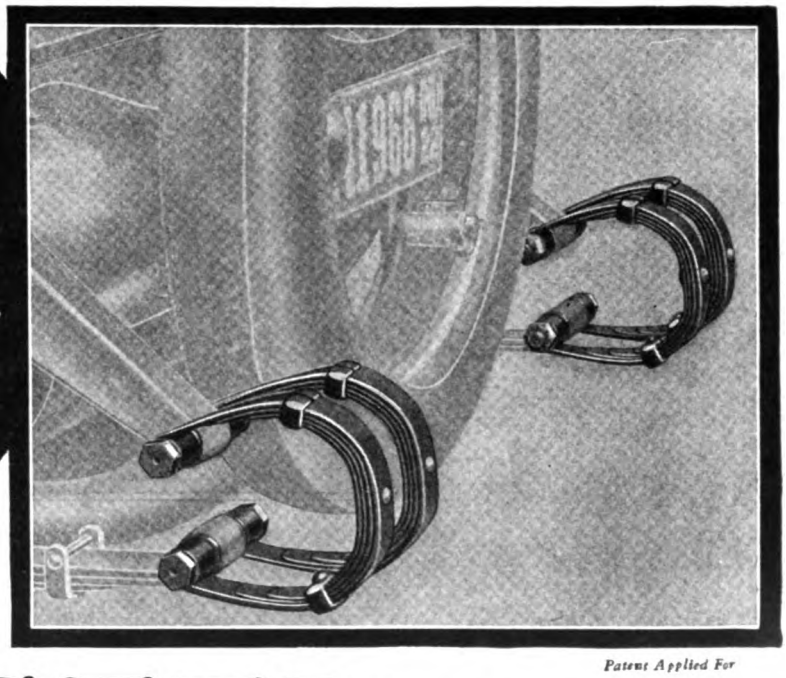
Like Lengthening the Wheel Base

Eclipse Master Springs actually add inches to the spring length. They give the car the riding effect of a much longer wheel base. Spring breakage becomes almost unknown. And this great improvement in riding quality will be noticed instantly. Car manufacturers and car distributors will find in Eclipse Master Springs the solution of most spring troubles and a marked advantage in selling. Your car equipped with Eclipse Springs will match any car regardless of price in any riding competition.

Dealers everywhere will find a ready and profitable market waiting for this latest great improvement in the motor car field. Master Spring Builders of a quarter of a century experience have perfected this new idea of "Floating Anchorage for Springs". Dealers who join us now will reap unusual profits. Write for proposition.

INDIANA PARTS CO., Dept. 3014, Richmond, Ind.

Eclipse

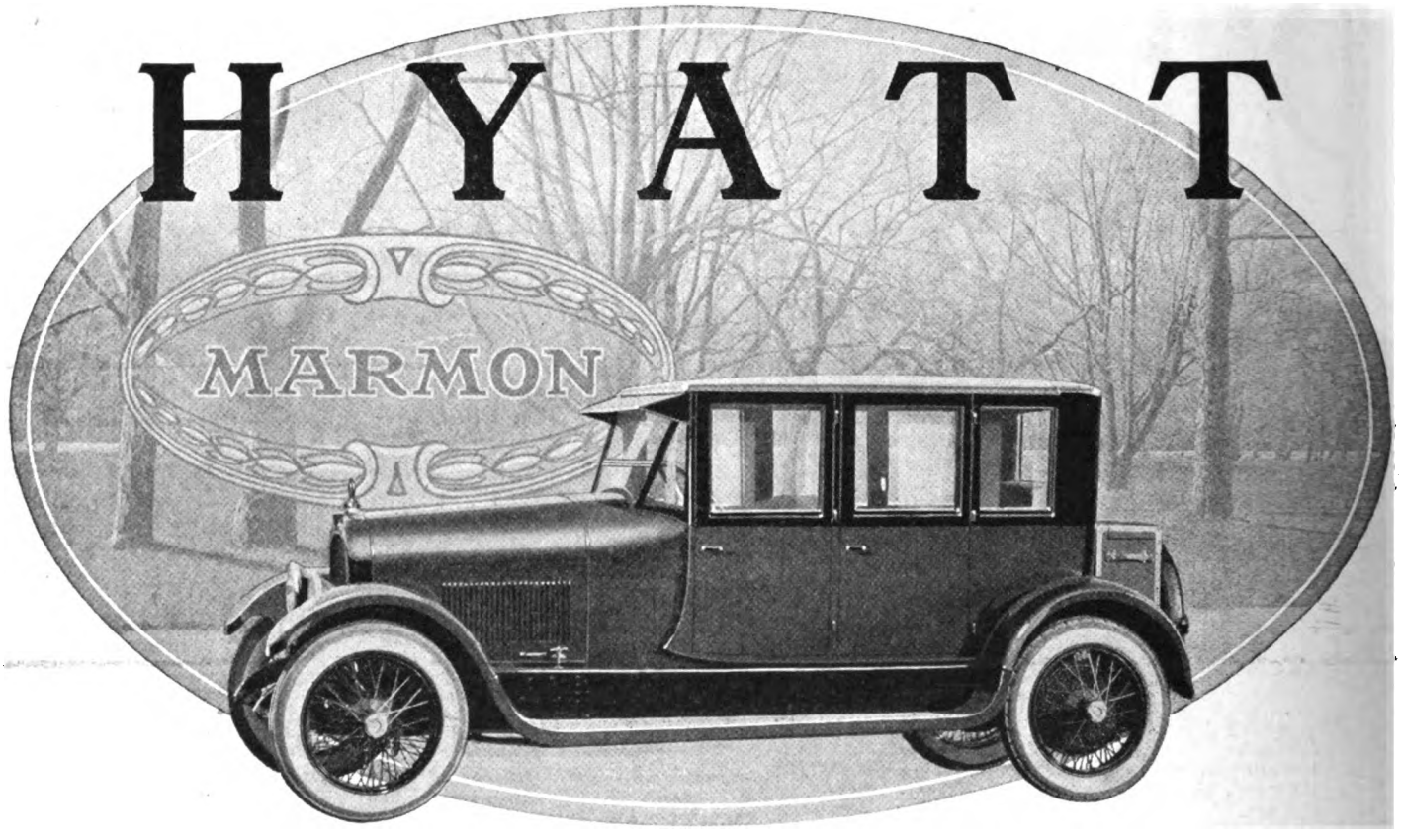


Patent Applied For

The MASTER Spring

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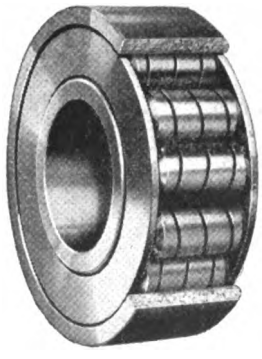
HYATT



THE Marmon car is noted for its driving and riding ease—and for its unfailing dependability.

Marmon builders have striven to maintain Marmon quality by insisting that every unit entering into the car's construction be tried and proven before its use could be considered. It is therefore a significant fact that Hyatt Roller Bearings are to be found in the transmission, rear axle and steering column.

These bearings assure a quiet operating, long lived transmission—a sturdy, trouble-proof rear axle and a free handling steering wheel which will not rattle.



A Hyatt Bearing with part of outer race removed to show the spiral rollers

HYATT ROLLER BEARING COMPANY

Motor Bearings Division: Detroit, Michigan

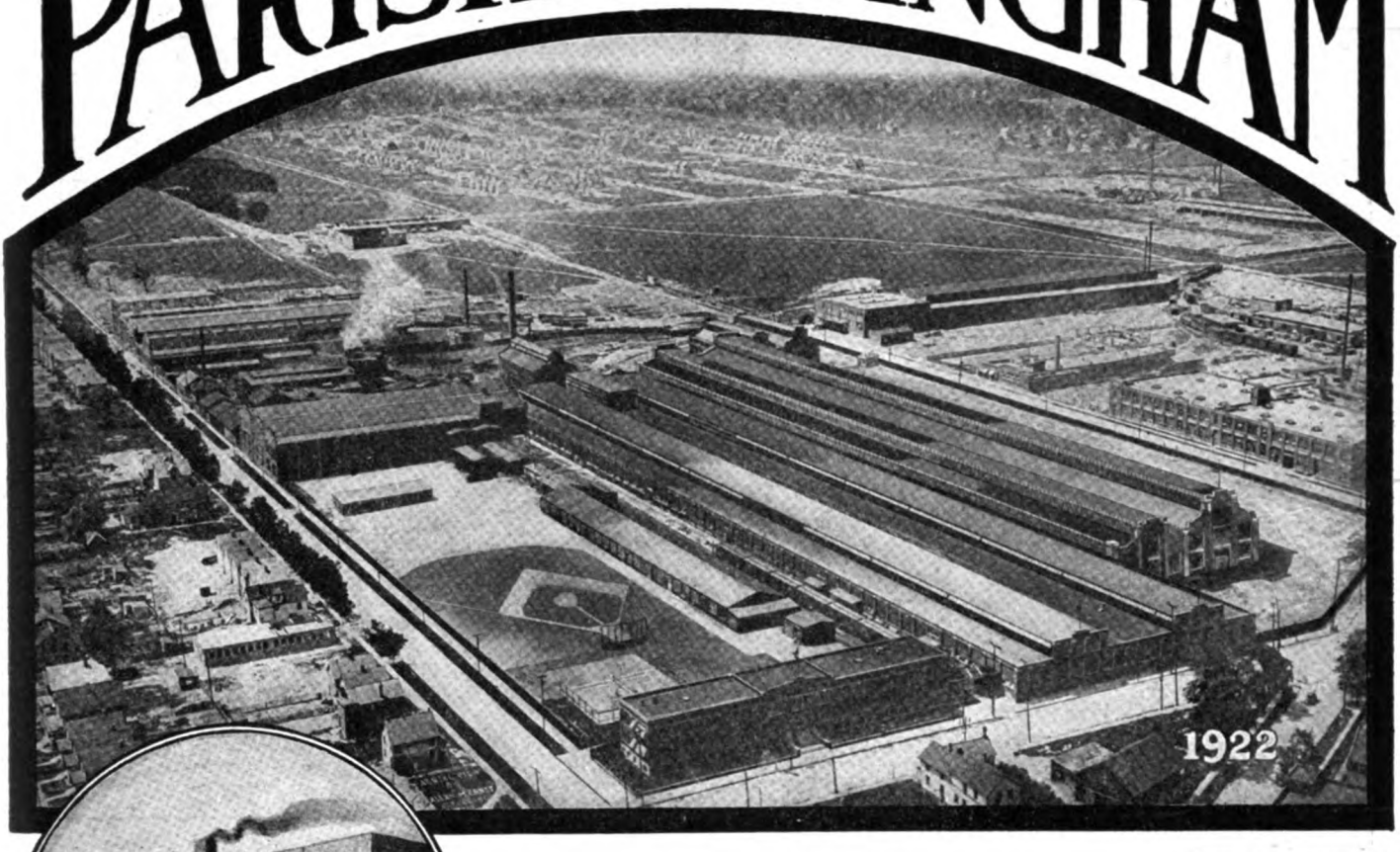
Tractor Bearings Division Chicago, Ill. *Pacific Coast Division* San Francisco, Cal. *Industrial Bearings Division* New York, N. Y.

HYATT QUIET BEARINGS

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PARISH & BINGHAM





PRESSED STEEL

FRAMES

PASSENGER CARS MOTOR BUSSES
TRUCKS TRACTORS TRAILERS

MISCELLANEOUS STAMPINGS

BRAKE DRUMS—AXLE HOUSINGS AND COVERS
RUNNING BOARDS—STEP HANGERS
MOTOR SUPPORTS—TORQUE ARMS
FENDER BRACKETS—TIRE CARRIERS
BODY BRACKETS, ETC.

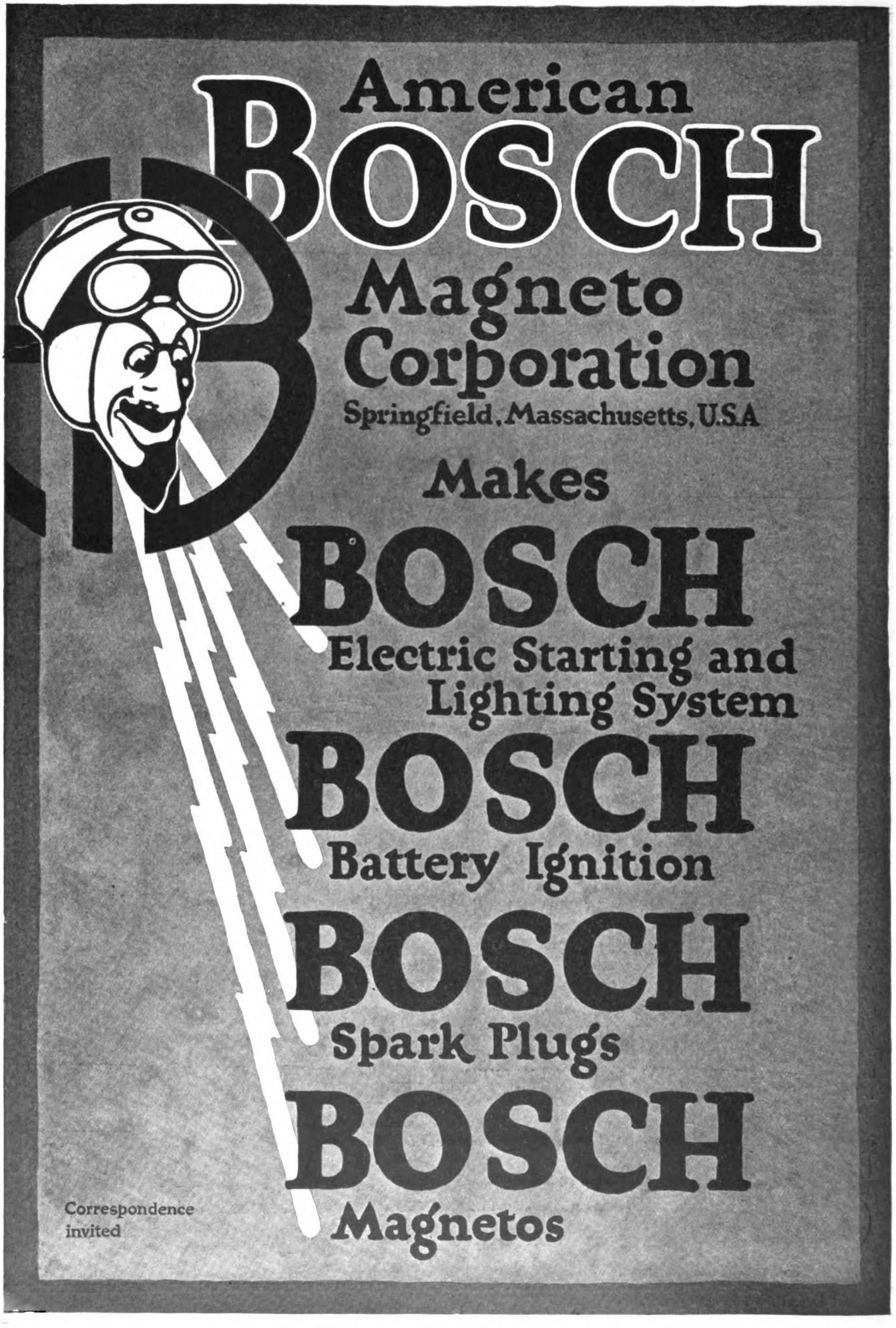
Our Engineering Dept. is at your service in helping you select suitable designs to meet your requirements. Write us.

PARISH & BINGHAM CORPORATION

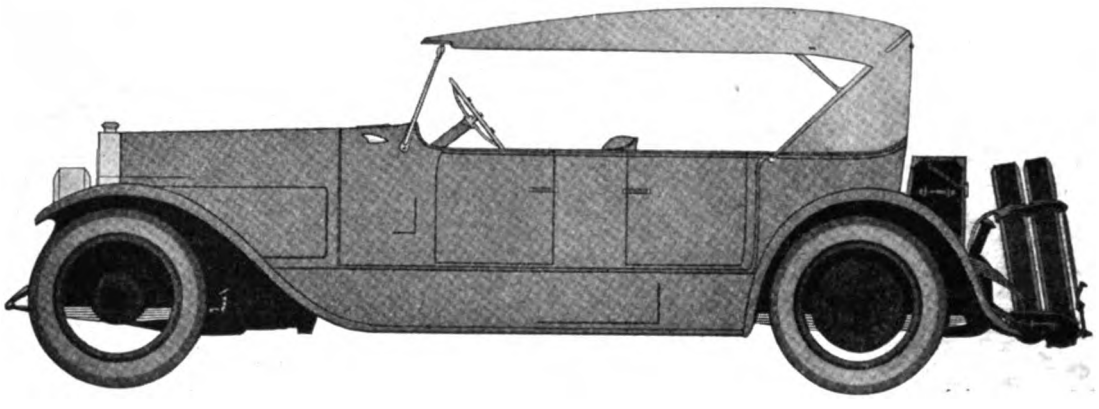
CLEVELAND, OHIO

P&B

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Four-Passenger Touring $6,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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The Mark of Quality

Lasting Achievement

WRITTEN indelibly in the annals of automotive progress is the record of Firestone's service in building tires to the highest conceivable standard.

In pledging Most Miles per Dollar to the public over two decades ago an ideal worthy of the whole industry was expressed.

Yet of even greater importance was the will and the confidence from the start to make it practical for all times.

The rapid but logical growth of the Firestone organization is tangible evidence of the force and soundness of the principle behind it. The name Firestone has gone far and wide because it has demonstrated that Most Miles per Dollar is a real and vital factor.

The Firestone Gum-Dipped Cord is the highest expression of Firestone talent—a lasting achievement in this important industry.

Most Miles per Dollar

Firestone

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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American Motors Announces

A New Series of American Cars

20% Increase in Power – Extra Equipment Added
List Prices Reduced $70 to $210

EQUIPPED with a new and enlarged 66-Horsepower six-cylinder motor (3½ by 5 inches) and mounted on the *Balanced* American chassis, improved and refined in many important particulars, we believe that at the list prices named herein this new series of American cars represents astounding values in both open and closed models. Note the size (127" wheelbase) and details of finish and equipment of this series as pictured on these pages and described in the brief specifications appearing below. Then let us give you complete particulars along with information as to our long-term, long-discount contract for dealers.

CONDENSED SPECIFICATIONS

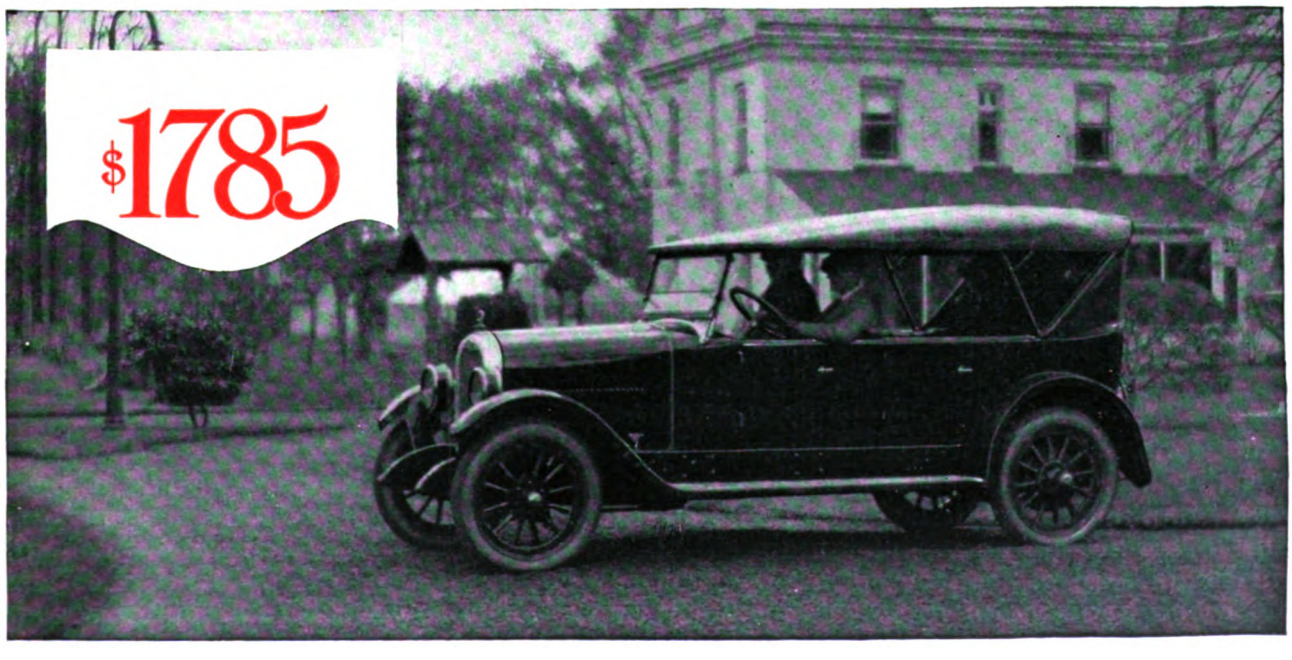
66-Horsepower (3½ ins. x 5 ins.) six-cylinder motor; single dry plate clutch; heavy type three-speed transmission; extra large bearings. I-Beam front axle, with pressed steel rear housing; special nickel gears.

Deep-section pressed steel frame; heavy steel running boards and heavy gauge fenders a unit with frame.

Alloy steel springs; 396 square inches spring surface.

127 inch wheelbase; roomy body with real leather upholstery and Marshall spring cushions; polished aluminum radiator shell; rain vision type windshield; barrel type headlights and cowl lights; cowl ventilators; tools in door; Alemite high pressure lubrication; non-skid over size cord tires (33x4½). Standard equipment including dash clock, inside mirror, windshield wiper, tonneau light, Perfection heater in Sedan.

See our 25,000 mile "Around-the-World" Warranty (Reverse Side)



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Most Complete Warranty Ever Issued -New American Guaranteed for 25,000 miles -The Distance Around the World

UNDER this warranty any purchaser can drive the new American a full 25,000 miles—or the distance around the earth—and if any part breaks under normal use and wear the factory stands ready to make it good. This warranty is represented by a signed certificate issued to the purchaser of each car and providing, incidentally, for periodical inspection by the dealer at intervals not exceeding three months. Good for an average of three years or more of actual service, this is the broadest warranty ever issued and a factor of direct aid to the dealer in building up retail sales.

LIST PRICES

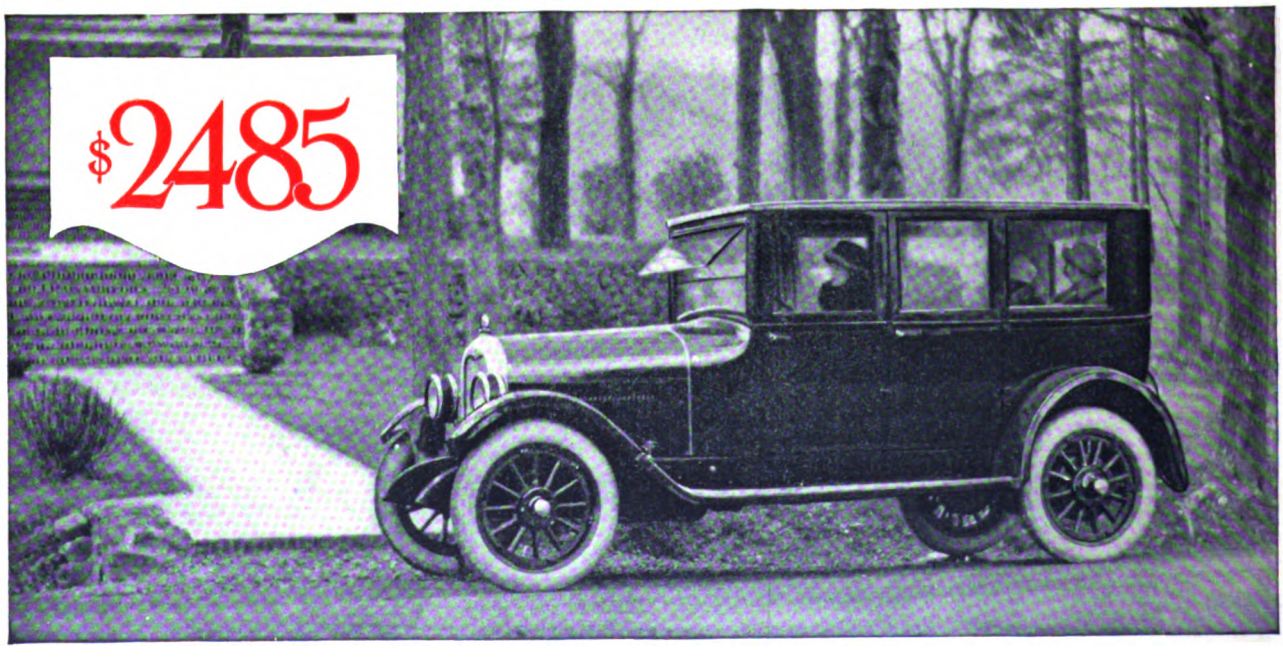
5 Passenger Touring Car	$1785	4 Passenger Sport	$1885
7 Passenger Touring Car	1850	7 Passenger Sedan	2485

F.O.B. PLAINFIELD, N. J.

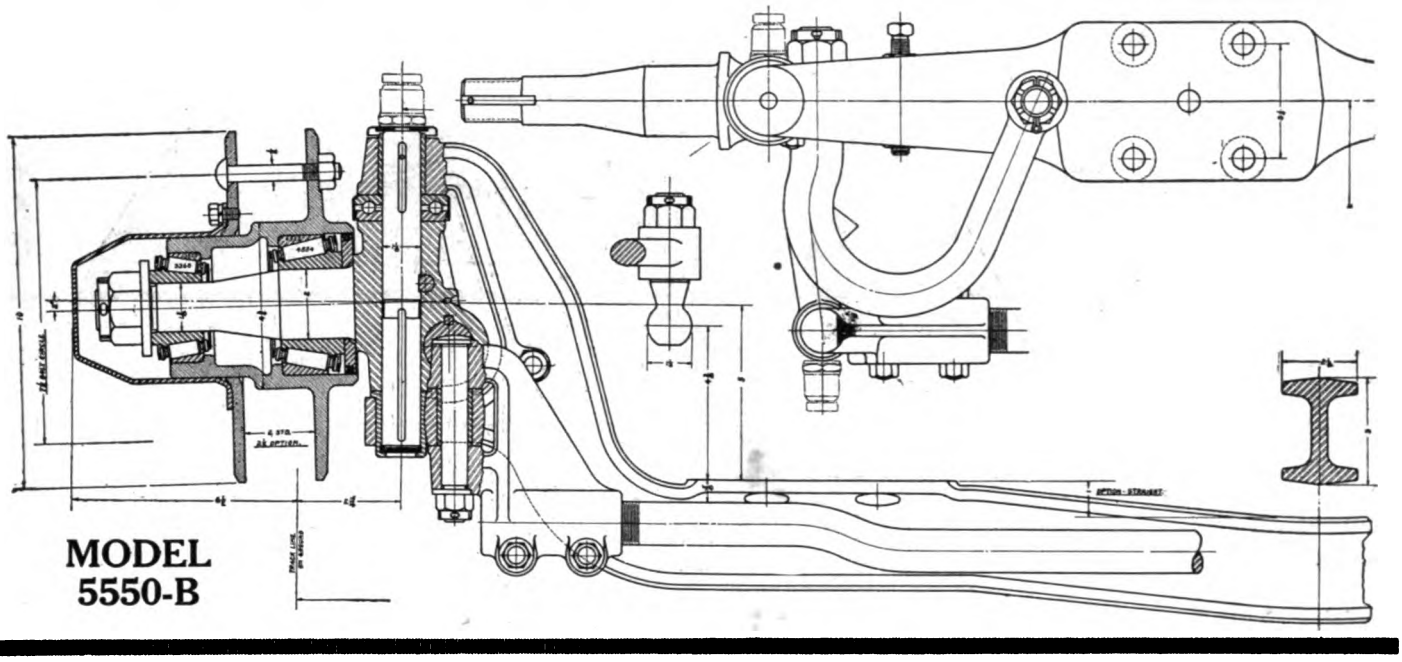
AMERICAN MOTORS CORPORATION

OF NEW JERSEY

Factory and Sales Offices PLAINFIELD, N. J.



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SHULER FRONT AXLES

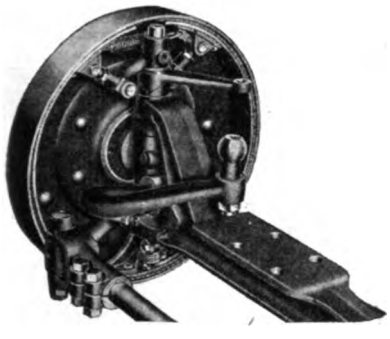
This New Model, Designed Especially for High-Speed Interurban Motorbuses, Meets Every Requirement

The rapid development of interurban motorbus transportation has created manufacturing problems that cannot be met successfully with units designed primarily for other service. SHULER early recognized this fact and has developed specialized front axles that meet exactly the new requirements.

Model 5550-B, though designed for the comparatively light work of the high-speed interurban motorbus of 18 to 25 passenger capacity, is heavy and sturdy enough in construction to provide an unusual degree of safety. The axle center is S. A. E. Spec. 1035 30-40 carbon steel, drop-forged in one piece and thoroughly heat treated. Steering knuckles and arms are S. A. E. Spec. 3135 chrome nickel steel, drop-forged and thoroughly heat treated. Ball thrust bearings are used in the knuckle heads to insure easy steering. Timken tapered roller bearings are standard wheel-bearing equipment.

A five-inch drop from spindle line to spring pad permits a floor height of only 26 inches, and yet gives ample road clearance. The lowering of floor and steps made possible by using Model 5550-B insures easier, safer and quicker loading. The exceptionally wide tread-range of 56 to 68½ inches permits a wide body floor, which, together with the low center of gravity, guarantees maximum stability in operation.

Heavier models of substantially this same new SHULER FRONT AXLE are available for motorbuses of larger size and greater passenger capacity. Detailed information and specifications will be forwarded on request.



Shuler Front Wheel Brake

permits simultaneous braking on all four wheels, brings tremendous factor of added safety and practically eliminates danger of skidding. The SHULER FRONT WHEEL BRAKE is designed into the standard line of SHULER FRONT AXLES for Motorbuses, Motor Trucks and Trailers. Manufacturers are invited to write us for more detailed information.

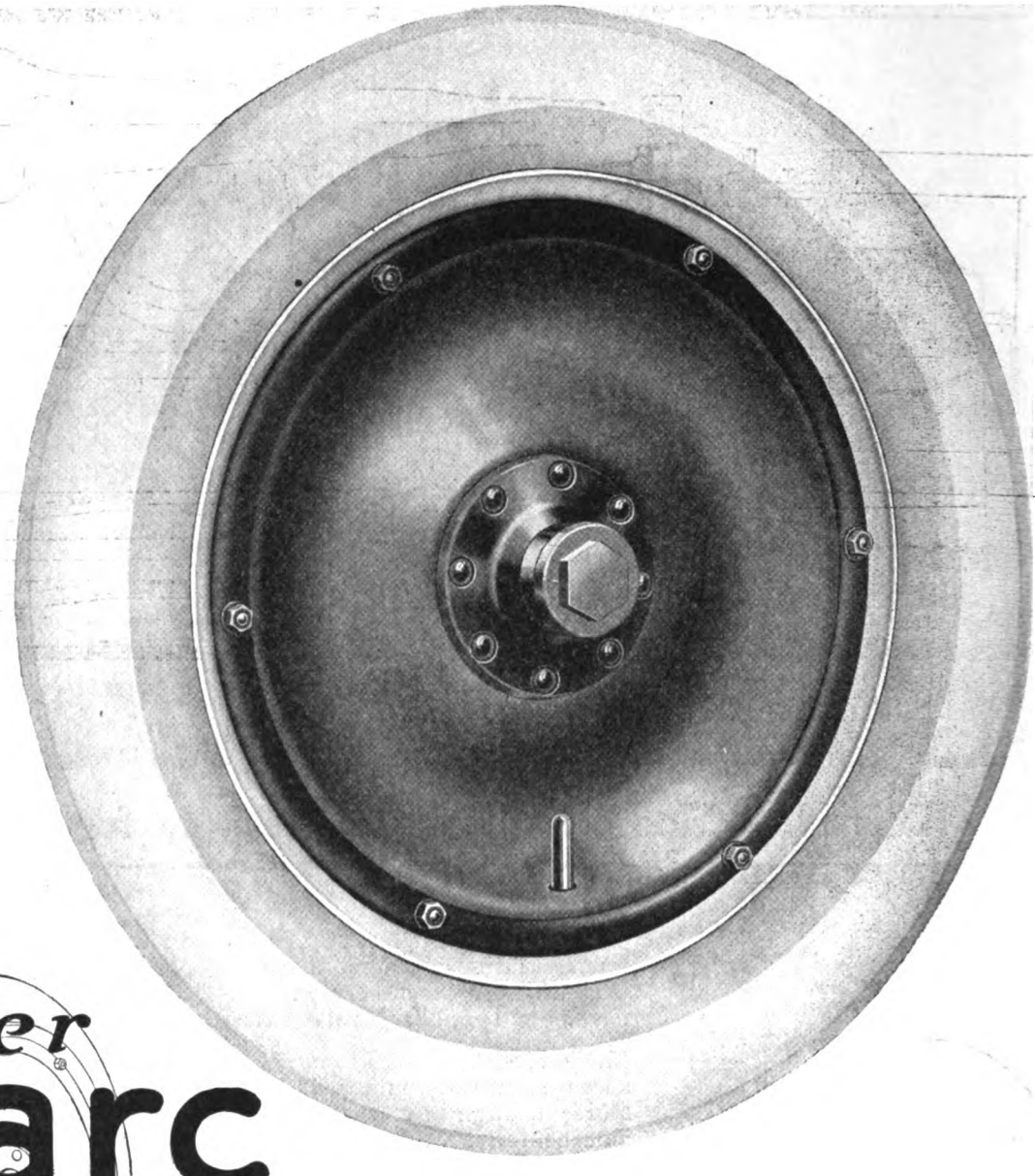
We solicit correspondence with manufacturers of motorbuses, motor trucks, trailers and tractors, with a view to offering our co-operation in designing SHULER AXLES into your specifications. We make front axles exclusively.

SHULER AXLE COMPANY
INCORPORATED

Front Axles for Trucks, Tractors and Trailers

3008 Jones Street **Louisville, Kentucky**

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Gier
Tuarc
STEEL WHEELS
—a Motor Wheel Product

EXQUISITE appearance is not the only explanation of the sweeping popularity of Gier Tuarc Steel Wheels.

It is their superior engineering which is making them standard factory equipment on a growing number of quality cars. Tuarc construction is actually so highly developed as to surpass ordinary wood wheels in lightness at **the periphery!**

Tuarcs introduced the two-arc design which first made it possible to use standard wood wheel valve-stems on steel wheels—directly accessible with any air hose.

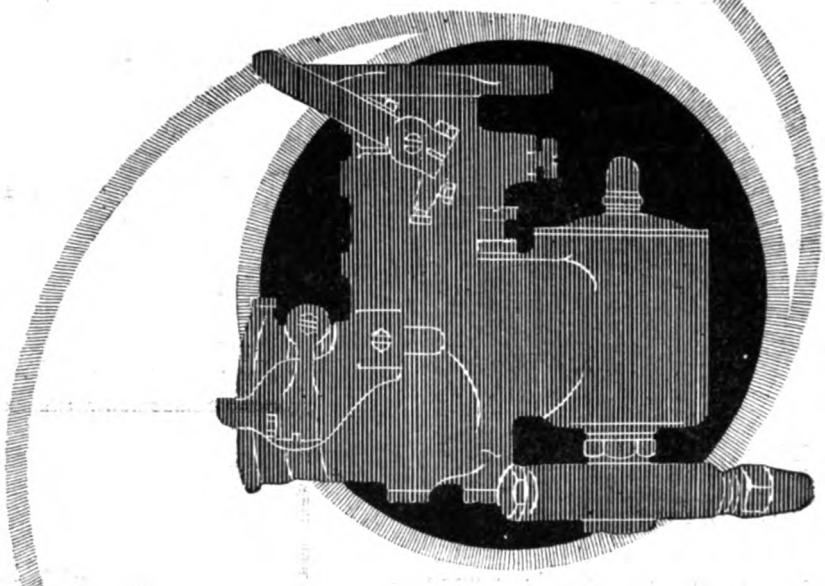
Tuarcs preserve the convenience of demountable rims on steel wheels, eliminating the need for any changes in the tire carrier. Tuarcs have done away with special hub fittings. They fit the axle just as does any standard wheel.

Small wonder that the manufacturer, the dealer and the public look to Tuarc wheels for the most advanced steel wheel design.

Motor Wheel PRODUCTS

MOTOR WHEEL CORPORATION, Lansing, Mich.
Motor Vehicle Wheels Complete — Metal Stampings — Steel Products

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The Holley Quality Carburetor on your car is a highly developed *metering* device. It measures accurately the necessary proportions of gas and air for perfect fuel combustion.

HOLLEY CARBURETOR COMPANY, DETROIT

HOLLEY

The QUALITY CARBURETOR

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POCOTOP

TOP FABRICS

Add to the beauty of any make of car

Their deep, rich grain and luxurious appearance make a decidedly favorable impression upon prospective motor car buyers. POCOTOP is a real talking point for car salesmen.

POCOTOP is a beautifully finished, rubber coated top fabric. Extremely tough and pliable, it cuts and handles easily. Twist it, bend it, turn it as you will, you will find that you can't crack the coating.

Send for samples of POCOTOP. Treat them rough—put them to the hardest test you can think of—when you are through, you'll admit the grain is put in to stay.

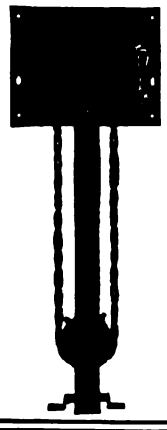
You Can't Crack the Coating

Made in all standard weights, backings and finishes for cars of every price class, but in only one quality—POCOTOP.

POCONO RUBBER CLOTH COMPANY

TRENTON, NEW JERSEY

DETROIT OFFICE: 1617 First National Bank Bldg.



PERFECT REGULATOR

Standard Equipment for America's Leading Automobiles

PERFECT WINDOW REGULATOR CO.
20 Exchange Place New York City

It's

Automobile Topics

you need every week

Just Published

QUESTIONS and ANSWERS

relating to modern

AUTOMOBILE DESIGN CONSTRUCTION AND REPAIR

By VICTOR W. PAGE, M.E.
(Author of The Modern Gasoline Automobile)

This is the latest and best automobile instruction book in the catechism form. It answers every question that can be asked about the modern car, being so complete as to include even electric gear shifting, starting and lighting, four-wheel drive, wire and cast metal wheels, and many other points of recent development.

387 Illustrations **701 Pages**

PRICE, $2.50

AUTOMOBILE TOPICS
Book Department 1790 Broadway, New York

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An engineer's best work may be spoiled by a car owner who neglects his gear-boxes.

DIXON'S 677 is a friend to the engineer and car builder—not only because it is the superlative gear lubricant, but also because it remains efficient for a far longer time.

Every engineer and car builder who is interested in the service of his product after it leaves his hands should write for full facts.

Joseph Dixon Crucible Co.

Jersey City, N. J. D X N Established 1827

Makers of Quality Lubricants

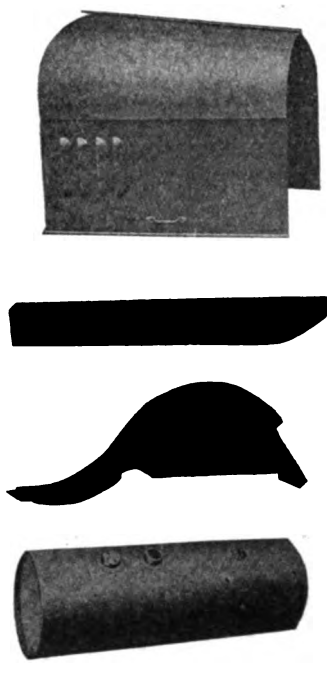
For Transmission, Differential, Spur and Bevel Gears Use Dixon's Gear Lubricant No. 677.
For Worm Drives Use Dixon's Gear Oil No. 675
For Universal Joints Use Dixon's Grease No. 672

Car Builders!

Pressed Metal Parts of Quality at Low Price, Ready Crated, Immediate Delivery to You!

This group of automobile equipment parts was made for a car just discontinued. The full list below covers the entire stock; it is for sale in whole or in part at a price very advantageous to the buyer. We are specialists in pressed and stamped parts and have filled this order in the ordinary course of business. To clear it we are willing to take a loss:

Quality Products Throughout



195 R. H. Front Fenders.
245 L. H. Front Fenders.
125 prs. Rear Fenders.
401 Four-cyl. Gas Tanks not enamelled.
6 Six-cyl. Gas Tanks enamelled.
90 prs. Hood Sills
321 prs. Hood Sills.
96 Hoods.
50 Hoods.
8 Hoods.
164 Four-cyl. Front Shields.
23 Four-cyl. Front Shields.
46 Front Shields.
135 prs. Side Pans.
6 Crates Side Pans (13 & 15 pr. to crate).
36 Six-cyl. Bottom Pans.
200 prs. Four-cyl. Bottom Pans.
9 Radiators, complete, 6-cyl. Car.
12 Radiators, complete, 4-cyl. Car.

Blue prints on any or all material forwarded to interested companies.

This is an exceptional opportunity for car builders, body builders and dealers. The entire stock is of superfine quality, dependable and durable. It is now held at the shipping point for immediate delivery. Let us know your requirements. Write or wire.

YORK CORRUGATING CO.

York, Pa.

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It Grips!

The Disc is Held in True Alignment Permanently "M & E"

Griptite UNIVERSAL JOINTS

are an advance in design and construction over all previous types. They keep tight in service, transmit heavy torque longer on larger angles.

Write for details.

MERCHANT & EVANS CO.
Philadelphia M&E Pa.





The Sign of Service

Let Your Nearest Ahlberg Branch Be Your Stock Room For Ball Bearings

We have all types of the highest grade ball and roller bearings in stock ready for immediate delivery.

In addition we have complete stocks of Ahlberg Ground Bearings to be had in exchange for your worn bearings, at a considerable saving.

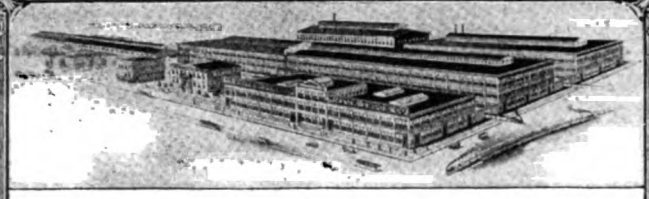
When you next need bearings call at our nearest branch.

BRANCHES:

ATLANTA, BOSTON, BUFFALO, BALTIMORE, SEATTLE, BROOKLYN, CINCINNATI, CLEVELAND, ST. PAUL, COLUMBUS, DALLAS, DETROIT, INDIANAPOLIS, LOS ANGELES, DULUTH, KANSAS CITY, MEMPHIS, MILWAUKEE, MINNEAPOLIS, OMAHA, NEWARK, NEW ORLEANS, ST. LOUIS, NEW YORK, PORTLAND, OAKLAND, PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, WASHINGTON, TOLEDO, YOUNGSTOWN

Ahlberg Bearing Company
317 E. 29th St. Chicago, Ill.

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U. S. TRUCK

Sales Franchise Presents these Advantages

Permanence

Established 1909. Third oldest truck company in the industry.

Financial Strength

Second to none. One of the strongest and most successful. Investigate through commercial agencies and banks.

Manufacturing Facilities

350,000 square feet of floor space and the most efficient equipment, devoted to the manufacture of trucks, cabs, bodies, etc.

Value

Reasonable price, consistent with quality. Costs less to operate, less to maintain, lasts longer, depreciates less and commands higher re-sale value.

Complete Line

U. S. Models 1¼, 1½, 2, 3, 4 and 5-7 tons capacity.

Established Reputation

13 years' service under hardest working conditions. 65% of U. S. users operate more than one U. S. Truck.

Time-Payment Plan

Strong financial condition of company enables us to assist dealers in handling time-payment sales on a sound basis.

Factory Co-Operation

Liberal discount, plus active support of factory organization helps to make dealers' investment more valuable.

Better inquire if your territory is permanently closed. It may not be.

The United States Motor Truck Co.

Incorporated

Cincinnati, Ohio

United States MOTOR "GOOD AS THE NAME" TRUCK



Made and Serviced for almost Every Car in America

SEARCH every name and class and price of car. Scrutinize the myriad of items in their makeup known as "outside purchases"—components not considered advantageous to construct in the car factories themselves.

In the supply of these mighty aggregates of externally purveyed items it is safe to say that *no single source* has been drawn upon as universally as the Briggs & Stratton Basco line of electrical units and assembles.

One or more of these products is to be found on practically every car—certainly in a predominating majority of every class of car.

The obligation imposed by such leadership is obvious. It places upon every product made under this name the duty of sustaining undiminished a record and high reputation that have been eleven years in forming.

This is at once an advance guarantee of continued functional excellences and for far-seeing sales policies, a resale factor of high value.

Other BASCO ***Products***

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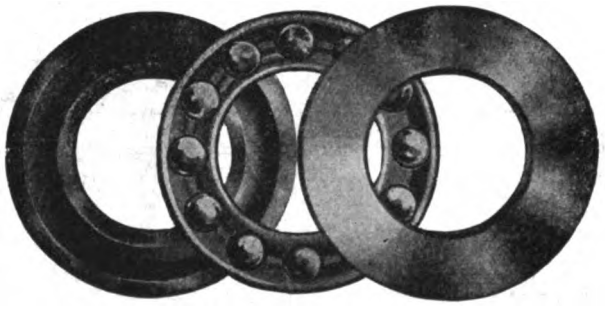
A BASCO PRODUCT

Briggs & Stratton Co.

Milwaukee, Wisconsin

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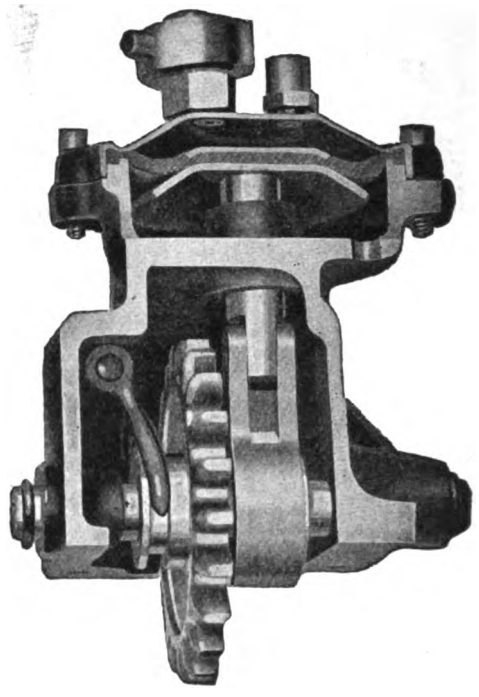
Thrust Ball Bearings made to your B/P's. Quotations made promptly on all inquiries.

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Western Sales Office, 1012 Ford Bldg., Detroit, Mich.

G

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Refined — Open Hearth
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Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

Live dealers are requested to write for facts pertaining to territory.

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Touring Car $1195
Coach $1450
F.O.B. Factory

The Coachbilt ANDERSON
LIGHT ALUMINUM SIX



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Anderson Motor Co., Rock Hill, S. C.

WARNER GEAR COMPANY
MUNCIE, INDIANA

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Carpets—Curtain Silks

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Gurney Ball Bearing Co.
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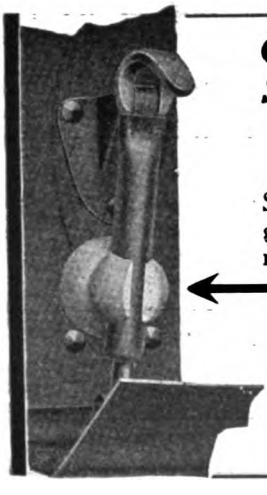
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TRANSMISSIONS
BROWN-LIPE-CHAPIN
DIFFERENTIALS
Both at Syracuse, N.Y.

OVER 50,000 MILES

now reported on "Whitney" High Efficiency Front End Motor Chain Drives and still in good condition.

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Golden Silence

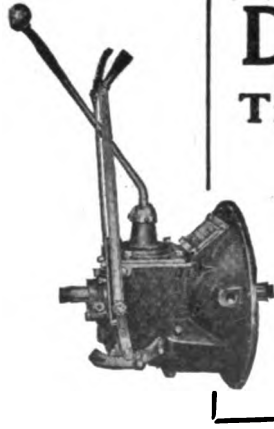
100,000

Sold in four months! That's the golden story of this wonderful little rubber vacuum cup device, the

Jorgensen Silencer

—fits the hood fasteners of Dodge, Buick, Chandler and other cars, eliminating all hood rattles. Dealers everywhere making nice profit. We will be pleased to hear from YOU.

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For trucks up to one-ton capacity, and Passenger Cars.

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The largest and best equipped frame plant in the world
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NATIONAL TWIST DRILL & TOOL


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A product whose uniformly high quality contributes largely to the high quality of the better class of motor cars and trucks. Send us your specifications.
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Body, Hood and Fender
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"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

CLASSIFIED ADVERTISEMENTS

Rates for advertising in this department, 45 cents per line, per insertion. Minimum charge $2.25. Cash with order. Each line contains about seven words.

LET US MARKET YOUR PRODUCT

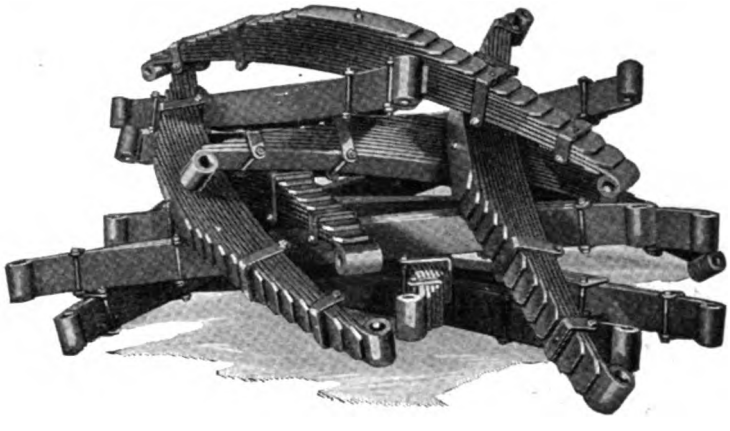
Two live wire merchandisers with established Detroit Office for ten years can handle another line used in the Automotive Industry. Have been dealing direct with automobile manufacturers all over the U. S. Address, Box 920, Automobile Topics.

If interested in the Automobile Industry, Subscribe to
AUTOMOBILE TOPICS THE TRADE AUTHORITY
15 Cents Per Copy $3.00 A Year

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Standard of the World



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The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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such as

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The STANDARD STEEL TUBE Co.

TOLEDO, OHIO

General Sales Office:
General Motors Bldg. DETROIT, MICH.



Accuratime Means Accurately Timed and Accurately Built



INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co.....558, 559
Ahlberg Bearing Co..... 594
American Bosch Magneto Corp..... 586
American Motors Corp. of New Jersey.....588a
American Sheet & Tin Plate Co..... 600
Anderson Motor Co..... 598

B

Baker R & L Co..... 577
Bearings Co. of America... 596
Bethlehem Spark Plug Co. Inc..... 580
Bock Bearing Co..... 578
Bosch Magneto Corp., American 586
Bowen Products Corp..... 598
Bower Roller Bearing Co.. 574
Boyriven Co., A..... 599
Briggs & Stratton Co..... 595
Brown-Lipe Chapin Co..... 599
Brown-Lipe Gear Co..... 599
Buick Motor Co..... 509

C

Champion Machine & Forging Co.....597
Chandler Motor Car Co., Back Cover
Clark Equipment Co., Inside Back Cover
Cole Motor Car Co..... 565
Courier Motors Co..... 598
Crosby Co..... 600

D

Detroit Carrier & Manufacturing Co..... 596
Dixon Crucible Co., Joseph. 593
Dodge Brothers..... 510
Doehler Die-Casting Co.... 600
Durston Gear Corp..... 599

E

Earl Motors, Inc..... 547
Eclipse Machine Co..... 599
Edmunds & Jones Corp.... 596
Essex Motors..... 498

F

Firestone Tire & Rubber Co. 588
Fisher Body Corp..... 582
Fisk Tire Co., Inc..... 505

G

Gabriel Manufacturing Co.. 508
General Motors Truck Co.. 506
Gilliam Manufacturing Co.. 572
Gilmer Co., L. H..... 566
Goodrich Rubber Co., B. F. 511
Goodyear Tire & Rubber Co., Inc..... 569
Grant Motor Car Corp.... 598
Gray Motor Corp..... 567
Gurney Ball Bearing Co... 599

H

Hayes Wheel Co..... 575
Holley Carburetor Co..... 591
Hoover Steel Ball Co..... 603
Hubbell, Inc., Harvey..... 581
Hyatt Roller Bearing Co.. 584

I

Indiana Parts Co..... 583
Interstate Iron & Steel Co.. 596

J

Johns-Manville, Inc..... 597
Jorgensen Hood Silencer Co. 599

Digitized by Google

INDEX TO ADVERTISEMENTS

K

Kelly-Springfield Tire Co.. 604

L

Laidlaw Co., Inc., Inside Front Cover

Lavine Gear Co..... 507

M

Madison-Kipp Corp..... 502

Mather Spring Co..... 601

Maxwell Motor Corp..... 504

Merchant & Evans Co..... 594

Metal Stamping Co..... 503

Monogram Lens Corp..... 598

Morse Chain Co..... 573

Motor-Kleen Corp..... 579

Motor Wheel Corp..... 590

Muskegon Motor Specialties Co..... 602

N

Nash Motors Co..... 512

National Twist Drill & Tool Co..... 600

O

Oakland Motor Car Co.... 554

P

Packard Electric Co..... 600

Parish & Bingham Corp.... 585

Park Drop Forge Co..... 597

Peerless Motor Car Co.... 553

Pennsylvania Rubber Co. of America, Inc.....572a

Perfect Window Regulator Co..... 592

Pocono Rubber Cloth Co.... 592

Pyrene Manufacturing Co.. 571

R

Racine Rubber Co..... 551

Republic Rubber Co..... 564

Rickenbacker Motor Co.560, 561

S

Schwarz Wheel Co..... 598

Sharon Pressed Steel Co... 597

Shuler Axle Co., Inc..... 589

Smith Corp., A. O..... 600

Standard Steel Tube Co... 602

Stephens Motor Car Co., Inc..... 549

Stevens-Duryea, Inc..... 587

Stewart-Warner Speedometer Corp..... 497

Stromberg Motor Devices Co..... 598

Studebaker Corp of America. 501

Stutz Motor Car Co. of America, Inc.....562, 563

T

Ternstedt Manufacturing Co. 528

U

Union Drawn Steel Co.... 597

United States Motor Truck Co., Inc..... 595

United States Rubber Co.. 545

W

Warner Gear Co..... 598

Westinghouse Electric & Mfg. Co..... 576

Whitney Manufacturing Co. 599

Wills & Co., C. H..Front Cover

Wyman-Gordon 499

Y

York Corrugating Co..... 593

Z

Zenith Carburetor Co..... 500

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BRASS
BRONZE
MONEL METAL
BELL METAL
ALUMINUM
HOLLOW BALLS

The World's Largest Manufacturer

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PHILADELPHIA.....259 Middle City Bldg.
CLEVELAND.....3124 Edgehill Road
CHATTANOOGA.....Sanford Brothers

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KEEP SMILING WITH KELLYS

Lotta Miles

IN the present condition of the tire market, where price cut has succeeded price cut until the quality of many tires has come to be regarded with suspicion, the dealer who has taken on the Kelly-Springfield franchise is in an exceedingly favorable position, because he knows he can sell Kellys with confidence in what he is selling.

Now, it costs no more to buy a KELLY

KELLY-SPRINGFIELD TIRE CO.

GENERAL SALES DEPARTMENT

250 West 57th Street

NEW YORK

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Clark Axles are thoroughly tested. Every part is subjected to minute inspection during manufacture and every complete axle is tested before shipping.

CLARK AXLES
are good axles

Users of Clark Axles are successful truck builders. Clark Axles are not found on "orphan" trucks.

Axle Models

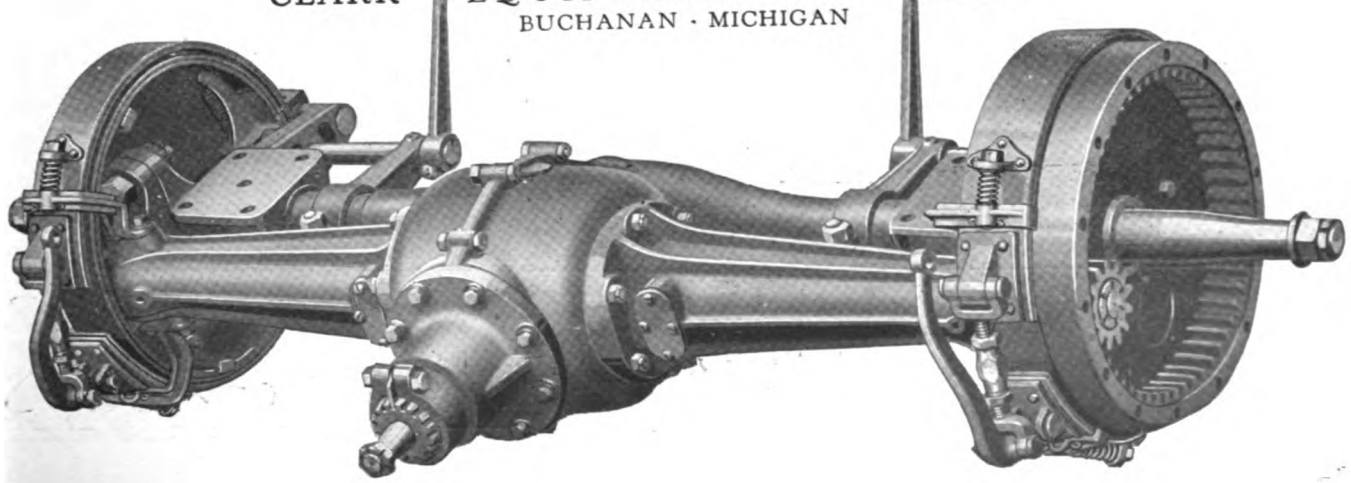
5 Internal Gear
3 Bevel Gear
3 Special Motor Bus

Plants

Buchanan, Michigan
Berrien Springs, Michigan
Battle Creek Michigan

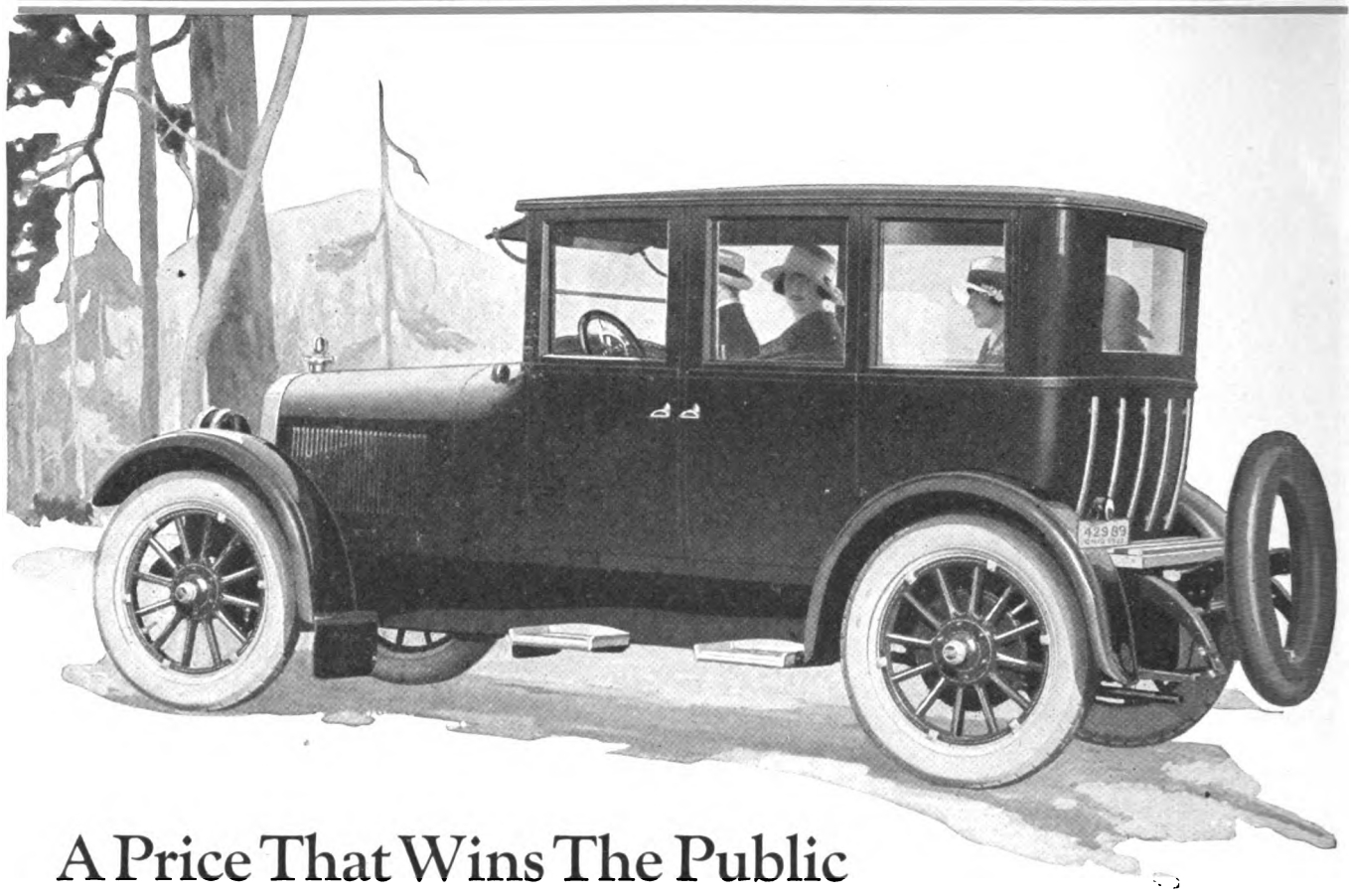
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CLARK EQUIPMENT COMPANY
BUCHANAN · MICHIGAN



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Chandler Value Explains Chandler Sales



A Price That Wins The Public

The New Metropolitan Sedan, at $2295, is typical of the smart, exclusive style and advanced design of the new Chandler Six.

PRICE is always interesting—but the motor buying public has learned to look behind the price to find the value.

The unusual sales success of the new Chandler Six is due to *extraordinary value at a price within the reach of the many.*

Chandler anticipated the demand for new style and smart appearance as well as superb performance in the popular price field.

Its success is reflected in the prosperity of Chandler dealers.

Ten models—each a distinctive value of its type—meet every transportation need and personal preference.

Your territory may not be permanently closed. Inquire.

TOURING CAR

$1495

F. O. B. Cleveland

THE CHANDLER MOTOR CAR CO. CLEVELAND

Export Department, 1819 Broadway, N. Y. Cable Address—"CHANMOTOR"

CHANDLER SIX

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 7 | PUBLISHED WEEKLY NEW YORK, SEPTEMBER 30, 1922 | FIFTEEN CENTS A C\
$3.00 A YE

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.

Do you realize
that you can sell
Jordans and
make money with
1/3 of the capital that
it takes to finance
a $100000 line

H E Osmond
Osmond Jordan Co
Milwaukee

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MARMON

The Foremost Fine Car



ANOTHER reason for the growing host of friends of the Marmon is its unusually low cost of maintenance. To combine superlative engineering with economy is indeed a rare situation.

A recent survey made throughout the country shows that the average cost of maintaining a Marmon is but $4.71 per month. This includes hundreds of Marmons with a combined mileage mounting into the millions.

The public is learning quickly that the Marmon is not only a wonderful performer but also remarkably dependable. We doubt if any other high-grade car costs so little for upkeep.

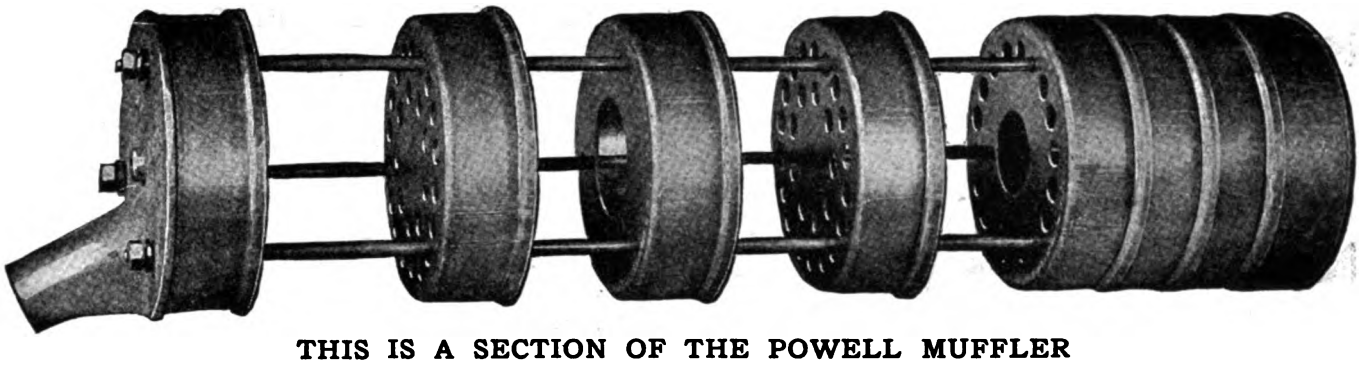
This nation-wide growth of Marmon popularity means, to dealers, increasing sales. If you are interested in such an opportunity, and your territory is open, we will be glad to investigate the possibilities of your community.

NORDYKE & MARMON COMPANY *Established 1851* INDIANAPOLIS

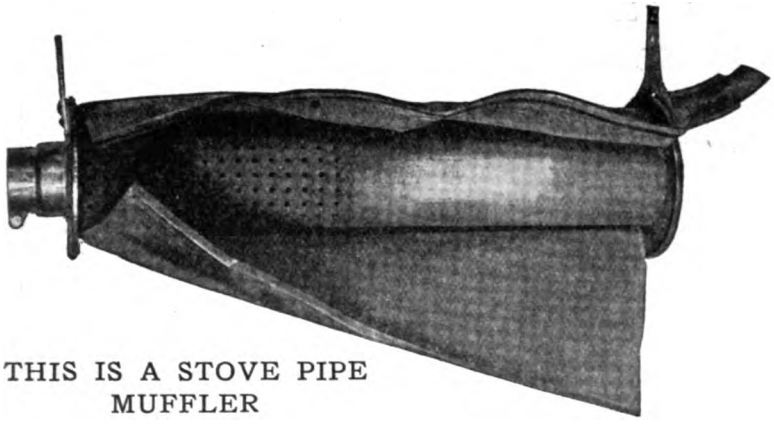
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POWELL MUFFLER

BLOW-OUT PROOF



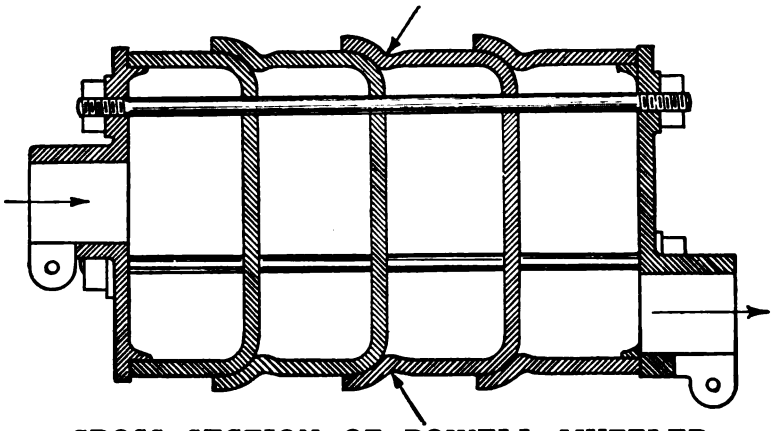
THIS IS A SECTION OF THE POWELL MUFFLER



THIS IS A STOVE PIPE MUFFLER

This Muffler was used only one week when it blew up as shown in this illustration.

The paint on the inlet head was not burned off—the muffler just ripped open from a charge of gas. The owner of the car is now using a Powell Muffler.



CROSS SECTION OF POWELL MUFFLER

This shows how the cups go together—one cup on another. Note where the cups come together they form an oval seat like a valve. This makes the Powell Muffler gas tight. A patented feature of this muffler.

Powell Muffler Company

Utica, New York

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DAVIS GARAGE
Pearl Street, Buffalo, N. Y.

ISAAC A. WEINER
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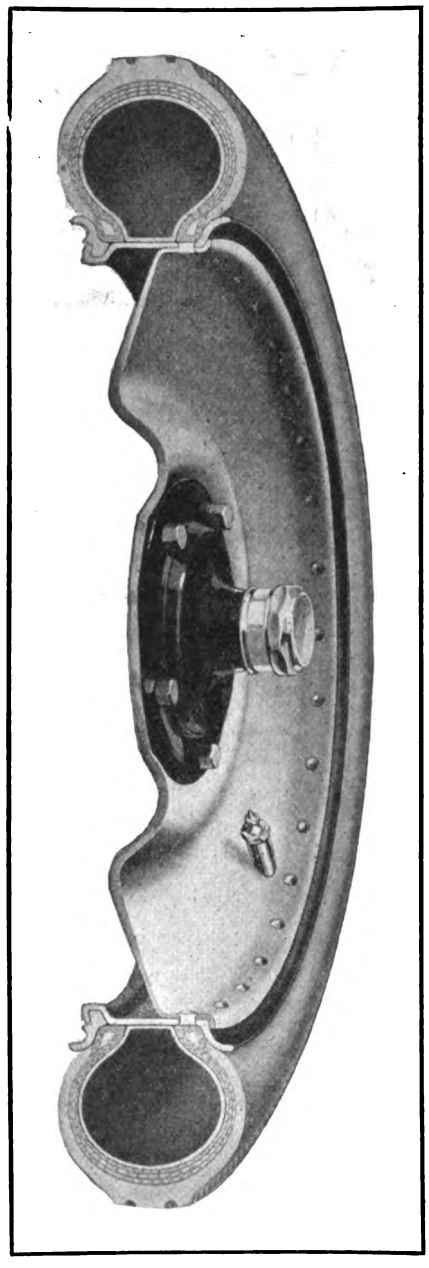
JOHN BLAIN GARAGE
1 Evans Street, Rochester, N. Y.

GEO. F. BALK SALES CO.
96 Selden Ave., Detroit, Mich.

Special Mufflers for Automobile Trucks, Auto Buses and Replacement

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FROM hub to rim the thickness of every Disteel Wheel is accurately *tapered by machine cut.*

Long experience in the designing and testing of steel disc wheels has proven to us that this tapered construction increases flexibility, absorbs and dissipates shocks and greatly promotes wheel strength.

Yet this tapered construction is only one of many details of Disteel Wheel engineering, the soundness of which is best appreciated by the fact that, so far as we know, no Disteel Wheel has ever broken in service.

Again we insist—and there is abundant proof behind our statement—there is no adequate substitute for genuine Disteel Wheels.

DETROIT PRESSED STEEL COMPANY

6660 Mount Elliott Avenue Detroit, U. S. A.

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865 Post Street SAN FRANCISCO

DISTEEL WHEELS

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, SEPT. 30, 1922 NO. 7

TABLE OF CONTENTS

New Competition to Come Through Service ... 621
Inflation to Set In in 1924, Jordan Says 621
Harding to Reduce Some Tariff Rates 621
Joyce and Chalmers Join Forces in New Company 622
John C. Wetmore Leaves "Mail" 622
DeBear Launches Own Company in Philadelphia 622
Chevrolet to Build Two More Factories 623
Credit Concerns to Be Brought Together 623
Mott Sees Bright Outlook 623
Automobiles Enlist to Aid the Churches 624
English Market for U. S. Cars Improves 625
Chrysler Sees Slow Foreign Car Demand 625
Hudson-Essex Prices Lowered 625
Ajax Shows Profits for First Six Months 626
Martin-Parry Sales Establish New High 627
Winther Motors May Make Stock Offering 627
Gray & Davis Stock on Boston 'Change 627
Nation's Business Turns to Highways 628
The Traffic Problem 628
July Exports Show Stable Conditions 629
Consumption of Gas Greatest in History 629
Canada Makes Important Invoice Changes 629
Sales in Washington Reported as "Spotty" 631
Velie Dealer Sees One Car to Family 631
Linscott's Dealers Visit Reo Factories 631
See Demoralization of Rubber Markets 632
Would Have Lights on Every Vehicle 632
Peerless Tells Story in De Luxe Form 632
Sees International Trade Arbitration 633
German Automobile Industry Expanding 633
Uncle Sam Striding Up Commerce's Hill 634
Wages Stabilizing at a Higher Rate 634
A. A. A. Cooperating in "Safety Season" 635
Safety Council Asks Uniform Traffic Laws 635
City Police Want State License Fees 635

FEATURES IN THIS ISSUE

New York "Try-Out" Booms Closed Cars 639
Should the Road Be Hard or Soft? 643
Selling Goods at Retail 645
Local Color Adds to Sales Picture 646
Latest Offerings of the Car Makers 648
Ideas That Lead to Greater Sales 650
In the Field of Accessories 651
Books; Both Timely and Instructive 654
With the Wholesalers and Retailers 658
Calendar 662
Table of Passenger Car Selling Points (Copyrighted) 667

Alphabetical Index to Advertisers 698

"NORMA"
PRECISION
BALL BEARINGS

The user of a car, truck, or tractor which fails, notes only the bare fact of failure. He concerns himself little with the ultimate cause of that failure. His condemnation covers the machine as a unit—how small or inconspicuous soever may be the part to which the failure is chargeable.

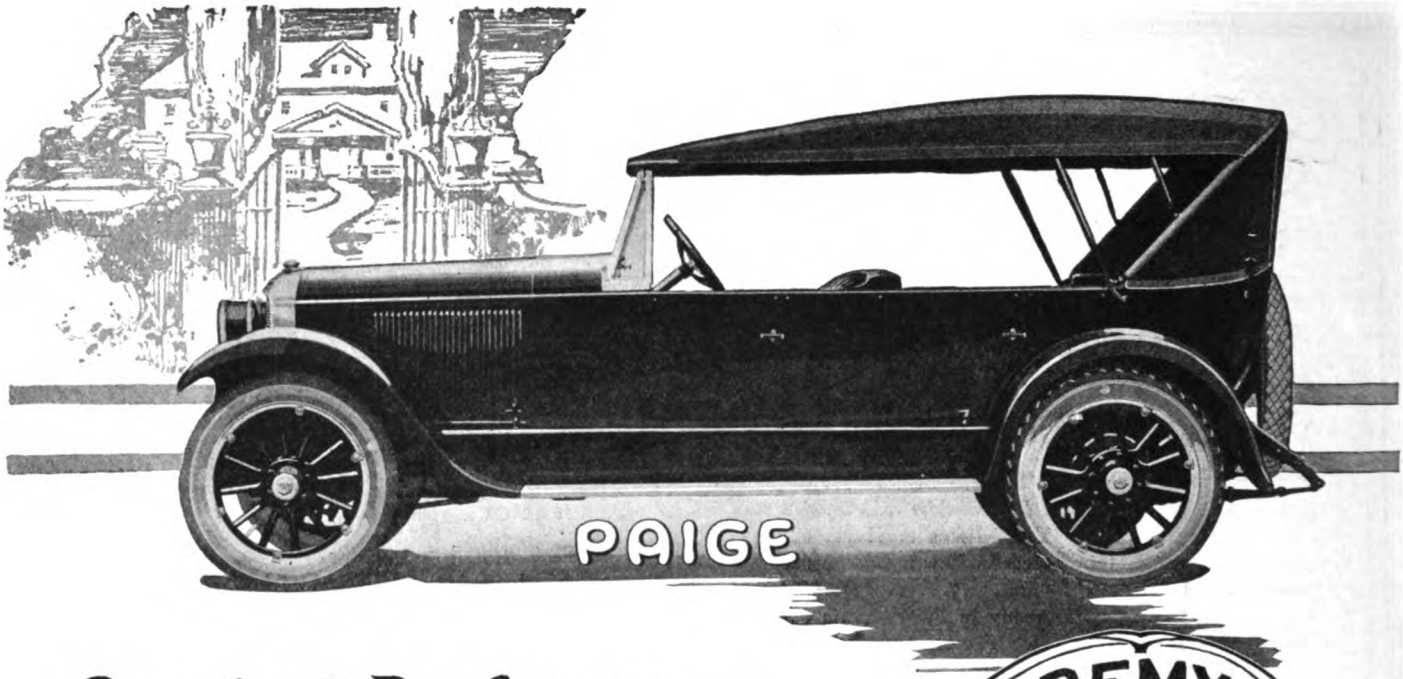
The failure of a bearing in magneto or lighting generator is—in its effects—a failure of the car, truck or tractor. And the desire to provide their customers maximum security against this failure explains why "NORMA" Precision Bearings are the accepted standards among builders of high-class magnetos and lighting generators.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Constant Performance

There is only one standard of performance for Remy equipment—constant performance—and every unit we furnish must measure up to this requirement.

Correct design and conscientious workmanship are responsible for the lasting satisfaction of Remy systems in the hands of the user.

And satisfying the ultimate user we know is the best way to assure the continued use of Remy equipment by our many good customers.

REMY Equipped

CARS

ANDERSON
APPERSON
AUBURN
CHALMERS
CHEVROLET
ELGIN
JEWETT
KISSEL
MAXWELL
MITCHELL
OAKLAND
OLDSMOBILE
PAIGE
STUDEBAKER
STUTZ
VELIE

TRUCKS

BROCKWAY
FEDERAL
G. M. C.
KISSEL
OGDEN
RUGGLES
SERVICE
STEWART
STOUGTON
TRANSPORT
UNITED

REMY

STARTING LIGHTING IGNITION SYSTEMS

REMY ELECTRIC COMPANY ANDERSON, INDIANA

PRODUCTS OF REMY CONSTANT PERFORMANCE

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Why They Chose

Studebaker

A Studebaker dealer in a middle-western city wanted to determine what really decided so many of his buyers in favor of Studebaker cars.

So he sent a questionnaire to several hundred owners.

Sixty per cent of them said they chose Studebaker on the *recommendation of Studebaker owners.*

Here are a few of the replies, quoted verbatim. They are significant:

"Success of my father, Mr. M....., with his car."
"Number of cars sold."
"Reliability of both car and company."
"Performance of cars."
"Recommendations of owners."
"Its lines and economy of gas and oil."
"Price, owners' recommendations, courteous treatment by salesman."
"Performance of car when I took the wheel."
"The high recommendations of different owners and because I thought it the best buy on the market for the money."
"Low operating cost."
"Quality product at low price."
"The advice of friends who are Studebaker owners."
"Service and satisfied customers."

The satisfied customer is Studebaker's greatest asset!

Likewise, the greatest asset of the dealer who sells the Studebaker line.

This is an important reason why so many business men are turning to the Studebaker franchise as the most desirable in the industry.

Another reason is the complete line—three models with thirteen body types—each a *six*—and each a *Studebaker.*

Still another is Studebaker's 70-year reputation for integrity in all dealings.

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*	BIG-SIX *7-Pass., 126" W. B., 60 H. P.*
Touring.....$ 975	Touring.....$1275	Touring.....$1650
Roadster (3-Pass.).. 975	Roadster (2-Pass.).... 1250	Speedster (4-Pass.) 1785
Coupe-Roadster (2-Pass.)..... 1225	Roadster (4-Pass.).... 1275	Coupe (4-Pass.)..... 2275
Sedan..... 1550	Coupe (4-Pass.)..... 1875	Sedan..... 2475
	Sedan..... 2050	Sedan (Special)..... 2650

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

THIS IS A STUDEBAKER YEAR

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The Ideal Combination



VANADIUM STEEL PISTON RODS and FORGING DIES

The piston rod in the hammer shown in the illustration has given over ten times the length of service of rods of other alloy and carbon steels.

The dies have forged over twice as many caps as the best dies of other steels—and are still good for many thousands more.

These records are typical of Vanadium Steel.

Let our Metallurgical Department help you solve your steel problems.

VANADIUM CORPORATION of AMERICA
120 Broadway NEW YORK CITY

Detroit, Michigan, 849 Book Bldg.

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Roughstuff

The quick, hard drying and perfect surfacing properties of the "roughstuff" which we manufacture have contributed much to its popularity in high grade factories throughout the country.

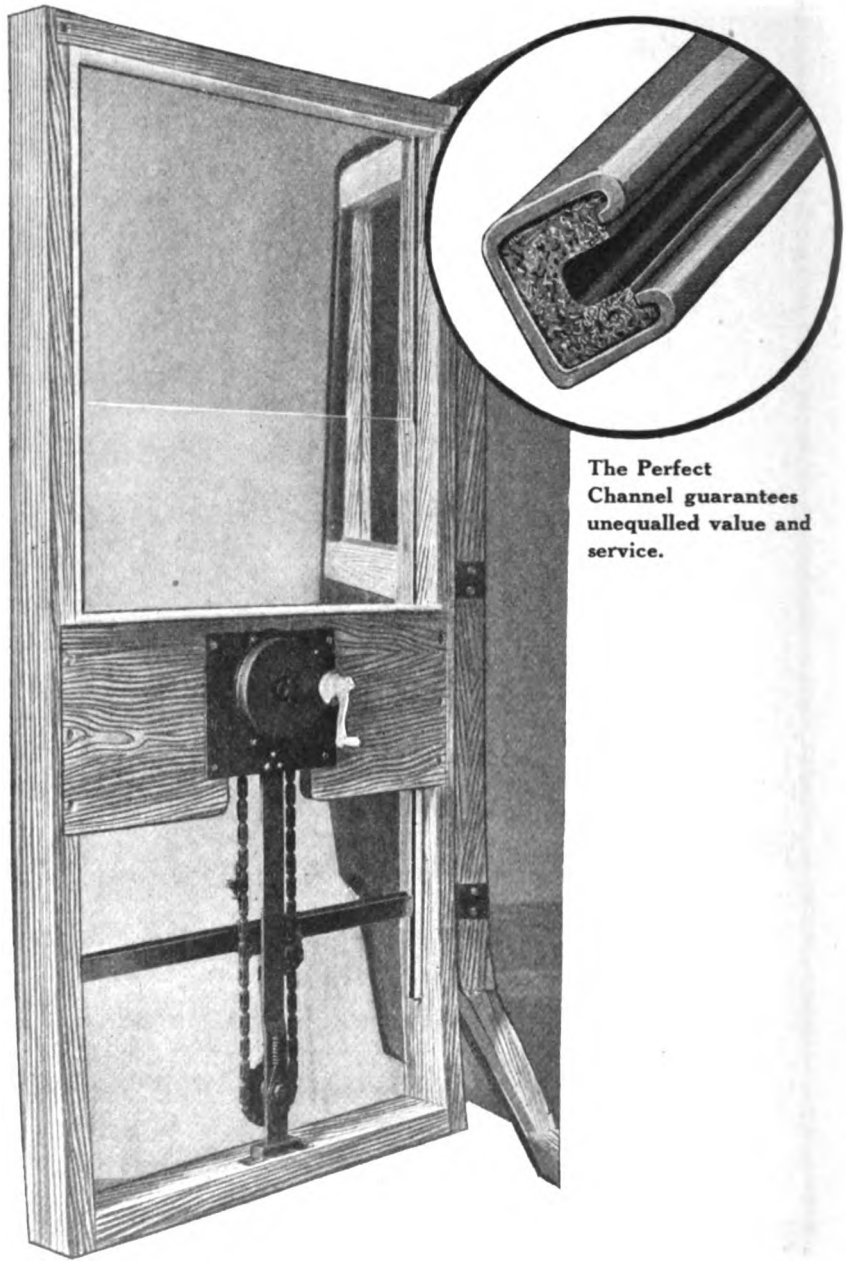
FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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The Perfect Window Regulator



The Perfect Channel guarantees unequalled value and service.

A New and Improved Window Regulator

The improvements embodied in the new PERFECT REGULATOR constitute the greatest advance in this direction. The same high quality has been maintained in the new model together with many new features at a lower price.

Motor Car Manufacturers and body builders now have at their disposal this new improved regulator bearing the name PERFECT which today signifies reliable performance just as it did fifteen years ago when the first car was equipped with Perfect Regulators.

PERFECT WINDOW REGULATOR COMPANY
20 Exchange Place, New York City

Branch Offices—Detroit, No. 528 Detroit Savings Bank Bldg.; Indianapolis, No. 310 Kahn Bldg.
Representatives—E. F. Rogers, Philadelphia; Scovel Iron Store Co., San Francisco, Los Angeles, Seattle; Hanyei Trading Co., Ltd., Tokio, Japan.
Foreign Branch—H. M. Hobson, Ltd., London, England.

Channels *Window Regulators* *Handles*

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"Two Years Without a Single Complaint"

Good-will is like gasoline. Without gasoline, your car gets nowhere. Without good-will your business stands still, rusts out—and dies.

Read this letter—and then ask yourself why not let Red-Top create good-will for you:—

COLE BROS. GARAGE
501-3 Second Ave. N.
Nashville, Tenn., July 7, 1922

The Fisk Tire Company, Inc.,
Nashville, Tenn.

Subject: Why We Sell Fisk Tires

Gentlemen:

First: Because we know Fisk Red-Top Tires give more miles of continuous service than any other tire sold in Tennessee.

Second: It has an extra ply of fabric, and an extra heavy tread, making this tire run more miles than is claimed for it.

Third: We have been selling the Fisk line for the past two years and at this writing have not had a single complaint.

Fourth: Fisk policy is by far the best policy of any tire company in the South.

Fifth: Once a Fisk user—always a Fisk booster.

Very truly yours,
COLE BROS.,
By A. D. Cole.

Read the second paragraph again—Mr. Cole writes the whole Red-Top service story in twenty-three words.

The customer-creating, profit-making, trade-building, Red-Top Tire will work for YOU this winter if you ask us about it now.

There's a Fisk Tire of extra value for every car, truck and speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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The

Generator Is One

of the

Smallest and Lightest

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Auto-Lite

Starting, Lighting & Ignition



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Wheels that Protect the Car

When your motor car hits a rough spot in the road, the tires and springs absorb this up-and-down shock.

But when you whirl or skid around a corner, there results a *side-strain* which only the wheels can absorb.

Even in straight-ahead driving your wheels drop into ruts and sway against bumps, which deliver a constant series of *side-blows* against the rims.

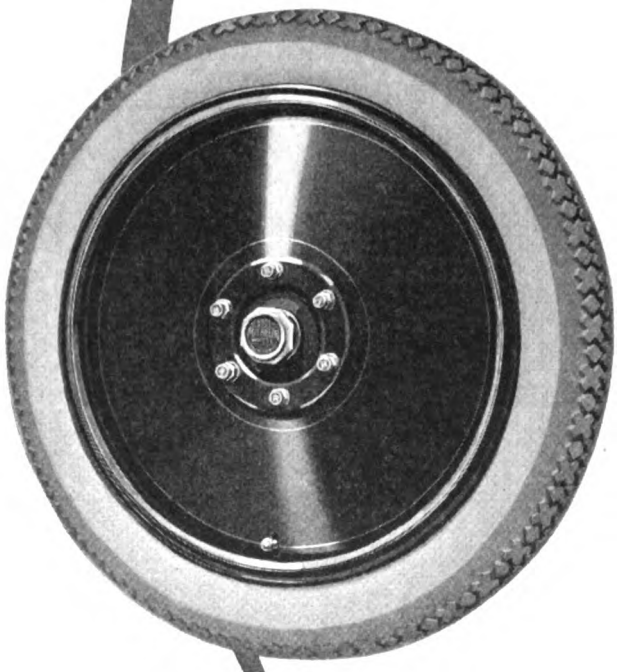
These endless *side-strains* and *side-blows*, when transmitted to the wheel bearings, steering gear and differential, result in serious wear and tear on the car.

They can only be adequately absorbed by wheels of exceptional *springiness* and *flexibility*.

That is one important reason why Michelin Steel Wheels are being adopted by leading motor car manufacturers. **Their *tapered convex discs* are specifically designed to render this** vitally important service.

Dodge Brothers, Studebaker, Willys-Knight, Chalmers, Winton, Nash and Yellow Cab are among those who have adopted Michelin Steel Wheels as standard or optional equipment

BUDD WHEEL COMPANY
Philadelphia

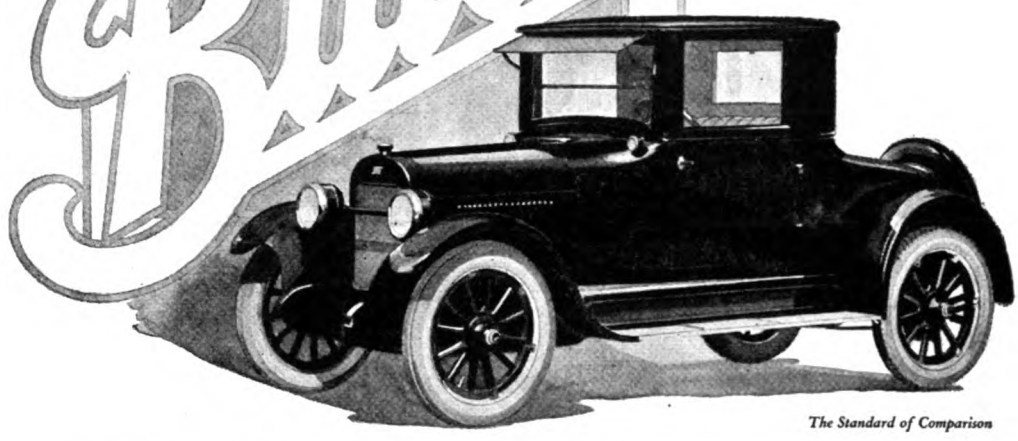


BUDD
Michelin
STEEL WHEELS

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The Ladies' HOME JOURNAL

VALVE-IN-HEAD Buick



The Standard of Comparison

A Luxurious Coupe for Three

The 1923 Buick Four

Bringing comfort and refinements heretofore found only in costly closed cars, the Buick four-cylinder three-passenger coupe meets a need which for years has gone unattended.

It is every inch a car of distinction. The low, metal body, custom-built by Fisher, is enhanced by the high lines of the hood, the graceful sweep of the full crowned fenders and the handsome drum-type head lights and cowl lights.

The very wide doors swing open to reveal an interior finished and upholstered in fine plush, and set off by fittings of distinctive pattern. There is a heater for cold weather, and the cowl ventilator, adjustable windshield, and disappearing door windows assure complete comfort for summer driving.

In this splendid car, as in each of the other thirteen models im-

Among other items of the complete equipment are: transmission lock, dome light, adjustable sun-shade, improved hood catches, flush door with lock giving access to large luggage space under rear deck, cord tires, transmission speedometer drive, aluminum steering wheel spider Class "A" fire insurance rating.
$1175 f. o. b. Flint

Buick Dealers Are Prosperous

The uniform excellence of Buick motor cars year in and year out brings to Buick dealers the kind of prosperity that cannot be destroyed. Buick dealers enjoy continued success because the Buick line is always in demand. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

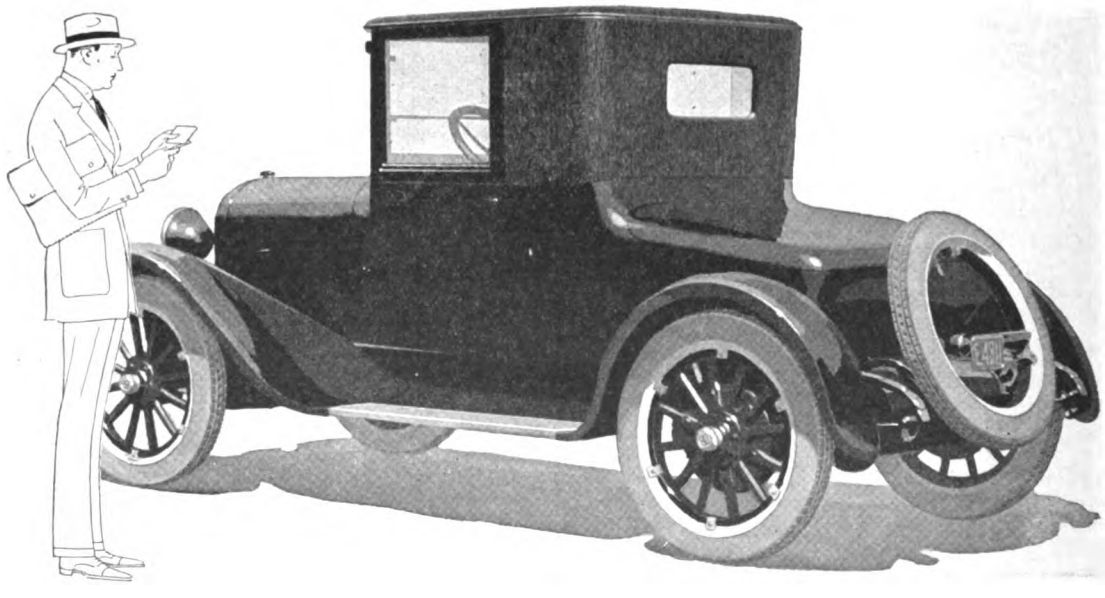
Dodge Brothers have built into this car every quality which you would naturally look for in a serviceable and attractive coupe.

The lines are clean cut and dignified. The steel body, electrically welded into a unit, is noiseless and exceptionally light. It is the first all-steel coupe body ever marketed. The enamel baked on the surface of the steel, retains its original lustre for years. The carrying compartments are roomy and convenient. The seat is upholstered in genuine leather. Exit and entrance are made easy by the unusual width of the doors.

In short, the fundamental purpose of the car is evident in every detail—to render practical, everyday service at a minimum cost.

The price is $980 f. o. b., Detroit

DODGE BROTHERS



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One Quality Only

The Silvertown is the pioneer cord tire of America. Its history is the record of every important development in cord tire construction. From the start it gave the motorist a new idea of tire service. *The Silvertown is made by an organization with 52 years' experience* in rubber manufacture.

There is only one quality in Silvertown Tires. The materials and workmanship in one are the same as in all others. The name of Silvertown is always a symbol of good quality.

Write or wire for complete details of how you can profit by joining the Goodrich Organization

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

Established 1870

Goodrich

Silvertown CORD TIRE

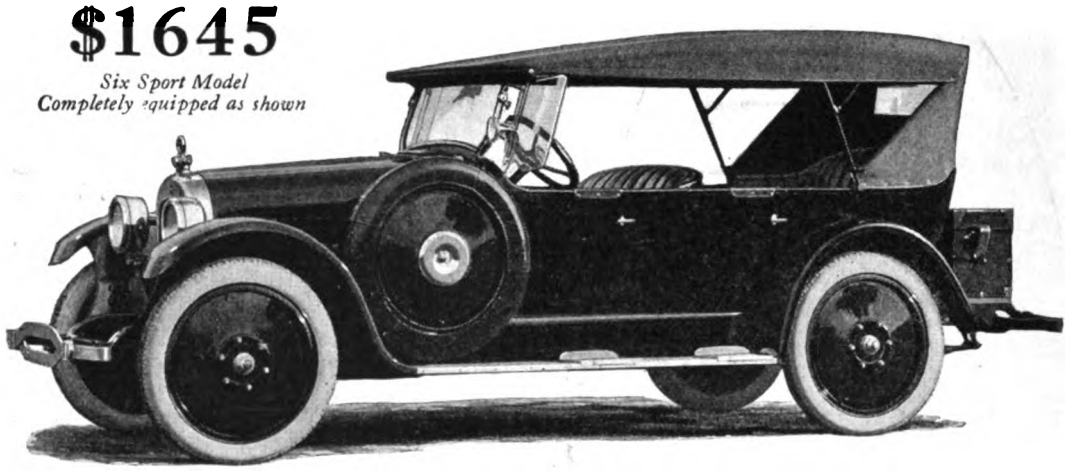
"BEST IN THE LONG RUN"

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Nash Leads the World in Motor Car Value

$1645

Six Sport Model
Completely equipped as shown



Another Big Business Getter for Nash Dealers

The New Nash Sport Model

Here's the latest addition to the Nash line—a popularly priced, smartly fashioned sport model with the most complete equipment ever put on a car. There's nothing in its field to touch it.

The shapely maroon body is swung gracefully low to the road. Handsome Biflex bumpers adorn both front and rear. And there's a rear-view mirror and windshield wiper.

Six disc wheels come as regular equipment, the two spares being mounted on the running board at the front on each side and furnished with two extra cord tires and tire covers.

At the rear you notice a finely built trunk mounted on the rack, and the trunk has a waterproof cover.

Then there are Johnson windshield wings, nickel-plated windshield posts, windshield of one-piece glass, spot light, nickel-plated barrel head lamps, and nickel-plated cowl lamps.

The combination stop and tail lamp is nickel-plated as is the radiator shell, the cowl ventilator, the motometer and the locking type monogram radiator cap.

Running boards have a special covering and aluminum step plates with rubber pads that are metal-filled.

At the rear of the body and directly in front of the trunk are upright nickeled guard bars. All nickel-plated parts are nickeled over brass to prevent rusting.

Some good dealer territory still open. Write today for particulars.

FOURS *and* SIXES

Reduced Prices Range from $915 to $2190, f. o. b. factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

(638)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, SEPTEMBER 30, 1922 No. 7

NEW COMPETITION TO COME THROUGH SERVICE

Efforts Increasing to Make Owners "Stay Sold"—Many Problems Involved Require Adjustment—Standardized Parts One of Possible Issues.

Many indications prompt the forecast that the next sharp angle of competitive development in the automobile industry will be along service lines. This will come rather less from appreciation of the consumer's needs and willingness to serve them than from the effect upon sales. The basis of the prediction is at once made apparent when it is mentioned that sales rivalries have reduced cars in competing classes to pretty nearly even terms; advantage, therefore, must ultimately be sought in other quarters.

Staging of the closed car show by New York dealers this week shed a bright light on the immediate future for sales in the lines directly affected. The trade has determined to sell a big volume of coupes and sedans, and will do so. Design developments, therefore, may be expected to materialize very largely in the direction of less expensive construction and finish in these types. As is definitely predicted by Edward S. Jordan in another column, sharp price competition in closed cars may be expected to follow, leading directly to lower prices.

But few trade observers are hardy enough to believe that the enhanced sales of closed cars can be made without cutting into touring car business to some extent. In fact, it would not be surprising if a successful outcome of the present effort to push Fall sales of closed cars were to be followed by a perceptible slackening off of spring sales for open types. These and other considerations have led more than one manufacturer to take thought of what is generally known as service and to consider ways and means for rendering it at once more of an asset to his business.

Automobile manufacturers are by no means alone in giving thought to this matter, however. Plans of some of the parts makers in this connection are already well known. A movement that has attracted considerable attention is that whereby local service stations are being developed by parts and equipment makers for the direct advantage of the consumer.

Some of the more thoughtful car builders are by no means blind to the implication that such service stations would be needless were their own dealers

(*Continued on page 624, second column*)

Harding to Reduce Some Tariff Rates

President Harding has undertaken to provide at once the machinery for the readjustment of tariff rates under the authority given him in the Fordney-McCumber tariff law. He is considering the organization of the United States Tariff Commission which will be the agency through which the readjustment will be made. There are approximately 4,000 items in the tariff law, each of which is subject to the President's right to alter them up to 50 per cent. It is the belief that many of the changes he is known to contemplate will be downward.

Idle Freight Cars Absorbed

An indication of the advance which has been made since the coal strike was settled is contained in the announcement of the Association of Railway Executives on September 25 that for the first time since November, 1920, the number of idle freight cars throughout the Country has been virtually absorbed. The railroad men look for a prosperous Fall season for all industries.

INFLATION TO SET IN IN 1924, JORDAN SAYS

Manufacturer Predicts Concerning Three Six-Months' Periods Now Before Industry—Labor to Be Big Factor After Easy Sales Give Way to Competition.

Three six-months periods, the first of easy sales, the second of the keenest of competition and the third of rapidly rising labor costs leading to a secondary inflation, now face the automobile industry, according to Edward S. Jordan, president of the Jordan Motor Car Co. Jordan, completing his semi-annual survey of the trade, surmises that the final period he foresees will set in about January, 1924. Here is what he says:

"There will be three periods during the next eighteen months. The first will be one of easy business for all manufacturers who have already organized their closed-car production. The second will be one of keen competition with price reductions on closed cars due to final efforts of all manufacturers to attain volume in closed-car output. The third will be one of rapidly rising labor costs and labor difficulties, due to an approaching period of secondary inflation brought about by the disinclination of labor to accept the wages that are offered.

"The first of January, 1924, should be somewhere in the neighborhood of the beginning of the next depression brought about by the attitude of labor towards employers. This attitude will be created by the unusual lack of men due to curtailed immigration and the disinclination of the sons and daughters of men who immigrated to this Country during the last twenty-five years to do ordinary labor.

"During the next ninety days there will be a great shortage of closed cars. This

(*Continued on page 624, first column*)

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JOYCE AND CHALMERS JOIN FORCES IN NEW COMPANY

Organize to Paint and Trim Bodies and Manufacture Automobile Tops

With Frank H. Joyce as president and treasurer, Hugh Chalmers as chairman of the board, and William M. Joyce as secretary, the Joyce Manufacturing Co. has been launched in Detroit. The Company will paint and trim automobile bodies and make tops. Fisher body plant No. 17, located at Jefferson and McDougall avenues, has been taken over as headquarters. The Company is incorporated under the laws of Michigan with $500,000 capital.

Joyce was one of the original incorporators of the American Auto Trimming Co., acting in the capacity of general manager and treasurer for twelve years until his retirement a short time ago. Chalmers is not alone lending financial connections, but is going to give the new concern part of his personal attention. Joyce and Chalmers have been close friends for a number of years, and have the best wishes of the trade for big and continued success. It is expected that the Company will get into production in about five or six weeks.

Garman Starts Own Company

H. B. Garman, for 11 years connected with the Steel Products Co., the last four years as general manager of that organization's Milwaukee plant, has entered the parts field with a concern of his own, the Garman Manufacturing Co. Headquarters will be maintained at Detroit. He has associated with him his son, L. R. Garman. The Company will specialize in drag links and tie rods, production beginning in November.

ELDRIDGE NEW CHAIRMAN OF A. A. A., SUCCEEDING LEWIS

Brings 25 Years' Experience in Good Road Work to National Organization

Maurice O. Eldridge, who has been director of roads of the American Automobile Assn. Good Roads board for the past three years and in direct charge of all legislative activities of the A. A. A., has been made executive chairman of the Association and has assumed active charge of that organization's work throughout the United States. Eldridge directly succeeds Dai H. Lewis who has been acting chairman since the death of A. G. Batchelder.

Eldridge brings to his task a record of 25 years of successful work in the U. S. Bureau of Public Roads. While assistant director of the Bureau he performed a great amount of original research and development work. For five or six years prior to associating with the A. A. A. he cooperated with the late Batchelder in good roads programs. He has been especially active in promoting the best interests of the industry, having fought the project to pay soldiers' bonuses by taxes on automobiles, a Federal tax on motor cars and other measures as well as being said to have drafted the first Federal Aid law.

Scott Heads Atlas Drop Forge Co.

R. H. Scott, vice-president and general manager of the Reo Motor Car Co., has been elected president of the Atlas Drop Forge Co., Lansing. Scott succeeds S. H. Carpenter, whose death occurred a few weeks ago. O. C. Hartig has also been made a director of the Company.

JOHN C. WETMORE LEAVES "MAIL" TO GO TO COAST

Dean of Automobile Writers Succeeded by "Becky" Scharps on N. Y. Paper

John C. Wetmore, the dean of automobile newspaper writers, retires October 1 after eighteen years' service as automobile editor of the New York *Evening Mail*. He will be succeeded by C. E. T. (Becky) Scharps, who has long been connected with the trade as an automobile editor and merchandiser, and who was automobile editor of the New York *Tribune* at the time he joined the Poertner Motor Car Co. a year ago to handle Durant sales promotional work. John, as the trade fondly knows Wetmore, is going to California and will make temporary headquarters at 912 Marsh-Strong building, Los Angeles. There he plans to conduct Wetmore's Motor News Bureau as a connecting news link with the Pacific Coast and will issue a bulletin covering California, Oregon, Washington, Nevada, Utah and Arizona.

In commemoration of his parting, the *Mail* on September 26 ran a special 64-page supplement, "Motoring Memories of John C. Wetmore." In this, John, his memory refreshed and aided by a committee of over 100 old timers, records for posterity his recollections of the past quarter-century in the automobile industry, with intimate sketches of many prominent men of the past and present. Wetmore was recruited from the bicycle trade, his "Jonah's" column having been a big feature of its day, leading directly to the automobile columns of later years.

St. Louis Honors McDonald

Stewart McDonald, president of the Moon Motor Car Co., has been elected a director of the St. Louis Chamber of Commerce. The directors of that institution have a far reaching and active influence on the destinies of the city and McDonald is thus honored by being accorded a place on the board.

Mason Promoted by Ladish

E. T. Mason has been elected secretary of the Ladish Drop Forge Co., succeeding C. L. Coughlin, who has resigned. Coughlin was also general manager and retains that position temporarily.

DeBEAR LAUNCHES HIS OWN COMPANY IN PHILADELPHIA

Successful New York Maxwell-Chalmers Distributer Takes on Same Lines

Harry J. DeBear, who gained a nation-wide reputation through his successful distribution of the Maxwell-Chalmers lines in New York City, has returned to his native heath, Philadelphia, where under the title of the DeBear Motor Car Co. he will distribute the same two cars in that city and surrounding territory. Actively associated with him is Fred J. Finkenauer, as treasurer and secretary of the corporation, which was granted a Delaware charter in August. He and his brother, Elmer R. Finkenauer, who becomes vice-president, have been connected with large and successful enterprises in other fields. Harry E. Weiner, who served DeBear as general manager for years in New York, will take up similar duties in Philadelphia. Present Maxwell-Chalmers headquarters, 216-220 North Broad street, and the local sales force have been retained.

DeBear returns to Philadelphia after an absence of 11 years spent in New York. Prior to that time he was with the advertising departments of the Philadelphia *Record* and *Evening Bulletin* and for a time with the Philadelphia Oldsmobile branch. At the Maxwell helm, DeBear achieved notable success, steadily increasing sales of that line from year to year.

Daniels to Direct Buick Publicity

Harry S. Daniels goes with the Buick Motor Co., Flint, Mich., October 1, as director of publicity. His resignation as advertising manager of the Dort Motor Car Co., a post he has held for the past five years, was recorded in these columns under date of September 23.

Atwood Adds to Duties

Frank L. Atwood will become general manager of the Hill pump plant at Anderson, Ind., on October 1. He is now vice-president of the Midwest Engine Co. The Hill factory is operated as a separate unit of the Midwest company, which owns the former Atlas Engine works at Indianapolis. Offices of the Hill company will be returned to Anderson after having been located in the Atlas building at Indianapolis for some time past.

Seek Former G. M. C. Man

Alexander H. May, formerly head of the maintenance department of the Canadian products division of the General Motors Corp., Walkerville, Ont., has been missing from his home since he left on a business trip to Toronto a month ago. He intended going on a hunting trip and his friends believe he may have suffered a lapse of memory.

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CREDIT CONCERNS TO BE BROUGHT TOGETHER

Commercial Credit Co. Baltimore, to Acquire Continental Guaranty Corp.—Both Long Active in Automobile Time Payment Operations.

Formal announcement was made on September 29 by Edward S. Maddock, president of the Continental Guaranty Corp., New York, that subject to approval by stockholders of Commercial Credit Co., Baltimore, that Company is making an offer for the purchase of the entire capital stock, but in any event not less than two-thirds thereof, of the Continental corporation. This offer is being submitted to stockholders of Continental corporation with a recommendation of acceptance by its board of directors.

The Commercial Credit Co. has had Robert Garrett and Sons, Baltimore, and associates, underwrite $1,000,000 of 7 per cent cumulative preferred stock at $26.50, $1,000,000 Class "B" 8 per cent cumulative preferred stock at $27.50, and $500,000 common stock at $52.50 a share, par in each case being $25. In addition $200,000 common stock will be offered to employes of the Commercial company and its affiliations, the Commercial Acceptance Trust, the Chicago and Commercial Credit Co., Inc., New Orleans, and of the Continental Guaranty Corp., at $52.50 a share. A 15 per cent common stock dividend will be paid on or before November 1, 1922, to Commercial Credit Co. common stockholders of record October 21.

Stockholders of the Continental Guaranty Corp. have prior rights to purchase Commercial Credit Co. new stock on the basis of two shares of preferred, two shares of Class "B" preferred, and one share of common stock at these prices, payment for which can be made in Continental Guaranty stock at $100 a share; or the stockholders may elect to accept $95 cash a share with 6 per cent interest from September 15, 1922.

The Continental Guaranty was organized in 1916 under the law of New York, and has for several years been a leading factor in the financing of the sale of motor vehicles, to the aggregate value of $265,000,000. Of late the Company has diversified its business into open accounts and other receivables, thereby covering about the same field as the Commercial Credit Co., which has for years been desirous of extending its operations and giving local service to customers in the New York territory.

With the acquisition of a controlling interest in Continental, the aggregate resources of Commercial Credit Co. and its affiliations are about $55,000,000, with a combined annual volume of business of about $135,000,000. The Baltimore Company will have a cash capital of $9,000,000 and surplus and undivided profits of $2,100,000.

Both concerns are among the largest, if not the largest, of those dealing in automobile credits. Outstanding on the books of both companies are many millions of dollars worth of business along this line. The negotiations reflect conditions pointed to in AUTOMOBILE TOPICS under date of September 16 wherein the possible concentration of interests in banking circles was discussed.

Mott Sees Bright Outlook

"Never in the recent history of the General Motors Corp., have immediate prospects been so promising and the outlook so bright as today," C. S. Mott, vice-president, remarked this week. "Our units are all doing more than might be expected at this time of the year, an encouraging thing in itself, aside from the mounting new business. Effects of the strike are still with us, but fundamentals have been corrected and healthy recuperation is under way. The Corporation is going to have a very satisfactory year."

TABLE A PERMANENT "SHOW"

AUTOMOBILE TOPICS' Table of Passenger-Car Selling Points (copyrighted) appears on pages 667-9 of this issue. It is revised to Sept. 26.

Some important lines have again revised prices. The unique arrangement of the Table according to list price of standard touring model gives the new market line-up at a glance.

Trends are strongly toward added equipment and lower-priced closed cars. Weekly revisions keep you posted as these trends progress.

Show season is on. All the sales data you can gather at those shows you can attend—as well as those you cannot get to—is permanently recorded for you in the Table. It is a continuous and always up-to-date exhibit of the industry.

Jordan Cuts and Improves Closed Models

Coincident with the lowering of closed car prices $300, the Jordan Motor Car Co., Cleveland, has made several refinements in both the five-passenger brougham and sedan, which now list at $2,485. Among other things, bodies have been lowered two inches and sharp corner lines changed to what is described as "a broomstick radius." Equipment on the brougham now includes a black Fabricoid trunk with two suit cases.

Buick Reaches New Production Mark

During the week of September 23, Buick Motor Co. reached a new high point in production, the plants at Flint and Detroit turning out a total of 4,058 cars. This is an average for the 5½ working days of 737 cars per day. With the approach of October 1, a seasonal slack quarter in the past, there are apparently no indications of a let up in the demand for the 1923 models, as a result of which the factories are making every effort to still further increase daily production.

CHEVROLET TO BUILD TWO MORE FACTORIES

Buffalo and Cincinnati Chosen for New Structures—Fisher Body Corp. to Share Plants—Will Result in 800 More Cars Produced Daily.

Work is to begin soon on the erection of two important industrial additions, at Buffalo and Cincinnati, respectively, by the Chevrolet Motor Co. In each city the Fisher Body Corp. will occupy part of the buildings. Vice-president Knudsen says daily production should reach 2,000 cars inside of six months, so rapidly is manufacturing capacity being extended.

A tract of 29½ acres of land has been obtained at Buffalo, located at East Delevan avenue and the Erie R. R., with a frontage of 1,650 feet on the Erie and about 800 feet on the avenue. The property is less than four miles from the center of the city. Buildings will be erected at once, with 400,000 square feet of floor space for the Chevrolet company, and 200,000 square feet for the Fisher corporation. Chevrolet will employ about 2,000 men at Buffalo and Fisher about 1,800. The plants will produce 500 complete cars daily and every effort will be made to have them operating shortly after the first of the year.

At Cincinnati, a tract comprising 16 acres has been acquired. This is at Norwood, a suburb about 5½ miles from the Cincinnati City Hall. There is frontage of 1,400 feet on the B. & O. tracks and 1,500 on the P. C. C. & St. L. The Norwood buildings will have 200,000 square feet of factory space for Chevrolet and 150,000 for Fisher. Chevrolet will employ about 1,200 men and Fisher about 900 in the production of 300 completed cars daily.

Commenting on the expansion, William S. Knudsen, vice-president of Chevrolet in charge of operations, asserts it was imperative. He points out that further additions to the Company's factory holdings will be made in the future.

"When the present program of Chevrolet expansion is completed," Knudsen explains, "we shall be operating on a very large scale. It will include additions in several States, and the daily production of cars should be 2,000 inside of six months from now, to speak conservatively."

Mitchell Completes Paint Shop

Mitchell Motors Co., Inc., announced this week the completion of a new paint and trim shop to be operated as a unit with the factory at Racine. The new department occupies a modern four-story building 92 x 320 feet. Every phase of the final finishing of Mitchell coach work will hereafter be taken care of in the new unit.

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AUTOMOBILES ENLIST TO AID THE CHURCHES

N. A. C. C. Finds Most Pastors See the Motor Car as a Welcome Adjunct—Many Rural Parishes Exist Because of Better Country Transportation.

"Automobiles may be a church aid but they must be converted." This is the expression of the Rev. W. O. Benthin of St. John's Presbyterian Church, Camas, Wash., and is cited by the National Automobile Chamber of Commerce as the average opinion of clergymen throughout the Country regarding the motor car. Having frequently heard the automobile condemned by ministers as a potent source of preventing people attending Divine worship, and having heard the other side, that the automobile aids both the pastor and the communicants in attending church, the N. A. C. C. decided to query clergymen throughout the Country.

The results of the questioning are varied. Where the people have a desire to attend church, the automobile is a decided help, is the opinion of the Rev. George Dorn, pastor of the Rountze Memorial Lutheran Church, Omaha. He points out that the automobile makes his church possible since communicants come from as far as 12 miles to attend service.

Against a wealth of such testimony, a deaf ear must not be turned to those who decry the motor car's effect on church attendance, the Chamber cautions. A number of these have written to the Chamber, not blaming the car but blaming the people who drive it. Apparently the basis for the disagreement among divines on this question arises out of special circumstances. If the people desire to go to church the motor car will help them, the Chamber points out with much sapiency.

INFLATION TO SET IN IN 1924, JORDAN SAYS

(*Continued from page 621, third column*)

will mean a curtailment of sales with possible further price reductions on the part of manufacturers who are not already in quantity production of closed models. However, the average prices of automobiles will be increased during the next twelve months, due to the extraordinary demand in the open car field for what is known as the sport model. People are demanding more equipment, including a trunk and larger tires and other accessories which add to their comfort and convenience. This means higher cost of production.

"Added to this factor will be the increased cost of manufacturing enclosed cars against open cars. Summing up the whole situation for the next six months, those manufacturers who build enclosed cars will move ahead more rapidly than those who are not prepared for increased closed-car output.

"From the dealers' standpoint, if any man would like to find out what dealers will survive in the industry it is only necessary for him to discover those that have actually been able to handle what is rapidly becoming a time payment business. Eighty per cent of cars sold at retail are now sold on the time basis and practically every sale involves a trade. It may be said that absolutely every sale of a closed car involves a trade. This means a close connection between the banker and the dealer. Wherever that connection is established, that dealer will survive. Where it is not established he will fail."

NEW COMPETITION TO COME THROUGH SERVICE

(*Continued from page 621, second column*)

more proficient. Nor are their dealers slow in pointing out to them that the opening of independent service stations by parts and equipment specialists gives exactly the same advantage in the matter of servicing such components to outside repair shops as it does to them.

A new slant on the situation was afforded by a manufacturer of a certain item of equipment, who approached the builder of a well-known car somewhat along the following lines:

"If you really want to sell more cars, why don't you show a little interest in the cars you have already sold? You go to work and spend, maybe, $3,000 through your engineering department in order to select just the right kind of equipment for your car. You encourage the manufacturer of equipment to spend $5,000 or $6,000 in developing and putting into production a product that is exactly suited to your needs. But when all that has been done, and your cars leave the factory with the best equipment that money can buy or ingenuity devise, your interest in the product seems to cease.

"Apparently it is a matter of indifference to you whether your dealers use the same product, or another for replacement purposes. Apparently you don't care whether the customer buys the proper replacement from your own dealers, or a substitute from another dealer or a supply store.

"If you really want to make your cars 'stick,' why don't you brand every part that goes into them with your own name, pack small replacements, such as are sold over the counter in special cartons, and then build up through advertising and direct missionary work through your dealers a substantial market for parts that are adapted to the car?

"If you really have faith in the product and want to assure yourself that it will give as good service up in Maine or down in Texas as it would if your own engineers had their eye on it all the time, why don't you go a step further and put a drawback in your guarantee that will invalidate it the moment unsanctioned replacements are put into it?"

The manufacturer, it is reported, was much impressed, and immediately called a conference of department heads to inquire into the feasibility of the suggestion. So enthusiastic was he, in fact, that he even bethought him of the advantage of molding the name of the car into the tire casings put forth as standard equipment.

This, of course, touches on a sore spot with the manufacturers, who, for many months, have been seeking ways to short-circuit the "pirate" parts maker, who has a way of ingratiating himself with the dealer, often to the detriment of the manufacturer's reputation. One manufacturer even went so far as to provide spark plugs having a special size hexagon, and suggestively supplying in the tool kit a wrench adapted for that plug and that plug only.

Theoretically this was to make assurance doubly sure that the owner would buy only plugs suitable for the engine. This is important because even comparatively slight variations in the length of the plug makes a vast difference in the performance of some engines. What happened, however, was that the users, in many instances, bought standard plugs anyway, and then blamed the manufacturer for failing to supply a wrench to fit them.

Thus those who are looking below the surface see, on the one hand, advantages from the standpoint of the manufacturer in so constructing the car that only supplies furnished by himself can be used in it. This practice, of course, is sanctioned by the successful experience along the same line of manufacturers in certain other lines. But on the other hand, it is seen that any movement in this direction tends to reduce the value of standardization in promoting interchangeability of specialized replacement parts, simplifying jobbers' and dealers' stocks and generally reducing the cost of supplies to the consumer.

In the meantime, educational work among dealers is progressing. The National Automobile Chamber of Commerce has been doing splendid work along general lines. Some of the larger and more progressive distributers are campaigning among their dealers. Manufacturers, to an increasing extent are recommending standard practices in repair work, offering time studies and suggesting flat rate systems. Dodge Brothers, which has carried the work a step further than others, has even reached the point of establishing service on a sales basis, making it practically a commodity, which the dealer's repair department is charged with the duty of selling.

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ENGLISH MARKET FOR U. S. CARS IMPROVES

Manager of British Overland Distributers' Tells of Growing Trade—Estimates Great Britain Can Use 50,000 American Automobiles Yearly.

Sales of American automobiles in England are now on the increase, according to Sir William Letts, managing director of the Willys-Overland Crossley, Ltd., distributers of that product in England and the Continent. Letts arrived in the United States last week to investigate methods of distribution in this Country. His concern is capitalized at £1,000,000.

"Trade depression in England aggrevated by the three weeks' strike of the engineering trades, interfered severely with the sale of automobiles," he explained. "But there are now unmistakable signs of improvement, especially for the cheaper cars. American manufacturers who ship higher-priced cars expecting to find a considerable demand are likely to be disappointed. The British public is buying cars ranging up to £500. In spite of the 33⅓ per cent duty, we can import 75 per cent of the parts of the Willys-Overland car from America, assemble it with 20 to 25 per cent British parts and sell it for £365 as a distinctive British all-weather automobile.

"We are doing some business with Belgium, Holland and the Scandinavian countries, but adverse exchange and high duty prohibit business with France. I estimate that England can use 50,000 American automobiles annually and Willys-Overland is planning to assemble 7,000 cars in England next year."

First Lansing Star Shipped

Production of the Star cars has begun at the Lansing plant of Durant Motors, Inc. The first Star was shipped out last week to the Intermountain Motor Sales Co., Salt Lake City, where it will be on exhibition at the Utah State fair. Assembly lines are being organized and big production of the new car is expected soon.

Standard Eight Lowers Open Car Prices

Standard Motor Car Co., Butler, Pa., reduced open car prices $105 to take effect September 1. The touring and sport model now list at $2,395 while $2,150 is the new price on the two-passenger roadster.

Marmon and Brewster Allied in N. Y.

Arrangements whereby patrons of the Marmon Automobile Co. of New York may avail themselves of the entire facilities of the well-known coach works of Brewster & Co. has been consummated. It amounts substantially to the appointing of the Brewster Company as associate Metropolitan dealer. At the latter's showroom, 721 Fifth avenue, standard Marmon models as well as Marmon chassis with Brewster bodies will be carried. Brewster chasses are discontinued.

Hudson and Essex Prices Lowered

Hudson Motor Car Co., Detroit, again reduced prices effective September 25, all models excepting the Hudson sedan being lowered $120 while Essex models were cut $50. New and old price lists compare:

HUDSON

Model	Old	New	Change
Phaeton (4)	$1,645	$1,525	$120
Touring (7)	1,695	1,575	120
Coach (5)	1,745	1,625	120
Sedan	2,295	2,295	...

ESSEX

Touring	$1,095	$1,045	$50
Cabriolet	1,195	1,145	50
Coach (5)	1,295	1,245	50

The Hudson sedan remains unchanged since this new model was introduced recently at the low price now in effect.

Oldsmobile Four and Light Eight Cut

Olds Motor Works, Lansing, Mich., put into effect on September 26, reductions ranging from $45 to $150 on all models of the four-cylinder and light eight "47" series. The four-cylinder touring now lists at $975 and the eight-cylinder touring $1,375. New and old prices compare as follows:

FOUR CYLINDER

Model	Old	New	Change
Touring (5)	$1,095	$975	$120
Roadster (2)	1,095	955	140
Semi-sport (4)	1,225	1,075	150
Touring (California top)	1,395	1,350	45
Brougham (5)	1,425	1,375	50
Coupe	1,595	1,475	120
Sedan (5)	1,745	1,595	150

LIGHT EIGHT (Model "47")

Touring (5)	$1,495	$1,375	$120
Roadster	1,495	1,375	120
Sport roadster	1,695	1,625	70
Super-sport (4)	1,725	1,675	50
Coupe	1,995	1,875	120
Sedan (5)	2,145	2,025	120

Prices on the larger eight, model "46," and the Oldsmobile Economy truck remain unchanged.

N. A. C. C. Elects Gray

Gray Motor Corp. has been elected to membership in the National Automobile Chamber of Commerce. It will exhibit its various styles of cars at the New York and Chicago National shows, it is promised.

Rolls-Royce Names Representatives

R. E. Bell, Milwaukee, P. B. Burry, Cleveland, Curry & Southworth, Denver, and Van Kleeck Motor Co., Pittsburgh, have been appointed sales representatives by S. deB. Keim, general sales manager of Rolls-Royce of America, Inc. Keim recently completed a trip through the Middle West and reports encouraging interest in increasing distribution of the product he is identified with.

Ford of Canada Reduces Prices

Ford Co., of Canada, this week reduced the price of its touring cars and roadsters $40. The sedan was lowered $60 in price.

CHRYSLER SEES SLOW FOREIGN CAR DEMAND

Little Can Be Expected for a Long Time to Come, He Finds—England Chief Market—Lower Priced Models Make Most Universal Appeal.

Walter P. Chrysler, chairman of the board of directors of the Maxwell Motor Corp., back from a three months' trip through Europe sees little to indicate a great foreign demand for American cars. England is the chief market to absorb our automotive products, he finds.

"It takes only a superficial view of central and southern Europe to convince the American automobile manufacturer that for a long time little can be expected of those countries as a possible field for American motor exports," Chrysler said. "Holland, Belgium and the Scandinavian countries offer some opportunities, but Great Britain with her 250,000 automobiles will be the export field to which the American manufacturer must turn.

"Maxwell exports to England and the continent of 2,000 to 2,400 cars annually represent about eight days present factory output. We expect an increasing demand as conditions improve abroad and indications point to shipments next year of 4,000 to 5,000 cars.

"Our $885 car is our popular model abroad and sells for £360, bringing it within the lower priced class now favored. In England there seems to be a preponderance of motorcycles which because of economy of operation are desirable for short distances. The lowest priced automobiles range from £190 to £250, but American motors because of a more desirable combination of power, speed and economy of operation are in a favorable position to compete with the European product in which power has been sacrificed for economical operation."

Ford Aims at 6,000 Daily

Orders were given this week, shortly after the resumption of operation, to all general foremen to speed up production and install additional machinery in Ford's Detroit plants with a view to making 6,000 cars a day by April 1, 1923. It was announced late in the week that nearly every plant in the Country had resumed output save the Minneapolis assembly house, where 500 men were still laid off on September 28.

Diamond Cab Starts Business

First of the cabs of the Diamond Taxicab Co. appeared on the streets of New York city on September 27. Promising to operate at 20 cents a mile, the cab Company's plans remain as outlined in AUTOMOBILE TOPICS under date of July 8.

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AJAX SHOWS PROFITS FOR FIRST 6 MONTHS

Company Nets $191,535 as of June 30—Excellent Results of January Financing Apparent—Total Assets Grow By $1,000,000—Prospects Heartening.

Operation of the Ajax Rubber Co. during the six months ended June 30 and following the financing undertaken last January, has fully demonstrated the prediction of the management made at the first of the year that the Company had placed itself in a practically impregnable position. Publication this week of the balance sheet as of June 30 provides material facts from which the same conclusion may be drawn.

The ratio of earnings to interest charges and to capital, and also that of the current assets, cash and receivables to current liabilities is distinctly sound. It will be noted that cash on hand and receivables alone are sufficient to pay current liabilities more than three times over. Quick assets exceed current liabilities nearly five and a half to one.

After paying all interest charges and providing reserves for taxes, depreciation and bad debts, the net earnings for the six months amount to $191,536. Comparing the June statement with that of September 30, 1921, it is seen that assets have increased by more than one million dollars. The $3,000,000 bond issue of last January wiped out all loans and eliminated bank debts of that date. Its value from an operative standpoint is equally apparent and the assertion of Horace de Lisser, chairman, that although 1921 showed a deficit, this year would reveal a profit, is amply borne out.

De Lisser, in a statement accompanying the balance sheet, points out that tires are selling today for at least 50 per cent less than in the Fall of 1920 and the spread of profits correspondingly reduced. The volume of business for the last half of the year promises to be very satisfactory, however, the tonnage shipped in August being heavier than that for any other month in the Company's history. He adds that in his opinion "tires are now selling at minimum prices and that the next change may be upward."

AJAX RUBBER CO.

Condensed Balance Sheet, June 30, 1922

ASSETS	
Cash	$603,354
Accts., notes receivable, less reserves	3,211,419
Inventories	2,875,260
Miscellaneous receivables	131,453
Land, buildings, machinery, etc.	4,351,611
Deferred charges	513,302
Goodwill and patents	1,874,875
Total assets	$13,561,278
LIABILITIES	
Current	$4,187,479
Capital—stated value	6,682,262
Proceeds 200,000 capital stock sold Jan.	2,500,000
Net profits six months of 1922	191,535
Total liabilities	$13,561,278

U. S. Rubber Postpones Meeting

Directors of the United States Rubber Co., scheduled to meet on September 28, will hold its regular meeting on October 5, when action on the preferred dividend will be taken.

Willys-Overland Profits

Net profits of $1,667,476 were made by the Willys-Overland Co. and subsidiaries during the second quarter of 1922, ended June 30. This gratifying total practically wipes out the huge deficit of the first quarter's operations, leaving the total loss for the six months at only $163,306. It will be recalled that net deficit of the first three months was in reality $992,464, since extraordinary charges were made against operation revenue in the period.

Hudson Substitutes for Certificates

Hudson Motor Car Co. has substituted permanent engraved certificates in lieu of the temporary certificates issued on registration with the New York Stock Exchange. The new certificates, of course, are for that stock without par value.

Receivers for Comet Plant

Receivers have been named for the Comet Automobile Co., of Decatur, Ill. The Company owes $60,000 to banks and about $75,000 otherwise, while the plant is said to be worth $400,000. The Milliken Trust Co. and Robert W. Jones are the receivers.

DIVIDENDS DECLARED

Velie Motors Corp.—Regular, quarterly dividend of 1¾ per cent on the first preferred stock; payable October 2, to stockholders of record September 15, 1922.

Kelly-Springfield Tire Co.—Quarterly, dividend of $1.50 on the 6 per cent preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

Reo Motor Car Co.—Quarterly, dividend of 1½ per cent and an extra dividend of 1 per cent; payable October 2, 1922, to stockholders of record September 15, 1922.

Stromberg Carburetor Co.—Dividend of $1; payable October 2, 1922, to stockholders of record September 18, 1922.

Electric Storage Battery Co.—Dividend of 75 cents on the new common stock and the new preferred stock; payable October 2, 1922, to stockholders of record September 15, 1922.

Fisher Body Ohio Co.—Regular, quarterly dividend of $2 on the preferred stock; payable October 2, 1922, to stockholders of record September 21, 1922.

B. F. Goodrich Co.—Regular, quarterly dividends of 1¾ per cent on the preferred stock; payable October 2, 1922, to stockholders of record September 22, 1922.

Hudson Motor Car Co.—Regular, quarterly dividend of 50 cents; payable October 5, 1922, to stockholders of record September 25, 1922.

Yellow Taxi Corp.—Initial dividend of 1¾ per cent on the preferred stock; payable to stockholders of record September 15, 1922.

Miller Rubber Co.—Regular, quarterly dividend of 2 per cent on the preferred stock; payable December 1, 1922, to stockholders of record November 10, 1922.

New England Tire & Rubber Co.—Dividend of 2 per cent on the preferred stock; payable October 15, 1922, to stockholders of record September 15, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets, during the week ended September 27. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted, as well as listed, securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	19	17½
Ajax Rubber	14⅝	13⅜
Allis-Chalmers	56⅜	54
Allis-Chalmers, preferred	104	101
American Bosch Magneto	41½	40
Case (J. I.) Plow	6	5½
Chandler Motor	61	58⅜
Chicago Pneumatic Tool	82⅛	78¼
Cleveland Motors	28	27½
Continental Motors, common	10¼	9⅜
Daniels Motor	11¼	10½
Durant Motors	46	43⅜
Durant Motors of Indiana	13½	12⅝
Fisher Ohio Body, preferred	93⅛	91¾
Fisk Rubber, common	13⅛	12⅞
General Motors, common	14¾	14
General Motors, 6% deb	85	84½
General Motors	84¾	84¾
General Motors, 7% deb	99	98½
B. F. Goodrich, common	34¾	33⅝
B. F. Goodrich	83¾	83¾
Goodyear, common	10½	10½
Goodyear, preferred	27½	27⅛
Gray & Davis	13	12
Hayes Wheel, w. i.	34½	33½
Hudson Motors	22	21
Hupp Motor Car, common	23	21
International Harvester, new	110¼	109
*Kelly-Springfield Tire, common	43½	40
Kelly-Springfield, pf. (8)	104½	104
Kelsey Wheel	95	95
Keystone Tire	8½	7¼
Lee Rubber	25¾	25⅛
Lincoln Motors	2	1⅞
Mack Trucks, Inc	58	55⅛
Martin-Parry	32½	30½
Maxwell Motors, Class A	58¾	57
Maxwell Motors, Class B	19	18⅛
Mercer Motors	3	2¾
Moon Motors	16	15½
Mullins Body	21¾	20⅞
Parish & Bingham	14	13
Pierce-Arrow, common	13⅜	12⅝
Pierce-Arrow, preferred	34	31⅞
Reo Motors	13¼	12⅜
Republic Motor Truck	3½	2½
Saxon Motors	4¾	4⅛
Stewart-Warner Speedometer	51¾	49½
Stromberg Carburetor	51⅝	51¼
Studebaker, common	128½	124¾
Studebaker, preferred	117	115
U. S. Light & Heat	1⅛	1
U. S. Rubber, common	52	49⅜
U. S. Rubber, 1st preferred	98	94
Westinghouse Air Brake	103	102
Westinghouse Electric & Mfg	63¼	62⅜
White Motors	50½	48
Willys-Overland, common	7	6¼
Willys-Overland, preferred	43¼	40⅞

*Par $25.

Prices for automobile securities quoted in Detroit during the week ended September 26 are as follows:

	High	Low
Auto Body	4¼	3¾
Charcoal Iron, common	1¾	1¾
Charcoal Iron, preferred	2½	2
Columbia Motors	3¼	3
Commerce Motor	3	3
Continental Motor	10¼	9½
Edmund & Jones, common	25	21
Federal Truck	19¾	17
Ford of Canada	413	385
General Al. & Brass	9½	9¼
Motor Products	89	85½
Motor Wheel, common	13⅛	12¼
Packard Motor, common	14⅝	13⅞
Packard Motor, preferred	91¼	88
Paige-Detroit Motor Car, common	23	21
Reo Motor (new)	13⅛	12⅞
Timken Axle, common	29	26
Timken Axle, preferred	90	87
Truscon Steel, common	21	17½
Truscon Steel, preferred	10¼	9⅞

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WINTHER MOTORS MAY MAKE STOCK OFFERING

More Common to Be Placed on Market for Public Subscription, Advices State —Balance Sheet as of August 31 Shows Condition of Corporation.

Winther Motors, Inc., is understood to be about to place on the market for public subscription a new stock offering as part of further financing which involves the exchange of old common for the new at the rate of two of the former for one of the latter. The new issue will be 150,000 shares of Class "A" common at $10 par value. Five hundred thousand shares of this classification are authorized.

Stockholders will vote at the annual meeting, April 1, 1923, on the proposition to exchange the old for new stocks. In this transaction about 350,000 shares are involved.

The Corporation's balance sheet as of August 21, 1922, was available this week. This lists total assets at $2,539,842, of which $49,128 is in cash and notes and $127,491 in notes and accounts receivable after deduction of reserves of $25,000. It is seen by the statement that of the $1,000,000 preferred stock at present authorized, $599,367 has been issued. Common stock of no par value issued as a bonus totals 400,000 shares.

The Corporation has lately been engaged in producing gasoline motor driven trains for the Chicago, Great Western railroad. The first of these was delivered a few weeks ago as recorded in these columns under date of September 23. An order for ten more has been received by the Company, which is also manufacturing post-hole diggers for the Western Electric Co., which, in turn, acts as sales agents for the product to the various telephone and electric service corporations.

Keystone's Earnings Improved

President Dorris W. Whipple, of the Keystone Tire & Rubber Co., states that earnings are now at the best rates in the past 11 months. About the end of October a new stock issue will be offered, he reports, the amount and price to depend on prevailing conditions at that time. There are about $1,960,800 of common stock authorized but not issued.

Bell Motor Receiver to File Account

Notice was given creditors of the Bell Motor Co., bankrupt, that the receiver will file his final accounting at York, Pa., on October 6. The balance on hand for creditor distribution is set at $13,426; the amount claimed as expenses of the bankruptcy proceedings is $2,994 of which $2,000 is for fees of the attorney for the trustee.

Truck Maker in Receivership

American Commercial Car Co., Detroit, petitioned in bankruptcy on September 19. The petition stated that it was the wish of the concern to dissolve "there being no prospect of making sufficient profits to warrant continuing in business." The Security Trust Co. was named receiver.

Gray & Davis Stock on Boston 'Change

Boston Stock Exchange has authorized for its list 115,000 additional shares without nominal value capital stock of Gray & Davis, Inc. These shares are to be added under the following conditions: 28,000 on notice of issuance and payment in full; 50,000 as they may be issued in conversion of first mortgage, seven per cent convertible sinking fund gold bonds and 37,500 shares as they may be issued in exchange for eight per cent cumulative preferred stock.

$5,176,119 for Lincoln Debt

Lincoln Motor Co. on August 1, had $5,176,119 in cash available for distribution to creditors after payment of the mortgages and preferred claims. This statement is the feature of the receiver's report made at Detroit on September 26.

G. M. C. Directors Order Dividends

Directors of the General Motors Corp., meeting in New York city on September 28, declared the regular $1.50 dividend on the 6 per cent preferred; $1.50 on the 6 per cent debenture, and $1.75 on the 7 per cent debenture stocks. They are payable November 1 to stockholders of record October 9.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended September 27 are as follows:

	High	Low
Firestone	82	70
Fisher, Ohio	45	45
Fisher Body, Ohio, preferred	97	97
Goodyear	11	9½
Grant	⅝	⅜
Grant, preferred	5⅞	3
Jordan, common	250	160
Jordan, preferred	85	70
Peerless	60	58
Standard Parts	5	3½
Standard Parts, preferred	19	17
F. B. Stearns	23½	21½
Torbensen Axle	25¼	22
W-S-M, common	50	34
W-S-M, preferred	70	70
Winton, preferred	35	25

Prices for rubber securities quoted in Akron during the week ended September 26 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	80	72
Firestone, 6% preferred	91	90
Firestone, 7% preferred	87	84
General Tire, common	300	250
General, preferred	100	95
B. F. Goodrich, common	35	33
B. F. Goodrich, 7% preferred	86	83
B. F. Goodrich, 6½% preferred	102⅝	101½
Goodyear, common	11	10
Goodyear, preferred	29	28
India, common	78	75
Marathon, common	3	2¼
Mason, common	10	9
Mason, preferred	55	42
Miller Rubber, common	72	70
Miller Rubber, preferred	100	97¾
Mohawk Rubber	20	10
Mohawk Rubber, preferred	100	70

MARTIN-PARRY SALES ESTABLISH NEW HIGH

Earnings Averaging $50,000 Monthly—Net for Full Year Should Approximate $500,000—Physical and Financial Condition of Corporation Good.

In both sales and profits Martin-Parry Corp. is expecting to establish new records this year, substantially bettering 1920, the best previous year. Earnings for the past six months have been averaging $50,000 a month after all charges and Federal taxes, or at the annual rate of $600,000.

Seasonal decline in business is cited as reason for a slump in sales early in the year, during the first two months, and the Corporation looks for a similar falling-off in the latter part of the final quarter of 1922. Sales for the first seven months exceeded $3,780,000, which figure may be compared with $3,725,434 for the full year of 1920.

The following tabulation shows sales and net profits for the past three years:

Year	Sales	Net Profits
1922	$6,000,000*	$500,000*
1921	2,424,879	820
1920	3,725,434	311,355
1919	1,927,680	244,195

* Estimated.

Indications are that September business will have about equaled that of August which bettered July's turnover. Financial and physical condition of the property is characterized as "good." There are no bank loans and no indebtedness beyond current payable accounts. Inventories are in unusually liquid condition, demand for bodies being such as to make it impossible to build up a surplus stock, the Corporation management finds.

Mason Tire Plans Expansion

Stockholders of the Mason Tire & Rubber Co. will be asked to approve issuance of $2,000,000 first mortgage bonds and 200,000 additional shares of no par common stock. The new funds are to be used in supplying additional working capital to increase production of tires to 6,000 daily; to refund $540,000 seven per cent gold notes and to complete financing of the new plant recently placed in production. The Company has tripled its business in the past three years and will make about $12,000,000 worth of tires this year. It is making 500 tires a day at the recently purchased Owen Tire & Rubber Co. plant at Bedford.

Credit Men Hit Trust Law

Resolutions declaring the Sherman Anti-Trust law "obsolete" and a hindrance to business were adopted by the National Assn. of Credit Men in annual convention at Atlantic City on September 26. The resolutions urged that the Sherman law be "superseded by a modern statute at the first opportunity."

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NATION'S BUSINESS TURNS TO HIGHWAYS

Motor Vehicle Registration Shows Trend Towards Road Transportation—Major Part of Growth in Trucks, Bureau of Roads Points Out in Survey.

That the business of the Nation is turning more and more to highway transportation is indicated by statistics on motor-vehicle registration as of July 1, compiled by the Bureau of Public Roads of the United States Department of Agriculture. Registration of passenger cars, taxis, buses, and motor trucks totaled 10,620,471 on this date, an increase of 157,176, which is a healthy growth, as the first half of the year is the off season for registration of new vehicles.

The surprising fact, however, is that of the 157,174 increase in registration; motor trucks constituted 116,701, against 35,030 passenger cars and 5,443 taxis and buses. This means an increase of over 16 per cent of the number of motor trucks at the beginning of the year. Figures are not available to show what part of the increase of 5,443, or nearly 11 per cent, in the taxi and bus registration is due to the increase in the number of buses traversing rural and suburban routes, but it is very probable that a considerable part of the increase is due to the development of this new form of transportation.

It has been frequently said that the traffic is always ready and waiting when good roads are built, and that the commercial vehicle as a class is more handicapped by lack of good roads than the pleasure vehicle. The increase in the registration of commercial vehicles, coupled with the present activity in highway construction, seems to bear out this statement in the opinion of department officials. The table of statistics issued by the bureau shows a registration of 9,467,874 private cars, 55,990 taxis and buses, and 1,096,605 motor trucks, making a total of 10,620,471.

Receiver for Holmes

Holmes Automobile Co. has been placed in the hands of E. A. McCuskey of Canton, O., receiver, following the petition on September 27 of four creditors. The claims aggregate $4,000. The Company has tangible assets of $850,000 and liabilities of $1.500,000, the creditors assert. A statement by the Company shows assets of $2,500,000.

Brigg-Stratton Closes at Cleveland

Brigg-Stratton Co., Milwaukee, has closed its Cleveland offices. L. H. Smith, in charge, is transferred to the factory where he will assist H. V. Rohm and will have direct charge of the eastern equipment division.

M. A. M. A. SALES RECORDS SHOW GENERAL INCREASES

Past Due Accounts and Notes Outstanding Likewise Reveal Growths

Sales of the Motor & Accessory Manufacturers' Assn. during August revealed a general increase in business all along the line and resulted in a total of $43,053,700, representing a five per cent growth when compared with the similar item in July. But most heartening in the monthly report is the relative decrease in the past due accounts division. Thus while in July this item grew 20 per cent as compared with June, in August the increase was but 8.21 per cent.

Notes outstanding increased 8.15 per cent over July, reaching the total of $2,398,250. The condition of these several book accounts varies considerably from that obtaining last year at this time but while the percentage changes are at variance the sums of past due accounts and notes outstanding this August are far below what they were in August, 1921. Furthermore, purchases this August are nearly twice last year's. The following tabulation is self explanatory:

	August, 1921	Per Cent Change
Total sales	$23,397,640	1.31 Inc.
Total past due	4,348,790	17.06 Dec.
Total notes outstanding.	3,494,510	5.30 Dec.
	August, 1922	
Total sales	$43,053,700	5 Inc.
Total past due	3,705,000	8.21 Inc.
Total notes outstanding.	2,398,350	8.15 Inc.

The Traffic Problem

COL. ROY C. VANDERCOOK, Michigan commissioner of public safety, this week placed before the people of his State a proposition looking towards the reduction of traffic accidents, and therefore of the traffic equation, which cannot be too highly praised. He proposes that the information contained in the police files concerning all automobile accidents be condensed into a tabulation to be used to formulate better traffic regulations.

Such a compilation presumably would show what cause or causes led to the majority of collisions, injuries and deaths. From it could be drawn a reasonable diagnosis of what traffic laws are wrong, which are right and what is basically in error in the administration of them. In fact, here is a plan that, carried out fully and carefully, would at once offer material on which to build a modern, efficient and sane code of traffic regulation, automatically and constantly abreast of the times and changing road conditions.

Colonel Vandercook does not believe the speed limit of 35 miles an hour on country roads has much to do with accidents. Study of data such as he suggests collecting would show whether he is right or wrong. It is the contention of many that the "fool" drivers are to be blamed for the greater percentage of casualties. The tabulated police records would demonstrate the truth or fallacy of this assertion.

The benefits of this gathering of police records into convenient form are inestimable. They would at once indicate whether the color of tail-lights has enough to do with accidents to warrant changing them. They would set out the costs of not stopping at intersections. They would make clear the debated parking ordinances. They would make greatly easier the formation of proper traffic laws.

Notwithstanding the constant preaching of all authorities and all safety enforcers, all printed exhortation amounts to little if directed at the operators of automobiles themselves. Despite the experience of ages, the child must discover the dangers inherent in agencies it does not know how to control. There is always the danger of so much preaching that it becomes an "old story" and consequently disregarded. Like the cat of which Mark Twain wrote, it learned not to sit down on a hot stove lid, after one scorching experience, but thereafter declined to ensconce itself on a cold lid either.

Amid too many laws, some are bound to be broken. The "cold stove lid" exists in the traffic codes of the Nation. A plan such as Colonel Vandercook urges has everything in its favor and nothing against it. It should be made national in scope. Police records tell all that is necessary. They form an invaluable lode of rich ore for the automobile manufacturer who would improve the traffic movement of the Country, knowing that in doing so he is improving vastly his future markets.

You Made It—Help Solve It

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JULY EXPORTS SHOW STABLE CONDITIONS

Total of Automotive Products Shipped Registers Loss in All Departments in Units but Increase in Values—Canada Retains Leadership.

Decreases in every classification of July automotive exports from the United States is registered in the monthly tabulation issued this week by the Department of Commerce. The falling-off, however, was accompanied by an increase in unit values in all cases.

Passenger-car exports during the month decreased 28.4 per cent in number and 24.4 per cent in value from those of June, 5,600 having been sent abroad at a valuation of $4,395,541. Thus the unit value, figuring the average of $784 per car, covers an increase of $42. The least decrease was shown in exportations of cars valued between $800 and $2,000.

JULY FOREIGN COMMERCE

Condensed

Exports:		
Cars	5,600	$4,395,541
Trucks	822	734,148
Parts	...	2,825,335
	6,422	$7,955,024
Imports:		
Cars	37	$ 72,438
Rubber	..	8,380,132

In the department of motor trucks, the falling off in number of units shipped was 26.7 per cent but the total valuation shows only 6.9 per cent lower than the same figure in June. Eight hundred and twenty-two trucks were exported at a total value of $734,148; their average value of $893 representing an increase in unit value of $192. And here again the smallest decrease was shown in medium-priced vehicles—those of from one to 2½ tons capacity. The unit value of this class is represented by the averaged figure of $487, while that of the trucks of greater capacity increased to $635.

In actual figures, as will be seen on consulting the accompanying table, passenger-car exports decreased 2,218; June exports being 7,818 and July 5,600. The decrease in the number of trucks was 299, there having been 1,121 sent out of the Country in June as against 822 in July.

A large slackening in the export of parts, save engines and tires, was recorded. Whereas in June the quantity figure ran up to 18,561,601, the July total was 11,791,538, a decrease of 6,770,063. The valuation slumped $1,264,437 to $2,825,335.

Concerning tires, the data presented by the Government shows that while the number exported fell off 4,035, the valuation of those sent in July increased over the valuation of the larger number in June by $209,354. Thus the growing importance of foreign trade, for tires at least, is amply demonstrated.

Exports of automobile engines were nearly cut in half during July as compared with June's shipments. The July figure is only 4,244 as compared with 8,852 in June. The valuation, however, did not show a corresponding decrease, the loss in value being only $280,212, July's total being $551,189 and June's $831,401.

While the leading passenger-car markets of the United States took decreased shipments, larger exports to several Latin American countries and New Zealand are in evidence. Brazil took 240 passenger cars valued at $201,179 during July, as compared with 90 valued at $91,128 during the previous month. Argentina received 217 valued at $223,994 as compared with 113 valued at $96,893; and 652 valued at $382,726 were exported to Mexico, as against 563 valued at $369,531 in June. New Zealand received 140 during July, as compared with 1,807 during June; Australia took 663 against 816 in June; and the United Kingdom was shipped 523, as compared with 775.

Exports to Sweden fell to 70 cars

(Continued on page 630, first column)

CANADA MAKES IMPORTANT CHANGES IN INVOICE FORM

Removes Requirement Concerning Declaration of "Fair Market Value"

Beginning October 1, new regulations covering the matter of consignees' invoices will be in effect on shipments to Canada. The Dominion Customs now require that the shipper's invoice indicate the country of manufacture or production, as to all imports. It will make necessary certification to that effect by the shipper.

Formerly, the Canadian Customs required the American exporter to certify that the fair market value shown on his invoice was no lower than the wholesale price, or lower than the actual cost of production at the time or place of shipment, plus reasonable profit thereon, but that requirement has been removed from the new form of invoice. Both of these changes are made in forms of invoice covering goods sold by the exporter prior to shipment, and goods forwarded on consignment without sale.

English Rolls-Royce at Capacity

Henry J. Fuller, chairman of Rolls-Royce of America, Inc., reports the English company now operating at capacity. He has just returned from abroad and found the concern employing 5,500 men.

CONSUMPTION OF GAS GREATEST IN HISTORY

Bureau of Mines Finds Motorists Used in July 60,000,000 Gallons More Than in June—Demand Nearly Two Millions Greater Than Production.

Domestic consumption of gasoline during July reflected the great impetus attained by automobile sales in increasing more than 60,000,000 gallons as compared with June. The total was huge, 566,000,000, and in producing it the refineries drew on their stocks to the extent of 52,000,000 gallons.

Exports during the month likewise grew, in this case by 6,100,000 gallons, a percentage of the total, 58,630,402, practically identical with the ratio in domestic consumption. Daily average consumption is figured by the Bureau of Mines at 20,213,193 which sum is nearly 2,000,000 more than was produced in the average day. This condition was true in June as well, and was exceeded a year ago July, although the total production and total consumption were each about 5,000,000 gallons less.

THE GASOLINE SITUATION JULY, 1922

(In gallons, last three figures omitted)

	July 1922	June 1922	July 1921
Income—			
Stocks[1]	824,966	856,607	750,644
Production	569,711	525,940	419,641
Imports	4,840	3,986	1,127
Total	1,399,517	1,386,534	1,171,413
Outgo—			
Exports[2]	60,497	54,603	29,419
Consumption	566,111	506,964	457,758
Stocks[3]	772,908	824,966	684,236
Total	1,399,517	1,386,534	1,171,413

[1]First of month.
[2]Includes shipments to insular possessions of U. S.
[3]End of month.

Plants operating during July averaged 89½ per cent of their indicated capacity. Their production was the largest ever recorded, showing an increase of 44,000,000 gallons over the June figure and 56,000,000 more than in May. Likewise domestic consumption was record-breaking in every sense of the word.

Production and consumption of kerosene and lubricating oils also recorded an increase during the month. The daily average increase in output of lubricating oils was 287.000 gallons.

French to Use Gasoline Rail Cars

French State Railway system operating in the Bordeaux district, has satisfactorily tested automobile traction service on short lines, reports Vice-Consul Davis B. Levis. The light cars used there are particularly adapted to gasoline power. French markets for U. S. cars are not "live," however.

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JULY EXPORTS SHOW STABLE CONDITIONS

(*Continued from page 629, second column*)

valued at $76,406, which may be compared with 961 during June and 802 during May. The greatest decrease, however, was shown in the Canadian figures which revealed only 891 cars received during July as against 1,807 sent into that country during June.

Belgium proved to be the leading truck market during the last two months, having taken 170 valued at $38,031 during July and 340 valued at $84,405 in June. Canada took second place with 117 trucks worth $225,697 as compared with 156 valued at $250,626. Mexico stood third in line with 105 trucks valued at $45,880.

Imports of automobiles rose slightly over those of June. There were 37 cars valued at $72,438 brought into this Country in July as against 33 valued at $39,656 in the preceding thirty days. Imports of parts, aside from tires, fell off considerably, the July figure being $31,208, that of June $45,596.

FOREIGN COMMERCE OF THE UNITED STATES FOR JULY

	July				Seven Months Ending July			
	1921		1922		1921		1922	
	Quantity	Value *Dollars*	Quantity	Value *Dollars*	Quantity	Value *Dollars*	Quantity	Value *Dollars*
AUTOMOBILES AND PARTS OF—								
Commercial:								
EXPORTED TO—								
Belgium	.....	.....	170	38,031	.....	.....	989	260,875
Netherlands	18	16,267	2	1,614	132	100,172	84	44,018
Norway	.....	.....	2	483	8	16,622	212	78,626
Spain	.....	.....	.....	.....	27	49,592	112	39,690
Sweden	2	2 111	.....	.....	49	108,146	365	107,295
United Kingdom	10	14,550	49	71,973	106	194,781	109	141,210
Canada	43	80,850	117	225,697	815	1,313,558	842	1,279,905
Mexico	92	53,689	105	45,880	942	1,239.435	622	369,667
Cuba	17	12,741	39	21,217	221	329,311	117	73,150
Argentina	.....	.....	2	5,020	18	49,526	17	28,720
Brazil	.....	.....	58	66,915	23	60,103	60	68,803
Other South America	.....	.....	41	42,616	52	89,401	187	141,414
British East Indies	.....	.....	8	10,383	178	408,732	83	108,989
China	.....	.....	2	1,000	44	65,559	41	34,661
Dutch East Indies	.....	.....	.....	.....	348	867,949	5	10,234
Japan	60	31,750	91	73,866	473	457,249	602	438,464
Philippine Islands	.....	.....	.....	.....	210	189,780	5	7,510
Australia	5	5,550	38	51,125	541	947,519	396	547,022
British Africa	3	3,285	11	13,633	55	103,611	81	103,617
Other countries	89	93,444	87	64,695	850	1,207,861	595	522,272
Total motor trucks and buses	339	314,237	822	734,148	5,092	7,798,907	5,524	4,406,142
Passenger—								
EXPORTED TO—								
Belgium	87	66,761	522	233,508	175	176,796	2,525	1,064,573
Denmark	2	950	67	46,395	57	99,085	311	253,629
Netherlands	34	33,484	77	86,986	257	307,102	473	447,837
Norway	1	1,800	10	8,664	37	50,170	1,018	402,059
Spain	20	17,672	96	69,701	360	661,235	793	763,157
Sweden	33	35,600	70	76,406	730	844,415	2,451	1,307,698
Switzerland	28	37,776	21	28,176	234	362,019	177	223,921
United Kingdom	17	58,000	523	46,131	236	414,717	2,520	2,045,088
Canada	580	570,476	891	838,881	3,600	5,201,507	7,180	7,419,782
Central America	.....	.....	25	22,899	.....	.....	181	164,845
Mexico	787	532,429	552	382,726	4,159	3,199,977	3,847	2,463,756
Cuba	83	57,369	117	69.301	1,329	1,053,657	737	619,982
Argentina	3	3,000	217	223,994	460	677,533	950	973,189
Brazil	7	12,397	240	201,179	231	359,675	656	628,988
Colombia	2	2.626	8	5,646	55	88,771	55	34,198
Other South America	3	6,615	113	88,932	297	580,876	514	372,595
British India	4	4,471	176	141,337	480	574,441	599	501,277
China	19	22,776	29	24,173	412	419.813	331	273,441
Dutch East Indies	13	13,523	67	55,951	402	704.024	266	270,873
Japan	117	56,722	94	58,923	796	708,974	772	463,940
Philippine Islands	.....	.....	38	27,292	426	427,102	268	217,593
Australia	88	85.255	663	606,224	1,184	1,431,317	5,619	4,086.085
New Zealand	14	16,005	140	99,893	499	669,386	597	510,198
British South Africa	11	13,062	156	161,994	268	330,522	1,000	943.603
Other British Africa	2	6.000	29	30,897	135	159.536	99	93,455
Egypt	7	5,798	39	15.291	119	90.918	260	121,205
Other countries	262	212,801	520	324,041	2,528	2,648,946	2,441	1,706,373
Total passenger cars	2,224	1,873,368	5,600	4,395,541	19,466	22,242,514	36,640	28,373,340
Parts of, except engines and tires	.....	1,952,525	11,791,538	2,825,335	.....	26,768,707	92,999,156	22,504.525
Total automobiles and parts of	.....	4,140,130	.....	7,955,029	.....	56,810,128	.....	55,284,007
Tires	.....	1,046,981	121,318	1,417,507	.....	7,583.005	782,150	10,204.357
Automobile engines	415	108,472	4,608	551,189	5,812	1,195,920	33,975	3,773.086
AUTOMOBILES AND PARTS OF—								
IMPORTS:								
Automobiles	45	90,532	37	72,438	290	544,200	210	407.212
Parts of (except tires)	.....	72,253	.....	31,208	.....	682,297	.....	390.925
INDIA RUBBER, CRUDE—								
IMPORTED FROM:								
France	11,356	2,019	6,036	1,403	11,356	2.019	415,943	36,139
Netherlands	323,106	40,365	923,272	170,934	3,124,486	588.146	4,734,660	864.360
Portugal	31,717	5.843	.....	.....	1,185,703	127,738	1,301.592	61,146
United Kingdom	3,347,596	415,510	1,769,259	264,960	12,599,412	1,967,444	32,229,166	5,864.022
Canada	30,624	3,369	8,170	1,193	274,981	107,724	24,531	3.689
Central America	11,400	1,164	.....	.....	23,585	3,073	14,434	2,232
Mexico	.....	.....	.....	.....	.....	.....	349.471	69,392
Brazil	1,482.037	116,275	1,469,643	149,404	14,873,413	1,733,556	12,711,793	1,532,229
Peru	78,582	11,318	.....	.....	183,413	28,198	141,779	30,220
Other South America	10,270	1,635	87,732	13,038	889,483	165,555	726,293	137,668
British East Indies	20,165,924	3,248,028	42,980,916	6,270.988	132,876,021	30,717,018	266,461,054	41,328,173
Dutch East Indies	2,011,670	357,665	8,803,660	1,286.419	22,992,037	5,778.289	49.696,633	8,082.969
Other countries	143,592	11,268	806,070	101,415	570,891	76,032	3,102,440	306,390
India rubber scrap or refuse, fit only for remanufacture	160,291	4,648	297,241	5,970	1,483,104	65,831	2,035,242	53,165
Total unmanufactured	28,066,807	4,332,277	57,495,892	8,380,132	194,276,450	42,211,793	379,568,044	59,370,042

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SALES IN WASHINGTON REPORTED AS "SPOTTY"

Dealers in Far Northwest Find Conditions Varying Throughout State—Rail and Coal Strikes and Demands of Lumber Rather Slow Up Trade.

Condition of the retail sales market in the State of Washington is decidedly "spotty," according to reports reaching AUTOMOBILE TOPICS this week. Several factors contribute to the diagnosis. The shortage of railroad cars, due in part to the demands of the lumber industry, the coal strike and the railroad strike, is the one big stone in the way.

That the general tendency of the trade is better is unmistakable, however. As Roy E. Dahl, sales manager of the Spokane-Nash Motor Co., reports, "the trend of the automobile business in this locality is upward. Our present rate of sales, compared with corresponding date last month, is about the same. Our stocks of cars is about normal."

Andrews Motor Co., Willys-Overland and Willys-Knight, Yakima, refers to the railroad strike as having had a deterrent effect on sales. Except in isolated cases, H. H. Andrews, manager, believes, dealers are not making money despite the volume of business done.

"Stocks of cars are ample," he asserts. "Used cars we are holding down to the level of potential demand. Speaking generally, a considerable number of used cars have moved into consumption this year, but the second hand buyer has been a poor risk because of his inability to make sufficient initial payment to insure completion of the contract."

Riegel Brothers, Dodge Brothers, Spokane, find the automobile business on an upward trend and express optimism for the future. The volume of sales compared with last month of last year are practically identical, varying by three per cent. The lumbering industry has had a good year, it is pointed out by this concern, the mining trade is not far behind, and as these constitute the principal sources of potential income for motor car dealers, the prospects are considered heartening.

Want Electric Truck Slogan

New York city electric motor truck dealers are offering prizes aggregating $1,000 for an advertising slogan to be used in future publicity. The contest opened this week with the first prize $500, the second, $200, the third $100 and forty $5 prizes. The contest closes on October 14.

Electric Show for Pittsburgh

Paul D. Lockard of the Duquesne Light Co., has been appointed general manager of the electrical show which will be held in Motor Square Garden, Pittsburgh, beginning November 4 and continuing for a week. One hundred and sixty exhibitors will show their wares and elaborate electric lighting and decorations will be provided under the sponsorship of the Electric League of Pittsburgh.

204 Durants for Chicago

Two hundred and four Durants were shipped in a trainload last week to the W. C. Auble Motor Co., Chicago distributer. The shipment was sent from the Michigan plant.

Stanley Steamer Forms N. Y. Co.

Following a showing at the Closed Car Show in New York city this week, the Stanley steamer management announced that representation in the Metropolis will hereafter be in the hands of the Stanley New York Co., with headquarters at 241 West 54th street. A. G. Armstrong, one of the old-timers in the industry, will be in charge.

Schools for Knights

Technical and engineering schools throughout the Country are asking the Willys-Overland Co. for Willys-Knight motors for demonstration work in their classes, the Company reports. Among some of these are the Sheffield Scientific School at Yale, the Mechanics Institute, Rochester, and the University of Pennsylvania.

LINSCOTT'S DEALERS VISIT REO LANSING FACTORIES

New Englanders Meet Their Sixteenth Trainload on Way to Plant

Thirty-three members of the Linscott Motor Co. dealer organization, representing Vermont, New Hampshire and eastern Massachusetts, were guests at the Reo factories at Lansing last week. As the dealers arrived from Boston headquarters, the sixteenth trainload of Reos to be shipped them this year was en route east. A year ago but three trainloads had been sent at this time.

J. M. Linscott was presented with a large replica of the key to the plant. Conferences, entertainment and meetings with the directors featured the visit. On their return to Boston, many of the dealers making up the party drove their consignments of the new phaeton away from the Linscott plant.

Steel Men Study Automobile

Processes used in the manufacture and heat treating of steel, particularly for automobiles, will be the center of attraction at the International Steel Exposition to be held in the General Motors building, Detroit, the week of October 2. More than 15,000 delegates are expected to attend.

VELIE DEALER SEES ONE CAR TO FAMILY

Gregory, of Kansas City, Adopts Slogan to That Effect—Means Doubling Number of Automobiles Now in Use—Entirely Possible, He Believes.

One automobile to every two families is the present average distribution, according to J. K. Gregory, Velie dealer at Kansas City and president of the Velie Dealers' National Organization. Gregory is working towards the realization of the slogan which he has adopted, of "A good car for every family in the Country."

"The slogan has been taken up by distributers and dealers, particularly of the light sixes, all over the Country, and is being given wide publicity," Gregory asserts. "Distributers and dealers assert that it has the most sound basis not only as a merchandising principle, but as an expression of what is actually taking place.

"Today the average for the entire Country gives a car to every two families—on the usual reckoning of five persons to the family. Only one-half of the families remain, therefore to furnish the original purchasers of 1922-23 cars—that is families that have not owned cars heretofore.

"Of course it is not possible that literally every family will have a car. But it is easily possible at present car prices that every family with an assured income, will supply itself with the vehicle that brings the great outdoors to them, and serves them best in their business as well as recreation."

Yellow Plans Increased Output

Expansion of the Yellow Manufacturing Co. plant to permit an output of 1,000 cars a month within less than a year is in prospect, officials of the Company declare. Present production is 400 cabs monthly. In addition to expanding the factory units, improvements in product and design will enable the Company to increase its output, it is explained.

Battery Business Good

Electric Storage Battery Co. is doing virtually a record business, it is reported from Philadelphia. Earnings and profits are correspondingly high.

Detroit Edison Earnings High

Earnings of the Detroit Edison Co., on whose power many automobile manufacturers of that city depend to a certain extent, took a decided spurt during August. Compared with August last year, the total, $2,011,061 represented an increase of $279,529. Net after taxes was $404,237, and for the eight months to August 31, $4,525,842.

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SEE DEMORALIZATION OF RUBBER MARKETS

Overproduction Estimated at 100,000 Tons — British Committee Reports Grave Situation to New York Bank—Urges Curtailment, Duties.

According to a British investigating committee's report to the Bankers Trust Co., of New York, the rubber growing countries of the world will produce 400,000 tons this year while the estimated world consumption will not be more than 300,000 tons. In addition, world storage is 110,000 tons in excess of necessary reserves for this time of year.

These figures are even more alarming to the rubber world than those recorded in AUTOMOBILE TOPICS under date of September 16. It is believed by the British committee that output must be curtailed at least 75 per cent immediately if the market is not to be so flooded that it will become demoralized. The following table portrays clearly the present and past conditions:

Year	Production	Year	Consumption
1920	370,000	1919	330,000
1921	282,000	1920	310,000
1922	*400,000	1921	265,000
		1922	**300,000

*Estimated. **Estimated on 3-year average.

Total stocks on hand are 310,000 at present, more than enough to supply the entire demand of 1922. Unless, therefore, the restriction on output is placed soon and rigidly enforced a much more drastic cut will be required next year with the probable result that the rubber growers will face absolute shut-down conditions. Two schemes embodying restriction of output and a progressive duty on exports are recommended by the committee. It is pointed out, however, that neither these nor any other schemes will work satisfactorily if all countries concerned do not join hands in enforcing them.

Paul Rubber Co. Expands

Paul Rubber Co., Salisbury, N. C., has let contracts for an addition to its building 60 by 120 feet, which will be used exclusively for the production of inner tubes equipped with the Tirometer valves. The additional space will enable the Company to produce 5,000 tubes daily.

Intercontinental Plans Approved

Reorganization plan for the Intercontinental Rubber Co., providing for a new company with capitalization of 60,400 shares no-par stock, has been approved by stockholders. Oil company is to transfer assets to the new for 31,370 shares of the latter's stock. After acquisition of the properties, the new company is to authorize $2,903,000 seven per cent convertible collateral trust notes, of which $290,300 (series "A") is to be issued to supply working capital and funds for expansion.

Peerless Tells Story in De Luxe Form

Dressed in attractive guise, the story of the new Peerless is being told by the Peerless Motor Car Co., for the benefit of its many friends, as well as the public at large. Forty-four pages of illustration and text make up a handsome booklet which offers a comprehensive description of the various body styles now being produced. Sketches and diagrams are also used to show clearly every detail of construction. It is a presentation thoroughly worthy of the name it carries.

Willys-Knight in Non-Stop Run

Completing within ten days time what is generally a season's run, a Willys-Knight touring car has just concluded a 5,200 mile, non-stop, endurance, economy run without a repair of any character and without a puncture. The test, made in the rugged mountain country of northern New Hampshire by the Boston branch of the Willys-Overland Co., included the carrying, at different times, of an aggregate of 50 persons and 20 drivers. At the end of the run the car climbed Mount Washington, 6,300 feet above sea level, an eight mile run in 42 minutes. Gasoline consumption was at an average of 21 miles to the gallon and a gallon of oil was used every 500 miles.

PARTS MAKERS LOOK FOR LARGE FUTURE BUSINESS

Several Booked "Solid" Until 1923 Is Several Months Old Survey Shows

Surveying the parts field this week, information reaching AUTOMOBILE TOPICS is to the effect that almost unanimously the makers look for unusual and continuously good business for the balance of this year and well into 1923. Many concerns find themselves with orders on hand sufficient to carry them up until the first of the year at capacity. And, perhaps seldom the case heretofore, have made commitments that far in advance.

While collections have been very good and other credit features excellent, it is pointed out by many in the field that the parts makers believe prices must advance in the not distant future. The sentiment of the trade is to the effect that while business has been phenomenal, profits derived therefrom have not kept pace. While many concerns have been working 24 hours a day, earnings from the great influx of business have not been commensurate. It is the consensus of opinion, however, that the Fall and Winter will prove exceptionally profitable at least for those engaged in the manufacture of parts for automobiles.

WOULD HAVE LIGHTS ON EVERY VEHICLE

Necessary to Reduce Accidents, States Road Official—Also Urges Passage of Uniform State Laws Requiring Rear View Mirror for Trucks.

Accidents on the highways could be greatly decreased by the passage of uniform state laws requiring every truck to carry a mirror, giving a view of the road immediately to the rear, and by requiring every horse drawn vehicle, as well as automobiles, to display some sort of light when using the roads at night. This is the opinion of M. O. Eldridge, director of roads of the American Automobile Association Good Roads Board, after making a careful digest of the traffic laws of all the states of the union.

Thirteen states have laws requiring the mirror on trucks, he points out, but very few have any regulation for horse drawn vehicles. The states requiring mirrors on trucks are Vermont, Washington, California, Connecticut, New York, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, New Jersey and the District of Columbia.

"Motor trucks need mirrors as they travel at a slower rate of speed than passenger cars, and the noise of the engine completely drowns out, in many instances, the horn of the motorist behind, who is blowing for the road," said Eldridge.

"As for the light on a horse drawn vehicle, the need for it is obvious, as a motorist, coming up behind such a vehicle and perhaps blinded by the headlights of a car coming from the opposite direction, cannot see it until he is right on it. I believe that uniform state laws on these two subjects will go far toward decreasing the number of accidents which take daily toll of life, and the A. A. A. will do all in its power to aid in obtaining such laws."

Truck Sales Large in California

August sales of motor trucks in California struck a new high point. There were 1,956 delivered, 12 more than the number registered in May, the previous record month. The increase over July was 271 with the odd coincidence that just as many were sold in the northern part of the State as in the southern, the number being 978.

Add Buses to Traction Service

Five buses have been purchased by the Northern Ohio Traction & Light Co. for the operation of two additional bus lines in Akron. The new routes will serve sections through which car tracks will not be laid for at least another year.

Prices, equipment, specifications—changing constantly. The Table (pages 667-9) keeps you posted.

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SEES INTERNATIONAL TRADE ARBITRATION

Department of Commerce Lawyer Finds Definite Strides Are Being Taken—Will Be Culmination of Centuries of Thought and Negotiations.

World-wide arbitration of business disputes, instead of protracted, expensive and friendship-destroying litigation, is at last making definite strides towards realization, according to A. J. Wolfe, chief of the Department of Commerce's division of commercial laws. After centuries of agitation, the combined efforts of the Department, trade groups and bar associations are beginning to get results, he finds, in the form of a plan, international in scope, providing for a national law in American and treaty arrangements to make it effective abroad.

"The commercial world," Wolfe asserts, "has hardly begun to realize the significance of the conferences held last Fall under the Department's auspices, which were followed by energetic efforts by the friends of arbitration, including the Chamber of Commerce of the State of New York and the United States Chamber of Commerce. Endorsement by the American Bar Association of a federal bill to make arbitration contracts valid and enforceable and of a clause to the same effect for the mutual recognization of such contracts by treaties of the United States with other countries, has been one of the most striking developments to date. Never perhaps in the history of commerce has the feeling been so strong that arbitration is the true solution of difficulties arising between honorable merchants both at home and abroad.

"An arbitration law which permits merchants to agree to arbitrate their differences and by which the awards of arbitrators have the force of judicial verdicts, now exists in the State of New York. A conference held in the Department of Commerce on November 15, 1921, went on record as recognizing the value and importance of commercial arbitration in the effort to conserve perishable and semi-perishable food products now going to waste at the rate of millions of dollars annually because of trade disputes.

"The American Bar Association in its annual convention in San Francisco in July last, gave its emphatic approval to the draft of a federal law to legalize arbitration in interstate commerce and in admiralty matters. The Chamber of Commerce of the United States has undertaken a work of immense significance in taking up with its constituent chambers the great and practical problem of providing the machinery for making commercial arbitration readily available to merchants at home and abroad and for making it a dependable weapon in clearing up the obstructions to the development of trade. Several chambers of commerce have advised the Department of Commerce of the perfecting of such machinery, notably the Chamber of Commerce of Los Angeles.

"A world-wide distributed questionnaire sent out by the Department of Commerce is beginning to bring out the great interest exhibited in other lands in the possibilities of commercial arbitration. Quick justice without recourse to courts by way of tribunals explains the whole proposition in a nutshell."

Engineers to See Ordnance Tests

Members of the Society of Automotive Engineers, the American Society of Mechanical Engineers and the Army Ordnance Assn. have been invited to a program of test-firing and demonstration of post-war ordnance material at the Aberdeen Proving Ground, Md., on October 6. The members will be admitted on a pass issued upon filling out a special blank prepared by the S. A. E.

SURVEY SHOWS GAIN IN USE OF COPPER IN CARS

100,000,000 Pounds of Metal Will Be Used This Year by the Industry

About 100,000,000 pounds of copper will be used this year in automobile manufacture in this Country, according to a survey of the Copper & Brass Research Assn. This represents an increase of 30,000,000 pounds over 1921, and about 750,000 pounds more than in 1920 when the automobile industry consumed 7.63 per cent of the total production.

Reviewing the use of copper in automobiles, the report says that high prices of copper and shortage of cars in war times resulted in substitution of inferior metals. This substitution for copper continued in 1919. In 1920, when manufacturers were striving to cut prices to the lowest, the practice was carried still further. Now the pendulum is swinging the other way.

Chicago Bus Co. Changes Hands

Local capitalists are reported to have obtained control of the Chicago Motor Bus Co., through the acquisition of 70,000 odd shares of stock. Apart from the rumored retirement of H. H. Jackson as president, no changes in executive personnel are contemplated. The Company has had a rather lengthy history of litigations.

Great Western Adds Motor Train

Propelled by a 64 horse-power motor, a two-car passenger train has been installed by the Chicago Great Western railroad on regular service between Des Moines and Marshalltown, Ia. The train provides seats for 56 passengers and sixteen feet of baggage space.

GERMAN AUTOMOBILE INDUSTRY EXPANDING

Many Companies' Output Contracted for Until January, 1923—Exports Decline Somewhat—Passenger Transportation for Hire Grows Quite Popular.

One of the unexpected factors in the gradual return of German industries to post-war normalcy is the "come-back" of the automobile business of that country. According to despatches from Berlin, the upward trend of the industry has reached the point where many companies have contracts for their entire output until January 1, 1923.

Nor is this business mainly export. Indeed, exports have declined somewhat, though cars sold abroad during the first six months of 1922 exceed in number those so disposed of during either the first or second half of 1921.

The domestic demand seems to be for light and medium weight cars. High operating costs are responsible for this feature of the market. Prices reflect the parlous state of German money. Small closed four-passenger cars now cost 565,000 marks. This may be compared with a cost of 140,000 marks, without tires, late in 1921. Medium weight automobiles bring 1,155,000 marks as against 300,000 marks ten months ago. These are large figures but they mean, in American money, $1,796 f. o. b., for the first named type and $2,775 for the second.

In Germany the use of automobiles as public conveyances is growing rapidly. The postal department is making use of 744 cars for transporting passengers aside from its 644 employed in the mail service alone. Passenger carrying by truck is also increasingly prevalent. Costs have been reduced to the point where 10 per cent is saved by the passenger as compared with railroad travel rates, which are constantly rising.

There are now about 90 automobile factories in Germany employing 10,000 persons. There were 118,119 motor vehicles registered on July 31, 1922, against 93,072 in 1914. These registrations include 60,966 passenger cars and 30,424 trucks.

Reports Kalgan as Tire Market

Kalgan, China, offers a fair market for tires and tubes, the Department of Commerce reports. The 40 cars in that district use as many tires as 400 cars would in American cities. This is due to excessive overloads carried and the fact that an old camel-caravan route is the only "road" open to extensive travel.

Crude Oil Production Gains

Crude oil production in this Country is now 1,540,082 barrels daily. This is a gain of 4,389 barrels over the preceding week.

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UNCLE SAM STRIDING UP COMMERCE'S HILL

Survey of 26 Cities Shows Strikes Have Not Seriously Affected Industry as Yet—Volume of Trade Decidedly Ahead of Last Year's Experience.

Further evidence of the well-nigh irresistible upward urge of business throughout the Country is readily obtainable through a survey of basic factors in the commercial structure of the Nation. Selecting 26 of the largest industrial and business centers in the Land, it is found that almost without exception all lines of endeavor are feeling an impetus that the strikes are not seemingly able to effectively oppose.

Thus, reports of New York city industries are to the effect that no curtailment in manufacturing but some in building have come about because of the labor controversies. At Baltimore the effect is termed "negligible." At New Orleans the strikes have had "small effect." At Chicago there is no damage reported as yet. The same obtains at San Antonio, Portland, Ore., and San Francisco.

The following table is interesting as showing the return of American industries to widespread prosperity:

City	Industries Showing Greatest Recovery in Recent Months
New York	Building materials, shipbuilding, wood products and metal products.
Boston	Building, electrical equipment, machinery, clothing.
Philadelphia	Iron, steel, silk, shoes and building.
New Bedford	None to any extent.
Fall River	Cotton goods.
Baltimore	Iron, steel, textiles, railway pairs and automobile parts.
Atlanta	Automobiles and textiles.
Rochester	Automobile equipment.
Cleveland	Automobiles and clothing.
Akron	Rubber.
Memphis	Lumber, steel, iron, mixed feeds and flouring mills.
Pittsburgh	Building, iron, steel and railroad equipment.
New Orleans	Only moderate depression and consequent light recovery.
Detroit	Automotive industry.
Duluth	Mining.
Minneapolis	Wholesale agricultural implements.
Chicago	Automobiles, building and meats.
St. Louis	Shoes, building, automobiles, electrical, iron, steel and clothing.
Tulsa	Oil and gas.
Dallas	Automobiles, clothing and farm implements.
San Antonio	Food products.
Denver	All industries.
Kansas City	Live stock, iron and steel.
Portland, Ore.	Wool and lumber.
San Francisco	Metal products, building, textiles and food products.
Los Angeles	Canning and building.

With the exception of New Bedford, Akron, Pittsburgh, New Orleans, Los Angeles and Denver, the effect of crop and industrial prospects is found to be decidedly stimulating. Coupled with this, practically every city finds the condition of manufactured and retail stocks considerably reduced. Only in the textile markets are large inventories of unsold materials prevalent.

A heartening influence is felt throughout the Country, it appears, in that the tendency to great expansion in the train of unusual prosperity is lacking. In only Boston, Baltimore, Memphis, Tulsa and some cities of lesser size is any great growth in this direction reported. Indeed, in some cities, such as Cleveland, actual retrenchment is in progress. It is interesting to note that in Los Angeles an unexpected blossoming of branch houses is in progress. Many Eastern concerns are establishing them throughout the city.

Not one city reports any but the most optimistic predictions for the future. Employment is likewise increasing steadily and in some sections labor is very hard to obtain at even high wages. Along with this sentiment, it is generally found that retail prices are remaining steady, although those cities reporting higher prices are about equal in number to those which find retail price-tags lower.

Finally, considering volume of trade, it is discovered that business this year is greatly in excess of last year's. Percentages range from "small" to "nearly twice as large."

Dot Lubricator Gaining in Use

Carr Fastener Co., Boston, reports that four more manufacturers have adopted its Dot lubricator as standard equipment. In addition, the City of New York has specified this lubricator on 200 trucks recently ordered and several large taxicab companies have also adopted it. The special Dot lubricator for Ford cars and trucks has been in use by several large fleets for the past six months. Such satisfactory results have been obtained that the Edison Light Co., Boston, has specified it for its Ford fleet.

AMERICAN WELDING CO. NOW PRODUCING TIRE BASES

Rims for Passenger Cars to Be Started in About Sixty Days

Readjustments and expansions in the factory of the American Welding and Mfg. Co., Warren, O., have progressed so far since the stockholders authorized the new reorganization plan early in August, that the Company was enabled to announce this week that it is now in full production of channel bases for solid and cushion tires for trucks and tractors. Furthermore, the necessary machinery has been installed and is now in operation, producing a variety of rings made from steel bars, angles and channels. A resume of the reorganization plans, whereby F. R. Klaus and F. H. Meyer became actively interested in the concern, appeared in AUTOMOBILE TOPICS under date of August 19.

J. C. Manternach, president, also announces that machinery for the production of rims of all types for passenger car wheels will be in operation in about 60 days. Some extensions to buildings are also contemplated. Klaus and Meyers have now made their headquarters at Warren.

WAGES STABILIZING AT A HIGHER LEVEL

Increases Begin to Offset Decreases and Violent Fluctuations Cease—Conference Board Finds 11 Per Cent Is Average Rise Up to the End of 1921.

Wages throughout the Country have reached their lowest level and are beginning to increase, according to the National Industrial Conference Board. In the Board's seventh bi-monthly summary of industrial conditions, it is set out that wages, especially in the automobile industry, are tending to settle on a level somewhat higher than prior to the war.

It is interesting to note that of the multitude of industries in the Country, the automobile and steel concerns are among the very, very few that have raised wages since July 15. The drift towards stabilization of wages, however, seems to be nation-wide and fairly definite, the board finds. The economic status of wage earners in the principal manufacturing industries was 11 per cent higher at the end of 1921 than before the war, in spite of reduction and part-time production.

The composite weekly earnings of all workers for wages in July, 1914, were $12.36. By July, 1920, when the peak in average weekly earnings was reached, they had risen to $29.69, an increase of 140 per cent. From that time on, the average weekly earnings declined and at the beginning of January, 1922, were $22.27, or 80 per cent above the July, 1914, level. The average weekly earnings of all male skilled labor were $14.19 in July, 1914; $33.54 in July and August, 1920 (the peak), and $25.66 in January, 1922. The average weekly earnings of male unskilled labor were $10.89 in July, 1914; $27.14 in August, 1920 (the peak), and $18.95 in January, 1922. For women the figures were $7.82 in July, 1914; $18.79 in June, 1920 (the peak), and $15.76 at the beginning of 1922.

Iowa Claims 48 Cars to One in 1910

Iowa's big growth in the number of automobiles owned and registered in the State in the last eleven years is mirrored in a report last week of Walter C. Ramsey, secretary of State. In 1910 there were 10,422 automobiles and trucks registered. In 1921 there were 481,535, approximately 48 times as many.

Charlotte Gets Bus Lines

Charlotte, N. C., is now connected with all towns within a radius of 25 to 30 miles through the installation of a new bus service between it and Monroe. The line is the final one of a series established by M. L. Best of Concord and all are reported well patronized.

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A. A. A. COOPERATING IN "SAFETY SEASON"

Asks Members to Sign Highway Education Board's "Pledge"—This Year's Safety Program Outlined — School Children of Nation to Participate.

American Automobile Assn. is cooperating in the safety program of the Highway Education Board of Washington. This year the plans for the "safety season," which is from September 10 to December 16, calls for a national safety essay contest among elementary school pupils, national safety lesson contest among elementary school teachers, and the observance of "seven days for safety," which will be from October 8 to 14 inclusive. Among other things, the Three A's is asking all its members throughout the Country to sign the "Pledge of Carefulness" issued by the Highway Education Board for this campaign, copy of which is presented in the accompanying insert.

The endeavor of the Association through distribution of safety posters and literature, talks in the schools, motion pictures in the various theatres, and other means of propaganda is to reduce the toll from traffic accidents. With the ever increasing number of automobiles using the highway, safety precepts are becoming an increasingly important part of every school curriculum and automobile owners all over the United States are taking a constantly greater interest in measures to make highways safe.

"Every automobile club connected with the A. A. A. will, I am sure, cooperate in making this 'safety season' a success," said George C. Diehl, president of the A. A. A. "Our members throughout the Country are intensely interested in any measure that tends to making the highways more safe for automobilists and pedestrians alike."

Since it educates the future citizen of the Country in safety methods, the A. A. A. believes the national safety essay contest, which last year drew responses from thousands of school children all over the United States, one of the greatest factors for safety, both present and future. This year the subject for the contest will be "My share in making the highway safe." National and state prizes are offered in this, as well as the teachers' contest.

Conditions prescribe that the essays must not exceed 500 words. Pupils in fifth to eighth grades inclusive, fourteen years old and under, are eligible for participation. Essays must be submitted not later than December 4. The contest embracing the practical lesson teaching safety on the highway, not to exceed 3,000 words, is open to all elementary school teachers.

PLEDGE OF CAREFULNESS

MEMBERS of the American Automobile Assn. are being asked by that national organization to sign the "Pledge of Carefulness," issued by the Highway Education Board, Washington, in connection with its safety program for 1922. The pledge follows:

Realizing my responsibility as an American Citizen to secure the safety of others by careful conduct on the streets and highways, and,

Realizing that the accident and the death toll of my Nation, State and city can best be reduced by thoughtfulness and carefulness,

I pledge myself to be considerate of the rights of others while on the streets and highways; to learn and observe traffic rules and regulations to the best of my ability; to cooperate in a campaign of carefulness, either as a pedestrian or as a driver of a vehicle, and I will, by precept and example, endeavor to assist others in making streets and highways safe

Most Drivers Careful, Pennsy Says

Ninety-seven per cent of automobile drivers are careful, according to inspectors of the Pennsylvania Lines, who have checked the performance of 30,372 cars at grade crossings in five States. The educational campaign of the automobile industry, the "Cross Crossings Carefully" drive of the railroads and the efforts of many other organizations are being pushed to eliminate the three per cent of careless motorists.

Bay State Registrations Grow

August registrations of automobiles and trucks in Massachusetts brought the nine months' total up to 348,059 of the former and 61,297 commercial vehicles. These figures exceed those of the same period of 1921 by more than 68,000 passenger cars and 9,000 trucks. August registrations were 17,937 passenger cars and 1,818 trucks.

City Police Want State License Fees

New York State automobile license fees, totaling $10,500,000 annually, should be turned over to cities for police work Commissioner Richard E. Enright of the New York Police Department declared before the International Police Conference, meeting in New York City last week. He urged that new laws be passed, giving police the full enforcement powers they now lack, and assailed New York State for issuing licenses to criminals, dope fiends, and persons mentally and physically defective without providing regulatory measures. Commissioner James W. Inches, Detroit, urged jail sentences for reckless drivers.

SAFETY COUNCIL ASKS UNIFORM TRAFFIC LAW

Sets Automobile Fatalities and Injuries at Relatively Low Figure of 325,000 —Would Train Children and College Students in Accident Prevention.

Figures compiled by the National Safety Council tend to disprove the widely credited statement that 1,500,000 persons are killed and injured yearly in automobile accidents throughout the United States. The Council, first admitting that reliable data is hard to obtain, finds itself justified in estimating that between 260,000 and 300,000 are so injured yearly. Since the organization estimates on a ratio of between 20 and 24 accidents to every death from such cause, it would seem that the total for killed and hurt would be in the neighborhood of 325,000 every year.

Nevertheless, the Council points out, while all other hazards peculiar to traffic conditions are steadily being eliminated and fewer and fewer deaths resulting therefrom every year, the automobile's toll continues to grow greater. Despite this fact, however, the total number killed from all traffic causes in the 50 cities chosen by the Council for its purposes, has been 4.8 per cent less this year than last.

The Council, in adopting a set of resolutions looking toward betterment of conditions, reports that 80,000 accidental deaths occurred in the Country last year. Of these 75 per cent could have been prevented, it is asserted. The most important phases of these resolutions concerned educational and punitive measures for prevention. The first is to the effect that all school children, as well as students in colleges and universities, be trained in safety, both for their own protection and as a lesson in good citizenship.

The resolution regarding law enforcement urges the adoption of uniform, practicable laws and ordinances for the safeguarding of vehicular traffic and the strict enforcement of these for the protection of law-abiding drivers and pedestrians. This has been stressed in the series of traffic discussions appearing in AUTOMOBILE TOPICS and generally is coming to be understood as one of the few ways in which traffic problems may be solved.

Chicago Busy with "Courtesy" Drive

A "courtesy" drive which is being conducted by the Chicago Automobile Trade Association is producing results in almost every section of the city as well as its immediate suburbs. A large crew of men are engaged in placing "courtesy" stickers on the cars parked along the curbs.

Show season has started. The weekly-revised Table (pages 667-9) gives you a handy guide to them all.

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CADILLAC

The year 1922 is the most brilliantly successful that the Cadillac Dealer Organization has ever enjoyed, and has resulted in the manifest and material strengthening of Cadillac leadership in the fine car field.

CADILLAC MOTOR CAR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

A Copy of the New Type 61 Catalog
will be Mailed You Free Upon Request.

Standard of the World

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

MOTOR TRADES PUBLISHING CO.

1790 Broadway, New York City

FRANK W. ROCHE, President and Treasurer
C. D. WIGHT, Secretary

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Advertising in Brief

Advertising, that all-powerful art of modern times, should make direct appeal in a personal manner, say those who ought to know. Therefore when the "Blank company" advises newspaper readers this week that "The new and very powerful Blank will make better time with less speed and fatigue in a five-mile city trip or a five-hundred-mile country tour than any other car, due to its compactness, its flexibility, its ability to take corners without sway and its amazing balance," a good advertisement is born. The average buyer of a good car, if a mature person, is interested in just the points brought out by the composer of the "ad." High speeds mean little in his life; higher average speeds to save time mean much.

Riding comfort and improved handling intrigue his attention. The general buyer believes all cars now-a-days—with the exception of his "pet aversions" which are some other person's "pet cars"—are on a par as far as ability to travel is concerned. He does think some cars are better than others in the matter of comfort and convenience, resistance to depreciation and cost of upkeep. Why does he? Because competent advertising writers have told him facts in a way he wants to be told and in a manner rousing his "human interest."

A Billion for Trucks

Statisticians, divining rods of modern industry, believe the business man of the nation will spend a billion dollars the coming twelve months on purchasing commercial vehicles. By business men, they explain, they mean every man engaged in commercial direction, including the farmers as well as the manufacturers. Coal will be hauled longer distances on trucks than ever before. Milkmen are becoming warmly interested in converting their transportation to trucks. Farmers will be called upon to send their produce to the cities from greater and greater distances and to make the shipments safe from the dangers of delay, trucks must be used. The Associated Highways of America is propagating the idea of linking all the great cities of the United States by trunk lines devoted largely to truck haulage.

The vision marks the end of the long road of small sales, relatively speaking, of course, for the truck makers. Ten years from today people will marvel at the obstruseness of we "moderns" in connection with the truck and its service to America. Now is the time for preparation by the truck makers. Let not the bud of promise be destroyed by the scythe of unpreparedness!

"Own Your Own Garage"

"Own Your Own Home" has become a national phrase despite the obvious excess verbiage. Perhaps it has not occurred to automobile dealers that the phrase itself and the ideas it engenders lend themselves to the uses of the trade. It is not an overconfidence, perhaps, to reason that a community in which "Own Your Own Home" is more than a slogan—is, indeed, a fact—does, will or should own its "own" automobiles. The community, therefore, needs garage facilities.

Having progressed thus far in reasoning, a casting about for facts reveals that few dealers have made any particular attempt to proselyte either for or against the "Own Your Own Garage" idea, here expressed. It is certain that the dealer can build up a good deal of good will and a good deal of business by taking one side or the other of this proposition. If he cannot adequately provide garage facilities for his customers why can he not push the purchase of garages by car owners—the dealer can sell the owner supplies and he will. It is the truth to point out to prospective private garage owners that it will not cost as much as might be expected and will prove an undisguised blessing in many instances.

Ex Animo

The great banker was sinking rapidly. Friends closed in on his death bed. The physician whispered, "I fear he is nearing the Great Divide."

"Tell them not to divide until I get there," murmured the dying man.

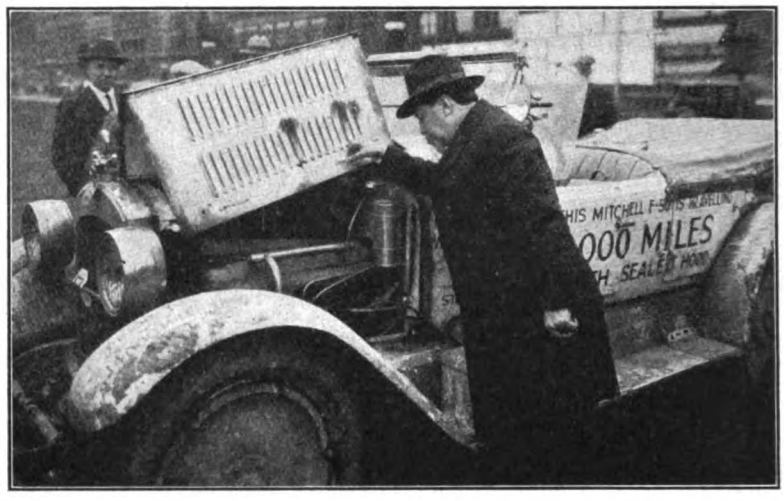
"From the heart" it came. And likewise from the heart come a great many of the woes of the business world of today, engendered by the old idea that he, the person mayhap involved, must "be there" or all will go to pot. There is, sometimes one thinks, too much personality in some businesses and the automobile trade is not immune. When an industry grows to magnificent proportions, one man's mind cannot cope with all that arises. Still there never will be a time, probably, when some man will not say, "Wait till I get there."

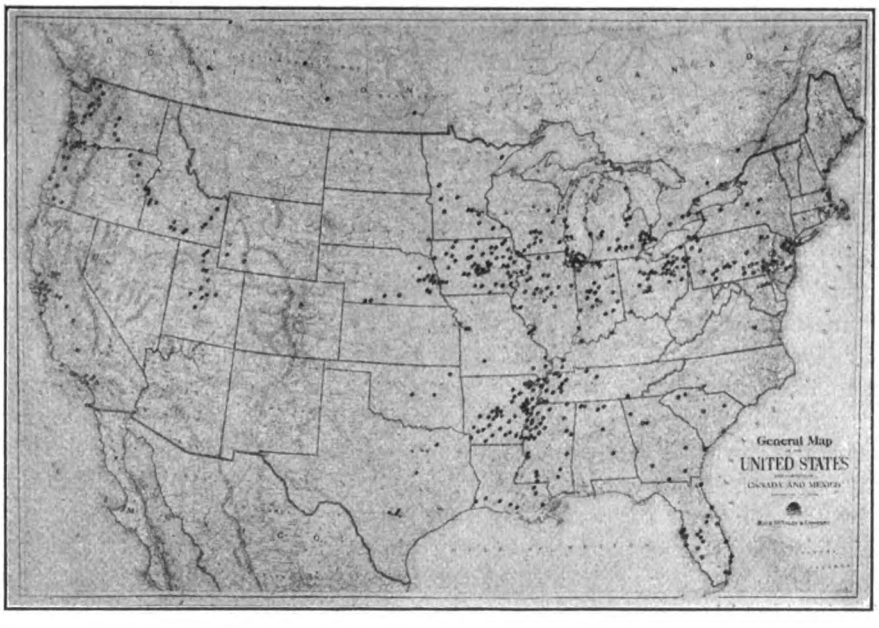
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Pictorial Stories of Strenuous Campaigns Waged

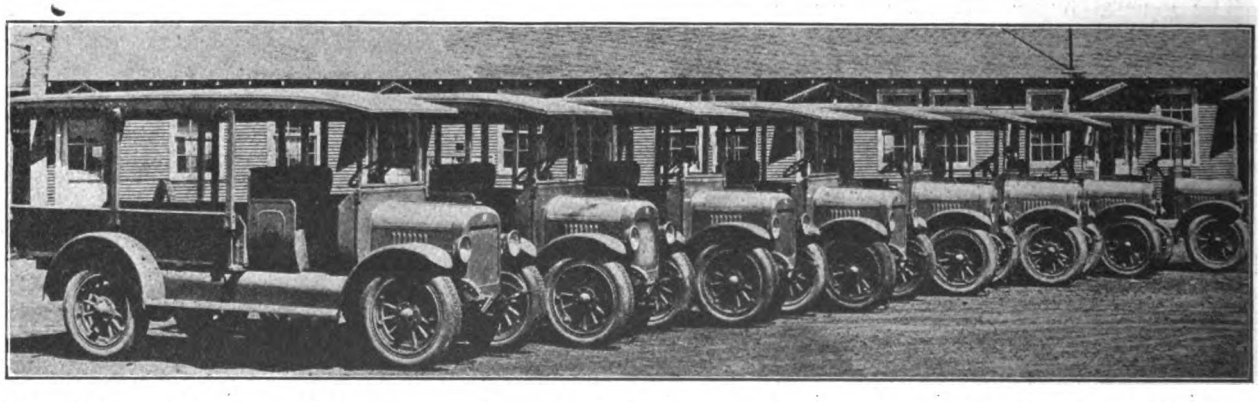
Mitchell Comes Home; A. E. A. Devises Map; Navy Buys Ruggles

AFTER having completed 10,254 miles with the hood of the car sealed so that engine adjustments were impossible, the Mitchell "White Streak" Number 1, piloted by Frank Zirbes, roared into Chicago on September 18, finishing an endurance run started June 4, when the car left the city. In every large city through which the car passed, the seals were inspected by prominent public officials who signed affidavits that they were intact. Not an adjustment was necessary and the consensus of opinion by spectators was that the engine ran with remarkable smoothness and quietness





IN order to stimulate greater activity in dormant sections, the Automotive Equipment Association, Chicago, has presented in the form of a map, its merchandising movement during the first year of its work. Each pin in the map, which is on the wall of the office of Merchandising Director Ray W. Sherman, signifies a meeting held, the "Ask 'em to Buy" story told and in most cases the "Ask 'em to Buy" moving pictures shown to an audience of trade people totalling fifty thousand



TWO fleets of Ruggles trucks have been purchased by the Government for use at the Brooklyn Navy Yard. One fleet, pictured above, consists of eight canopy top express body trucks equipped with the open cab, and the other of six oil tank trucks with the All-Weather cab. Each job is built on the Model 20 chassis having a capacity of 500 to 2,500 pounds

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New York "Try-Out" Booms Closed Cars

Makers Submit Many New Offerings and Established Lines for Approval—Public Responsive at Local Exhibit

TRADE attention was turned to New York this week for a representative reaction of the buying public's pulse toward closed cars for the coming season. The occasion that furnished the "test" was the second annual closed car show of the local dealers, officially staged by the Automobile Merchants' Association and endorsed by the National Automobile Chamber of Commerce. The report is all that indications led the trade to expect, if not more, for the metropolitan populace proved readily responsive to closed cars in general, and the many new offerings in particular.

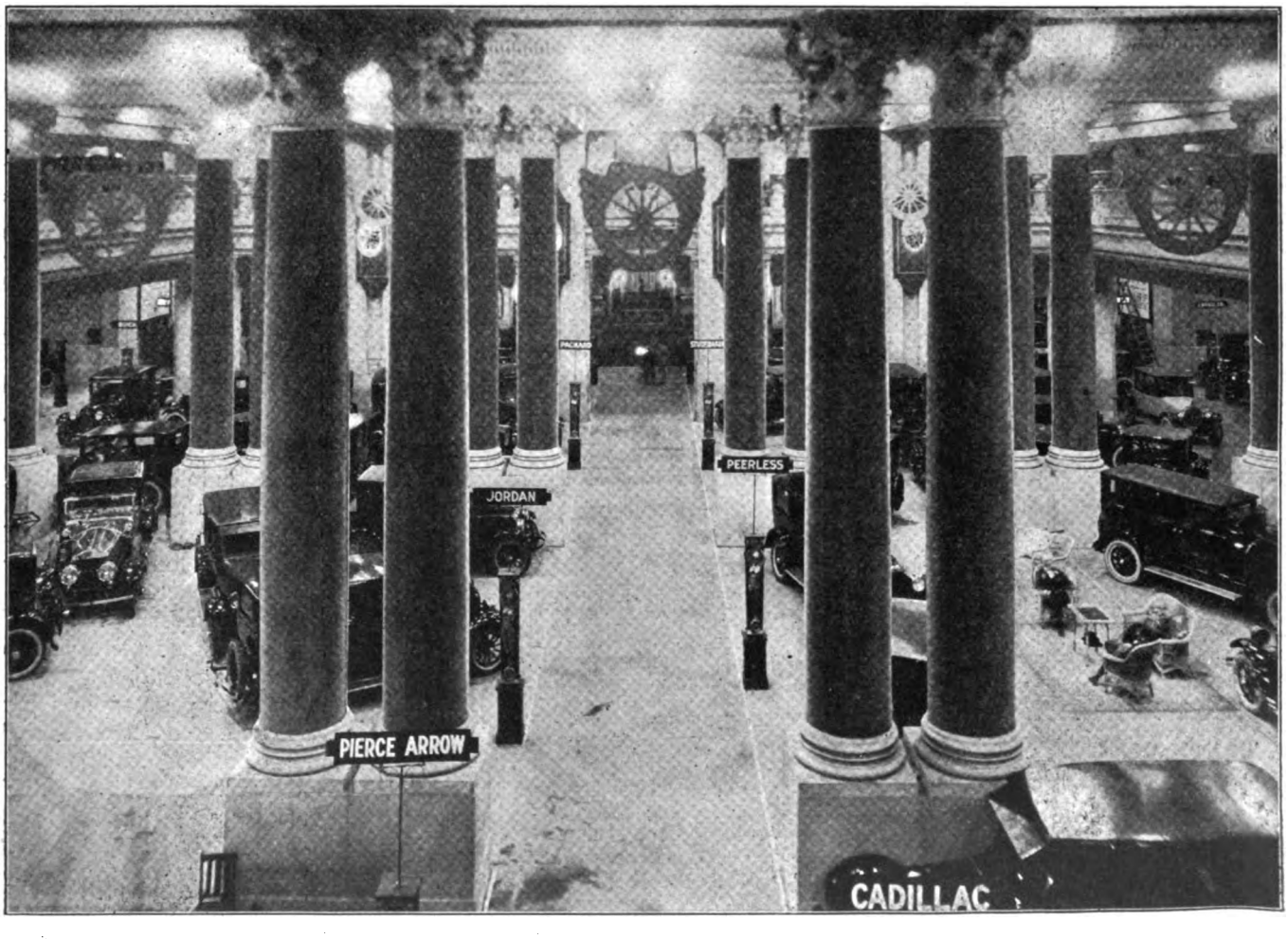
Many factors contributed to make this year's exhibition national in aspect. First there was the fathering of the show by the manufacturers through the N. A. C. C. The patronage was unofficial, to be sure, but none the less genuine and cordial.

But of greater importance is the fact that the manufacturers, while ostensibly merely giving their sanction, in reality took advantage of the ideal circumstances to try out their closed car offerings in advance of the national shows now but three months distant. This was evidenced by the many new body models displayed, some of them for the first time anywhere.

The reasoning here is perfectly logical. Should the models shown "take" with the representative public in and adjacent to New York, it follows that the manufacturers would be safe in continuing them for the 1923 season, because it is felt that in matters of style the Country follows the lead of New York.

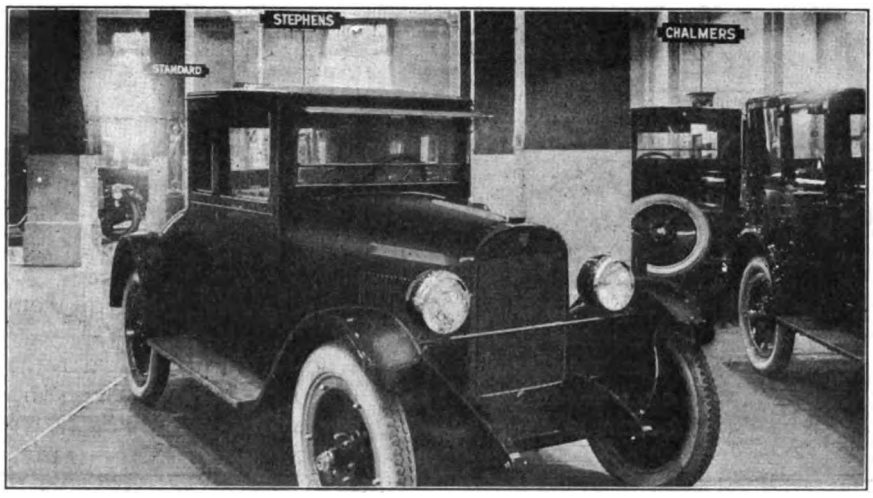
If for any reason any kinks developed, there remains sufficient time between now and January to get these straightened out in time for the big national exhibit. Those manufacturers who had nothing new on display were able to ascertain whether their present lines satisfied the class of buyers who constitute their markets, or whether their prospects were inclined to look with favor upon offerings of a kind not already included in their lines, but possibly shown in other exhibits.

One incident shows how this "try-out" worked. Included in the exhibit of one popular line was a new model regarding the popular reception of which all the salesmen connected therewith were frankly skeptical. But, as it turned



Grand Central Palace was decorated in national show style for the dealers' second annual closed car exhibit

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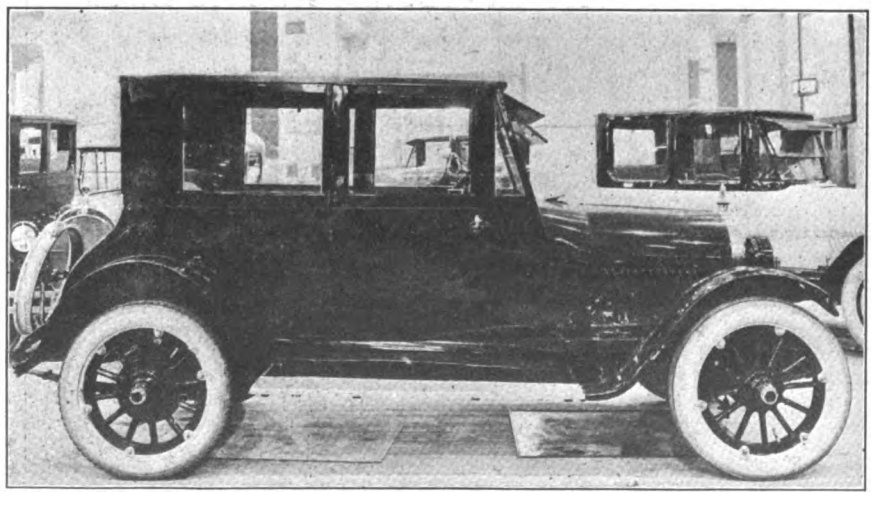


Maxwell uncovered its new two-passenger club coupe priced at $985

out, the show car of this particular model was sold for cash within a few minutes after the doors opened the first night. Subsequent experience proved that this job moved considerably faster than the other models, which had been expected to score instantly.

Other national aspects were the setting in the Grand Central Palace, the home of the big January show, with decorations rivaling those of the major exhibit; the large and representative makes on display; the interest shown by the suppliers of materials; and the reassuring volume of attendance.

Last, but not least, was the support of the daily press. Practically every Sunday edition of the larger newspapers lent a national show atmosphere with special automobile show sections, profusely illustrated and abundant with the customary write-ups, puffs and the piffle without which no show supplement to a daily newspaper is complete. It should be said, however, that the local dealers' advertising amply justified this consideration. There was, for instance a column editorial, written in Arthur Brisbane's best style, which called upon every reader to attend the show and *buy*, arguing that everyone could afford to own a car and no one could afford not to own one. "Archy," Don Marquis' famous alter ego, was also featured, boosting the show automobile. The daily editions carried the national show atmosphere throughout the week. About the only national features missing were those customarily found in hotel lobbies and on the floors above during show season.



Oldsmobile four five-passenger brougham made its first appearance

The show ran for the week September 23 to 30, inclusive. Altogether there were some 56 makes of cars on display, in models ranging from one to six in number, on the main and mezzanine floors of the Palace. In addition there were located on the mezzanine, four makes of trucks and a few accessory stands.

Exhibits were confined exclusively to closed cars. There were, however, a few open models having California tops with Winter enclosures to justify their presence in the Palace.

From the dealers' standpoint, this year's pretentious affair was prompted by two factors. First, there was last year's experimental closed car show, held in the 12th Regiment armory November 14-26, which proved such a success as to warrant the present exhibit on a more elaborate and pretentious scale. This year the date of the exhibit was advanced two months, since many felt that the first attempt came too close to the national show, and also because the earlier date was more appropriate for launching the closed-car selling season.

The second big factor is the increasing importance of the closed type of automobile. The trade is too well aware of the steadily enlarging percentage of total output for which the closed models account, to require further comments on this score.

Attendance was gratifyingly large. While official figures are not available at this writing, actual observations indicated that this year's attendance far surpassed that of a year ago. The 75-cent admission charge apparently did not by any means stop the people from coming as some feared it might.

Sales were reported at practically all stands. Inquiries brought forth expressions of nothing but complete satisfaction with the results. The majority reported many sales actually made in the Palace, while others attributed to the exhibit the spurt in sales recorded in local showrooms. At all events, the crowds that swarmed about the cars eagerly inspected every detail and freely asked questions. A goodly number of prospects bearing all the earmarks of being "red hot" were harvested throughout the entire week.

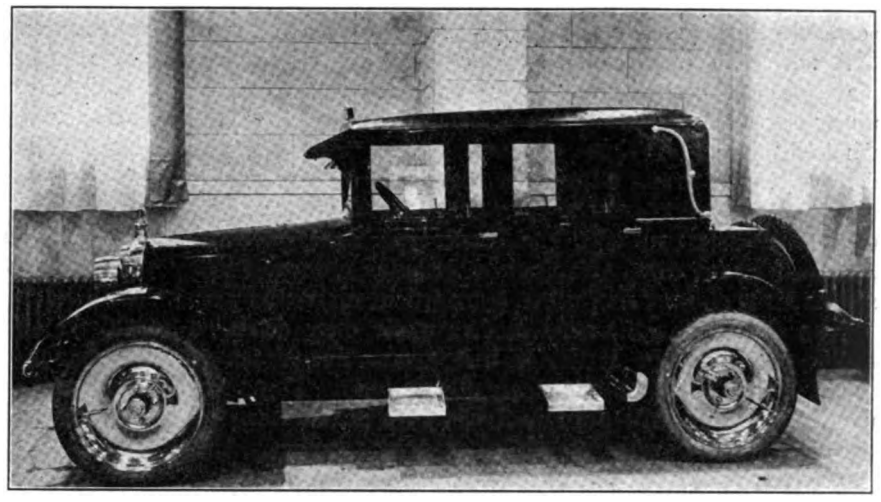
As for the exhibits themselves, there were several new models uncovered for the first time. Equal in number were the new models about which the trade had heard, but which were seen for the first time. Then there were any number on display which were recently brought out and which were given their show initiation at this time. At practically every stand there was something new to attract attention.

Price cuts on three popular lines coming simultaneously with the show, served to heighten interest in these exhibits. On the opening day, Hudson reductions of $120 on open models and the coach, and Essex reductions of $50 on the touring, cabriolet and coach were disclosed. These were closely followed by Oldsmobile cuts, ranging from $50 to $150 on the four-cylinder line and from $50 to $120 on the model "47" light

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eight series. Word of "a very unusual announcement" pertaining to the Jordan to be made Sunday, October 1, prompted inquiries at this exhibit, where it was said that the closed models were to be reduced an even $300 in price.

All forms of closed bodies were exhibited. Conspicuous by their numbers were the new two-door five-passenger closed models, variously styled coupes, broughams, coaches, touring-sedans, and also bearing the several more distinctive appellations applied by individual manufacturers. At the majority of stands, particularly the popular-priced lines, a body of this type was invariably to be found.



Special four-passenger sedan body mounted on lengthened Hupmobile

In the great number of such instances, these bodies are of less expensive construction than the standard closed cars. Those that come under this classification are designed to meet the big demand for lower-priced closed cars. The others are of standard construction, sell at prices approximating those of the larger coupes and five-passenger sedans, and are offered for the congeniality the seating arrangement affords, plus the smart appearance the design permits.

Many, but not all, are fitted with trunk rack and protecting metal bars on the rear body panel. Some even carry the trunk itself as standard equipment. Incidentally, there is a marked tendency, so the exhibits revealed, to mount trunks on all forms of closed cars.

The two-door five-passenger jobs are more or less similar in exterior lines. Interior room, type of individual tilting seats, quality of finishings and assortment of fittings, however, all vary. The conclusion seems to be that this type of body admirably lends itself to production at practically whatever cost the manufacturer wants to fix upon.

Sedans were shown in all exhibits. These included five- and seven-passenger types, close-coupled or sport types, and vestibules or suburban designs.

The assortment of coupes included two-, three-, four- and even five-passenger designs. From those models displayed, there seems to be heightened activity in the two-passenger single-seat type. Interior finishing of these is in both conventional closed car cloths and leather.

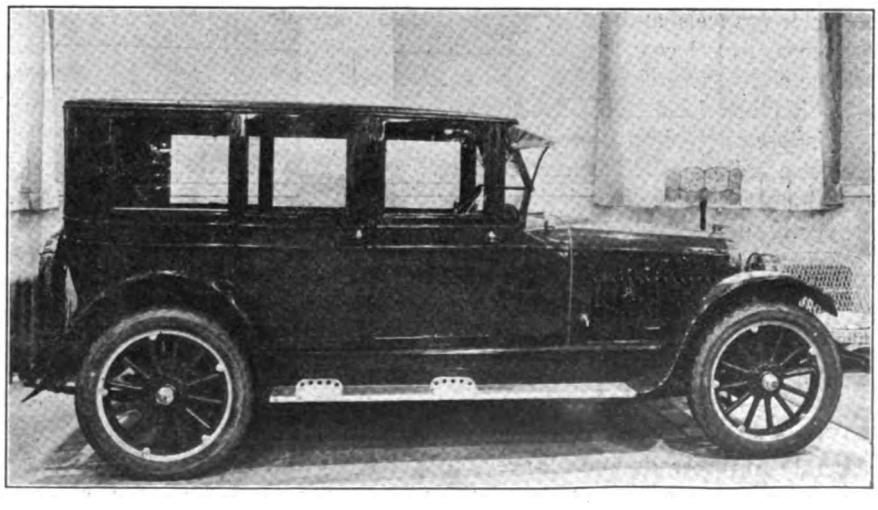
The more elaborate town cars, collapsible broughams and limousines were naturally in the minority. These have their own exclusive followings, however, and attracted interest in proportion.

One of the most interesting and unusual sides of the show was the number of custom-built bodies mounted on popular-priced chassis. There is a limited demand for such combinations, as the dealers' experience has proved. The reasons vary from the desire for smaller cars, easy of maneuvering in traffic, yet with bodies in keeping with one's station in life, to the ambition of those who would own custom-built cars and who either are entirely satisfied with the mechanical excellence of the medium-priced chassis or who cannot afford the more expensive ones. The lower cost of maintenance and operation also are factors.

Sombre shades—black, dark blue and wine color—easily predominated in finishes throughout the Palace. Here and there a car would stand out prominently by reason of its lighter and gaudy finish. Observation made leads to the conclusion that while many buyers want lighter colors on open cars, when it comes to the closed models they either prefer or are entirely satisfied with the darker shades.

One could not pass from exhibit to exhibit without particularly noticing the results of activities of the textile suppliers. Apparently they have forced upon the car manufacturers the vogue of brown upholstery, with wide stripes of either darker brown or black, regardless of whether or not it harmonizes with the exterior color of the body. Plain upholstery was decidedly conspicuous, therefore, when it was found—usually in the expensive custom-built bodies. Harmonious combinations proved a relief in the comparatively few instances where found.

New developments of the well-known car makers, as revealed by the exhibits, are here summarized. Presented for the first time, was a new Maxwell two-passenger closed car, styled the club coupe. This is priced at $985 at the factory. It is a single-seater with the attractive lines of other closed bodies in the line. Its design differs from the others only in that the line carried down from the windshield curves forward just before reaching the bottom. Interior is finished in leather. Door windows have mechanical regulators, while the rear quarter windows are



Nash was shown with a custom-built seven-passenger vestibule-sedan

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conveniently lowered and raised by means of coach straps.

A new windshield is used on this model. It is a two-piece design, both sections swinging outward, with the upper section accounting for about three-fourths of the windshield height, thus eliminating the "line" in the driver's vision found where the sections are more evenly divided. The metal visor is adjustable by a simple arrangement and contrasts with the fixed type used on other Maxwell closed cars. Equipment includes mirror, windshield wiper, heater and other standard items of the line.

Two new Oakland closed models made their debut—a five-passenger coupe at $1,445 and a new five-passenger sedan at $1,545. Both bodies are Fisher built. These two models are more fully described elsewhere in this issue.

Studebaker likewise introduced two new bodies. One is a seven-passenger touring-sedan, with trunk rack and trunk on the rear, mounted on the big six chassis. This model is priced at $2,650, with a set of five disc wheels at $25 extra, as is true of all Studebaker models. The sedan body of the special six line is new, being distinguished from the former body by double panels.

The Oldsmobile brougham on the four-cylinder chassis was seen for the first time in New York. This five-passenger two-door design, was covered fully in these columns four weeks ago. The lowered price of the week, $1,375, combined with its newness, doubly served to draw interest. This model, incidentally, revealed the fact that Oldsmobile models now carry a nameplate on the cross-bar of the spare rim carrier.

New Reo model "C" closed cars—a four-passenger coupe at $1,835 and five-passenger sedan at $1,885—were exhibited. These have entirely new bodies and are featured by such items as disc wheels, drum-type lamps, step plates and the like. The "B" sedan and coupe, $2,355 and $2,435 respectively, and the $1,745 business coupe were also shown.

Many New Models Seen for First Time

Stephens has two new models, five-passenger brougham at $2,000 and four-passenger coupe at $2,450. The former is characterized by 32-inch doors and unusually generous legroom for occupants of the rear seat.

Velie exhibit included a new five-passenger brougham at $2,185. This price includes trunk and trunk rack at rear. At the Cleveland stand were a special coupe at $1,620 and a special sedan at $1,710, the former with front bumper, disc wheels and trunk rack, and the latter with five wire wheels and trunk rack. Lexington's new five-passenger royal coach at $2,145 was also shown.

The show gave New York its first opportunity to see the new Haynes 1923 "55" sport series. This includes the specially-equipped and finished models previously reported in these columns. The new Roamer-built Barley, details of which are given in another part of this issue, was introduced to the trade on this occasion.

A new Durant four-cylinder coupe for business and professional men was revealed. This is a two-passenger design identical in every respect with the four-passenger coupe except for the single seat and large compartment behind it. The Gray $760 five-passenger coach was also exhibited.

There were several new lines and models, introduced recently to the trade and all previously described in AUTOMOBILE TOPICS, which attracted their full share of attention. These include the new Peerless, new Cadillac victoria and five-passenger coupe, new Buick lines, Dodge Brothers business sedan of steel, Moon "6-40" sedan, Nash five-passenger sedan on the shorter of the two six-cylinder chassis, Star coupe and sedan, new Cole "890" closed cars, Earl cabriole, new Gardner coupe and sedan, and seven-passenger Willys-Knight sedan, among others.

The many established products, with which the trade and public are familiar, shared with the new offerings in the public's measure of recognition. For example, there were such popular closed cars as the Hudson coach, Essex coach, Nash four carriole, standard Maxwell closed models, Oakland and Chevrolet business coupes, Dort low-priced closed jobs, Jordan brougham, Standard's improved types, Overland's recently reduced models, Rickenbacker, the new Stearns-Knight six, and Kissel with custom coachwork.

Custom Bodies Shown on Low-Priced Chassis

Prominent among the custom body jobs on chassis not generally so employed, was a four-passenger Hupmobile sedan, $3,200 delivered in New York. Shipped on special order by Hupp, it was exhibited by the Van Alstyne Motor Corp. This has a Reiss (Detroit) body on a chassis lengthened to 126-inch wheelbase. Equipment included in the price mentioned includes six polished aluminum Disteel wheels, trunk rack and rails, two extra tires, C. G. front and rear bumpers, nickeled radiator and lamps, individual steps, Warn-O-Meter and parking lamp on top of body at the front. Finish is in maroon and black.

Stratton-Bliss Co., Dodge Brothers distributer, exhibited a four-passenger coupe with United body, selling at $1,950 in New York, and a Babcock town car similar to that first shown at last year's show. The coupe is trimmed in brown leather and has a divided full-width rear seat and two individual tilting chairs.

Unusually attractive was the seven-passenger vestibule-sedan on a longer Nash six chassis, exhibited by the Warren-Nash Motor Corp. This has a Bridgeport body, and sells for $3,500, delivered in New York.

Sherwood Automobile Corp. showed a special seven-passenger suburban on a 124½-inch wheelbase Jordan chassis. This is also a Bridgeport body and retails for $3,650, New York delivery.

Another frequently-commented-upon special job was found at the stand of the Hudson Motor Car Co. of N. Y. It is a collapsible brougham, $4,945 delivered in New York.

Custom-built jobs were shown on practically all of the higher-priced lines. Among them was a Healy cabriolet on a Cadillac chassis. Packard showed a Farnham-Nelson limousine-brougham on the twin-six. The Daniels was shown with its justly famous coachwork, as were the Rolls-Royce, Pierce-Arrow and Cunningham.

Marmon New York Co. exhibited a Brewster sedan body in the rough to emphasize the body work. News of the week tells of a new working arrangement between the New York Marmon distributer and the body builder mentioned. At this same stand, there was also a Hume sedan body which had a removable dividing arm for the rear seat.

Three open cars were shown with California tops. These were the Oldsmobile, Stutz and Oakland sport.

Everyone expressed praise for the manner in which Tom Moore, secretary of the dealers' body and show manager, and Edward Eckhardt, who handled the publicity, fulfilled their duties. The show committee of the Automobile Merchants' Association was made up of: Charles H. Larson, chairman; Glenn A. Tisdale, Harry W. Gaston, Lee J. Eastman, H. T. Porter, Wm. C. Poertner, Harry S. Houpt, E. P. Herrman and Tom Moore.

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Should the Road Be Hard or Soft?

Opposing Factions Contest Merits of Hard and Resilient Pavements — "Rubber Roads" Mentioned

ROAD building is being done far more scientifically now than it was a few years ago. There are, however, two schools of engineers who still disagree as to what material will make the best road. One school advocates the rigid pavement to withstand the impact shocks of heavy traffic. The other school believes that a cushioned pavement is best. The asphaltic concrete pavement fits the theory of the engineers who advocate a resilient shock absorbing pavement and the cement concrete pavement meets the views of those who favor the rigid pavement.

California after a long, bitter and costly experience with rigid pavements, is turning rapidly toward the resilient types. The latter have gained favor also in Washington, Arizona, Arkansas, Texas, North Carolina, Kentucky, Tennessee, Florida, Missouri, Illinois, Michigan, Massachusetts, Connecticut and Rhode Island. Oregon has used both kinds of materials on its roads and, like the other states mentioned, will be in a position in a few years to determine which school of engineers holds the correct theory.

There are other states, on the other hand, New York among them, where the cement road is gaining in favor. Several of these have been slow in coming to it, and therefore have less direct experience to go upon than have such states as California and Michigan, which were among the first to make heavy outlays in the construction of non-yielding surfaces.

Hence, in the mind of the reasoning man several broad questions suggest themselves. For instance, were the alleged "failures" of some of the earlier concrete roads due to the fact that extensive projects were put through at a time when the fund of general experience in concrete road building was comparatively meager? Are those alleged failures, therefore, due to faulty construction?

Undoubtedly, in some instances, they are. Local conditions have a profound influence on the success or failure of any road building project, and by "local conditions" is meant the entire range of governing influences beginning with natural resources and climate and ending with the political situation.

There is only one way in which a road project can be really successful, that is by lasting longer than the community expects it to last. But there are almost as many ways in which it can fail as there are denominations in the Christian religion.

It should not be denied that many of the pioneer concrete roads were built in the days when the art of cement road construction was in its infancy. Projects now going through have had the benefit of rapidly accumulating experience. Furthermore, the improvement in roadbuilding machinery has been marked and rapid.

It not only costs less, allowing for differences in costs of materials and labor, to build concrete roads today than it cost before the war, but even under average contractual conditions, there is better assurance of uniformity in the finished product. In other words, the concrete road built today is really the product of a portable manufacturing plant which turns out remarkably uniform work, especially considering the variation in materials and in subsoil conditions, which have to be contended with.

All of this helps very materially to uphold the hands of the "cement interests," with whom, perhaps unfortunately, all who advocate concrete roads are wont to be classed. It is a thoroughly natural, but wholly regrettable circumstance that political and commercial influences obscure a good many of the points that should be studied with entire impartiality and balanced according to their individual and exclusive merits.

When people absolutely condemn the concrete road, therefore, as many do, it is necessary to inquire who they are and where they have been keeping themselves the last few years. It is necessary to know whether their opinion is based on scientific knowledge, backed by a good store of information on this very intricate and perplexing question, or whether they are swayed by prejudice or personal interest.

But the same must also be said of those who condemn the asphalt pavement in general terms. This class of road, it must be remembered, is the older of the two, and is, therefore, less inspiring to the imagination. The asphaltic class of paving surface, moreover, served the public well up to the time when the motor vehicle really arrived. Its apparent failure at that time was due largely to the fact that all forms of pavement then known were failing under the new traffic conditions. Condemnation of the resilient pavement must not be too hasty.

Here again, local conditions largely influence experience. A "bad" road may be a bad road for any one of a whole lot of reasons, or as a result of the several possible permutations and combinations thereof. Sweeping conclusions, therefore, are apt to be dangerous for the "concluder," at least if he values his opinions and holds himself in any way bound by them.

The fact that many asphalt surfaces have failed under the strain of modern traffic means absolutely nothing. The old roads were bound to fail under the new conditions

HARD ROADS OR SOFT?

HERE is a bare hint of a controversy that is of deep interest to the motoring public, and which promises to endure for many years to come. Two schools of highway builders hold exactly opposite views on the matter of the ideal road surface. One insists that the pavement should be rigid and practically unyielding; the other that it should be resilient.

Casual observers profess to see in the controversy only the natural divergence of opinion resulting through association in a business way with the two great natural resources producing, respectively, cement and asphalt. Others realize that there is an absolutely honest difference of view based on contrasting theories. The article is also valuable as reporting highway progress in several of the more widely traveled states

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anyway. Furthermore, the business interests associated with this class of construction, up to and including even the cheaper forms of tar-surfaced gravel roads, have made rapid strides in late years.

Hence this much may be said at once, and without knowing more of the merits of the case: that the fact that some states have turned from cement to asphalt, where new projects are concerned may be conclusive of something, or it may be conclusive of something else. It may mean that a reversion to the older forms has taken place because of two evils these seem to constitute the lesser; it may mean that improvements in the manipulation of one class of material have brought it ahead of the other when judged in terms of practical results. Finally, it may mean that the resilient pavement, by its very nature, is a more durable and better surface than the non-resilient.

On this point there is, of course, a great deal to be said. The function of the rubber tire immediately suggests itself to the mind, and a superficial conclusion is that in one case the tire does all the work, whereas in the other its duties are shared to some extent by the pavement.

Therefore, it might be supposed that a resilient pavement would be easier on tires than a non-resilient pavement, so far as cushioning effect is concerned. But when it comes to traction and wear on the tread who knows?

Apparently the cement surface affords better traction all around than the smoother asphaltic surface. But is it possible to say at once that a tire slipping only to a comparatively small extent on a cement surface will wear more rapidly than a tire slipping a great deal—comparatively speaking—on an asphaltic surface?

These are among the things that remain to be determined conclusively. Meanwhile science is struggling to provide the media for judgment. Traffic cannot be judged soundly unless there are units of measurement and comparison. And in a day when everyman's motor truck may carry any sort of load, distributed any sort of way, and on any kind and condition of tires—when it may run at any speed—it is a pretty tough proposition to say how much it is going to wear the road.

Seek to Judge Merits of Roads

The United States Bureau of Public Roads, the Bureau of Standards, and the affiliated and non-affiliated, but interested industries are laboring faithfully and well to develop methods of judging those questions that determine whether a road is good or bad, relatively speaking. Law enforcing authorities are laboring faithfully in a few noteworthy instances, but indifferently in many more, to reduce traffic to standard and therefore measurable terms. But the road is long, the universe is yet young and "rubber" road surfaces are just beginning to be mentioned as a possible public benefit as well as a direct advantage to an anxious industry which is now raising more rubber than it knows how to sell.

Just here, touching on the attitude of the average man toward all things pertaining to highways, a strange thing comes to light. His utter lack of interest in highway improvement has been very largely overcome and his apathy toward working in the cause of better roads, thanks to the educating influence of the automobile, is gradually passing. But still of all important things in the world, roads are one thing that he knows practically nothing about. Where roads are concerned he is apt to be all prejudice and no sense.

This is proven by the fact that he shuns bad roads like the plague, or if forced to traverse them, does so grumblingly without making it his business to find out what made them so bad. To good roads, on the other hand, he pays tribute by putting them behind him as fast as ever he can, nor ever stopping to reason why they are good. Until the point is reached where the motorist is as good a judge of a road as he is of a car, the public, which is today so very motorwise, will continue to be clay in the hands of politicians and propagandists.

During the present construction season the Pennsylvania State Highway Department has built, under great difficulties, 224.6 miles of new hard-surfaced roads. Chief, among the new roads opened in the Keystone state this year, is the beautiful new Lackawanna Trail, between Scranton, Pa., and Binghamton, N. Y., one of the finest asphalt highways in the world and running through some of the most beautiful scenery in America. Altogether, there are 10,777 miles of state highways in Pennsylvania, of which 5,000 miles are now improved.

Analyzing Pennsylvania's Roads

Of the 10,777 miles of highways, 5,378.87 miles are earth roads, 190.2 are gravel, 155.7 are of flint, 2,089.5 are waterbound macadam with broken stone base, 828.3 are waterbound macadam with Telford base, 218 miles are of bituminous macadam and 115 miles are of bituminous concrete. There are 68.16 miles of bituminous concrete with Telford base, 57.4 miles of asphalt with broken stone base, 70 miles of plain concrete and 1,086 miles of reinforced concrete. The mileage of vitrified block roads is 383 miles, that of the wood block is 3.7 miles and that of the stone block is 4.5 miles.

The New Jersey State Highway Department whose chief engineer, T. J. Wasser, recently was elected president of the American Road Builders' Association, has let contracts this year for many miles of new roads that are being constructed. New Jersey contracts let early this season provided for 22.6 miles of new asphalt highways. Roads of this type are being constructed of twenty to thirty feet width, with shoulders, between Smithville and the Mullica River, Eatontown and West Long Branch, and Bridgeton and Millville and in the vicinity of Madison. Bridgeton, Newark, Bound Brook and Passaic.

There are in New Jersey 17,121 miles of roads, of which 6,977 miles have been improved with hard surfaces, such as sheet asphalt, asphaltic concrete, bituminous macadam, portland cement concrete and other modern pavements. Of the total road mileage 40.7 per cent is now hard surfaced. The mileage of hard surfaced roads in New Jersey is 7.7 per cent greater than the percentage for the United States in general. The state also has two and one-half times as many roads per square mile of area as the whole United States.

By awarding contracts for 29 road projects on August 30 the North Carolina State Highway Commission brought its lettings this year to 1,114 miles, or 114 miles more than the goal of 1,000 miles set for 1922. The total cost of the new road construction authorized in North Carolina during the first eight months of this year will exceed $22,000,000, or nearly one-half of the $50,000,000 provided by the state for new roads during the first five years' period.

With these last awards North Carolina has set up a record for road building for one year that has never been equalled. Since January 1 contracts have been let for 568 miles of hard surfaced roads—principally asphalt—and 546 miles of gravel roads.

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SELLING GOODS AT RETAIL

HERE'S a new slogan for every live automobile merchandiser to adopt—NOW. Part of it already is familiar. The balance promises to become more so as time goes on. It's this—"Ask 'em to Buy for Christmas."

Those merchants who have made a custom of catering to the holiday trade now have their campaigns pretty well under way. They tell us that this year promises well.

What does this mean to the automobile and accessory dealer? Just what he makes it mean.

Sufficient is it to say for the present that there will be plenty of loose cash about. The question to be considered is, whose cash register will record it?

In the meantime remember that slogan—"Ask 'em to Buy for Christmas." You'll hear more of it later.

* * *

THERE'S nothing like having before you a concrete example of the particular point you're trying to emphasize.

For purpose of illustration, think of being able to back up your statements as to tire mileage by directing the prospect's attention to a casing that has registered 26,450 miles. And on a car just like the one he is considering!

In the showroom of the Dorris Motor Car Co. is just such an exhibit. It promises to be an effective one, too, in substantiating the maker's claim for unusual mileage.

* * *

WHAT are you doing in the way of keeping up-to-date? You expect your business to develop—are working hard to make it develop. But do you realize that it is your own development as an individual that determines the growth and expansion of your organization?

Little excuse can be found in these times for those whose ideas smack of by-gone days, in view of the wealth of information to be gained from regular and well-chosen reading. Authorities in every line of endeavor are giving the fruits of their knowledge and experience for, say, the price of a theatre ticket.

On Page 654 of this issue will be found brief reviews of some recent publications that are worthy careful inspection. None of them is priced over $3.

From time to time there will be others. In the meantime further information on these or any other volumes included in the list of business literature will be supplied gladly in an effort to stimulate development of the individual which in turn means development of his business.

AS "SID" SNYDER SAYS

DID you ever stop to consider what a heap of difference it makes as to who's doin' the talkin'—you or the other feller? Think it over good and you'll see it's true as the Gospel.

* * *

You tell your friend he's got a hole in his clothes. You say it with a grin lurkin' round your mouth. Sort of tickles your sense of humor. But just let that feller tell you there's a hole in your clothes. Maybe you don't sit up and take notice! It's him that's doin' the talkin' then

* * *

SUCCESS in salesmanship depends largely upon three words which also begin with the letter S, one merchandiser of wide experience points out—Spirit, Shoe-leather, Skill. And the greatest of these is Shoe-leather.

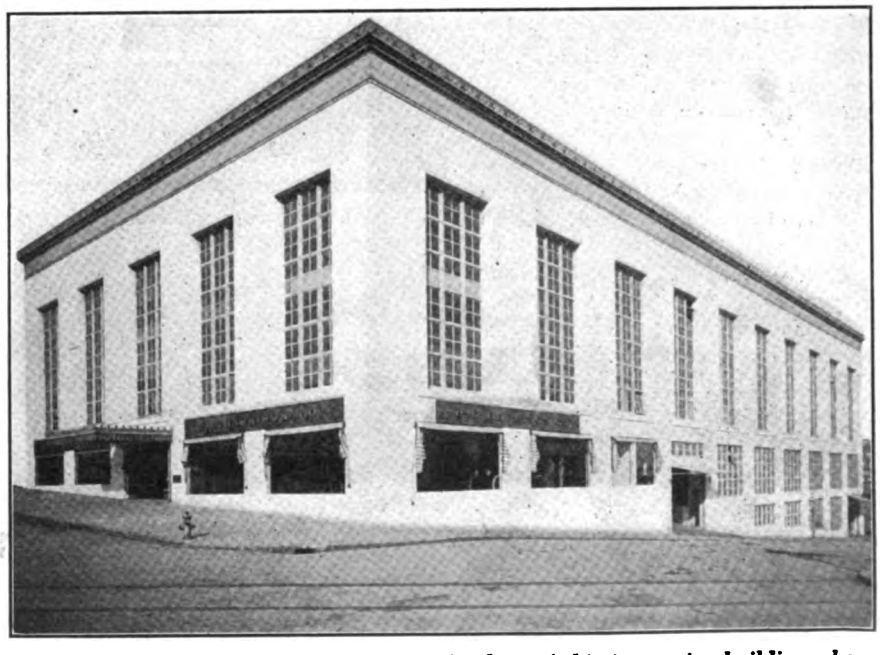
For it's the man who makes the greatest number of calls each day who ultimately "brings home the bacon."

* * *

A NEW use has been found for the penny picture postal. Wamsley & McClure who conduct the Southeast Tire Shop in Kansas City, Mo., are the discoverers, as is shown on one of the following pages.

Instead of the customary historical spot of interest there appears thereon a faithful reproduction of the Southeast Tire Shop. The car owner thus sees for himself what sort of establishment it is that solicits his trade.

Hudson-Essex by the Golden Gate



"H. O. Harrison Co." reads the sign over the door of this impressive building where California pays homage to the popular Hudson-Essex lines

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Local Color Adds to Sales Picture

Berkeley Motors Serves Its Message with Proper Amount of "Main Street" Atmosphere—And Gets It Read

A SALES picture may be attractive in every respect; it may seemingly possess every element to assure its success, yet it will result in failure. And why? For the simple reason that it lacks the essential touch of local color.

One sales official has described it this way. "I can sketch out a general sales picture of our products for our field representatives," he said, "but I can only hope to make it general.

"To them falls the task of taking that general picture and setting it off with a background full of local color. The closer they bring that picture home to the public they're trying to reach, the better the results."

Just what can be done by the automobile merchandiser in the way of localizing his sales appeal has been illustrated of late in activities of the Berkeley Motors, Durant dealer in Middletown, Conn. This was revealed in a series of advertisements appearing in the local papers.

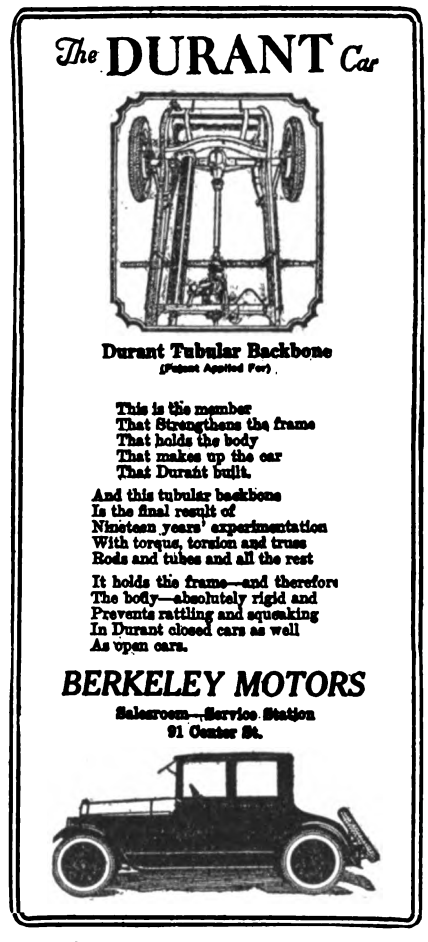
Here is one example of how Durant efficiency was brought home to every reader:

Does your car
deliver as much power—smoothly—as you desire?
For example, will it—
Climb William St. or Spring St. at five miles per hour in high gear?
Run west on Lawn Ave. to Pine St., turn around and climb back up, continually in high gear?
Climb Wilcox Hill and Southington Mountain with four passengers in high gear?
Accelerate from 5 to 25 miles per hour in 8 seconds?
And run at five miles per hour or fifty-five smoothly on rough roads?

"That the Durant Four will do these things goes without saying—but that it will do them quietly and comfortably is a revelation to most people."

This copy introduces what may be termed local color. William street or Spring street, means something to the reader. He can picture in his mind's eye the car running west on Lawn avenue to Pine street and then climbing back. The climb up Wilcox hill and Southington mountain also is familiar.

The result is that he gets a clear idea as to what the machine can do. Moreover, past experience has shown him what other cars have been able



Copy with a popular appeal

to accomplish on the same roads. Thus he is in a position to judge as to the claims made.

The chances are that many tests could be mentioned in which that same car achieved far more wonderful records than those mentioned. The fact remains, however, that they would never arouse the same amount of interest in the reader as did the four or five described.

From this it must not be inferred that the car owner is completely oblivious to the records of achievement made in test runs by a machine similar to that which he owns. Quite to the contrary there is every reason to believe that he is interested to a considerable degree.

It all resolves down to the well established fact that what interests the public most is that which affects it directly—that with which it comes in daily contact. And is this not something to be considered by the automobile dealer?

Of chief interest to the man who has made up his mind to buy a car is what kind of service it will give him on the roads in his immediate vicinity. He may derive a certain amount of satisfaction from the knowledge that a machine just like his has succeeded in breaking a record in some hill-climbing contest on the Pacific Coast. But if he has never been up that particular mountain and if he never expects to climb it, that same achievement is taken largely as a matter of course.

On the other hand, mention some record it has made in that part of the country in which he lives, or tell of its performances on hills in his immediate neighborhood and the sales picture is brought at once into his focus. The result is obvious. His interest is assured.

Another of the series of interesting advertisements with which Berkeley Motors sought to arouse interest in Durant efficiency has to deal with service.

"As a car owner," this read, "what is your conception of service?

"Is it not prompt, honest, efficient and courteous attention to the adjustment of your car?

"We believe that is what you desire and that is what we continually strive to provide.

"An essential element of this service is the instant availability of new parts. All principal parts for Durant cars are always available at our Middletown service station. Complete stocks are found at Bridgeport, Hartford and New Haven—and the nearest factory is but 98 miles distant.

"If you contemplate a tour this Summer, you will find Durant dealers

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all over the United States—each one eager to serve you and to speed you on your way.

"That is our idea of motor car service."

Again the local element is present, and effectively employed. What the prospective buyer wants to know is "Where can I get parts if I buy a Durant Car? How far do I have to go?" He may have read all sorts of wonderful things about the service which is assured owners of the car, but as long as they do not affect him directly they fail to arouse his interest to the fullest extent.

However, the statement that right there in his home town are kept all principal parts, and that complete stocks are available in near-by cities, hits him squarely. It likewise means something to him to know that the nearest factory is but 98 miles off.

Two others among the Berkeley Motors advertisements which are reproduced on these pages, likewise deserve emphasis at this time. Each of these is written in informal style.

"A local Durant Four owner" reads one of these, "just returned from a trip over the Mohawk Trail, tells us he had no use whatever for his first and second gears, and that Mr. Durant's description of his car is certainly conservative to say the least—Just a Real Good Car."

The chances are that the great majority of car owners in that town are well acquainted with the Mohawk Trail. If they have not actually been over it themselves they have heard enough about it from those friends who have traveled that way to possess a pretty fair knowledge of what it means to make no use whatsoever of first and second gears.

Then again the very fact that the statement was made by a local owner—someone in their very midst—adds further emphasis to it. Just a little touch to be sure, but of the kind that creates a selling background.

Still another has been phrased along somewhat the same lines. "Said a friend just returned from a trip through southern New England—'We found Durants as thick as Fords—and we saw Durant service stations everywhere!'"

What this means to the prospective buyer who anticipates a trip throughout that very section just as soon as he makes his purchase can easily be imagined. What assurance he finds in those words—"and we saw Durant service stations everywhere!"

The task of establishing a background filled with local color need not be necessarily confined to advertising, however. It may be extended to other of the dealer's sales activities.

Good use of it may be made by every salesman each time he comes in contact with the prospective buyer. In fact it should play an important part in his sales talk.

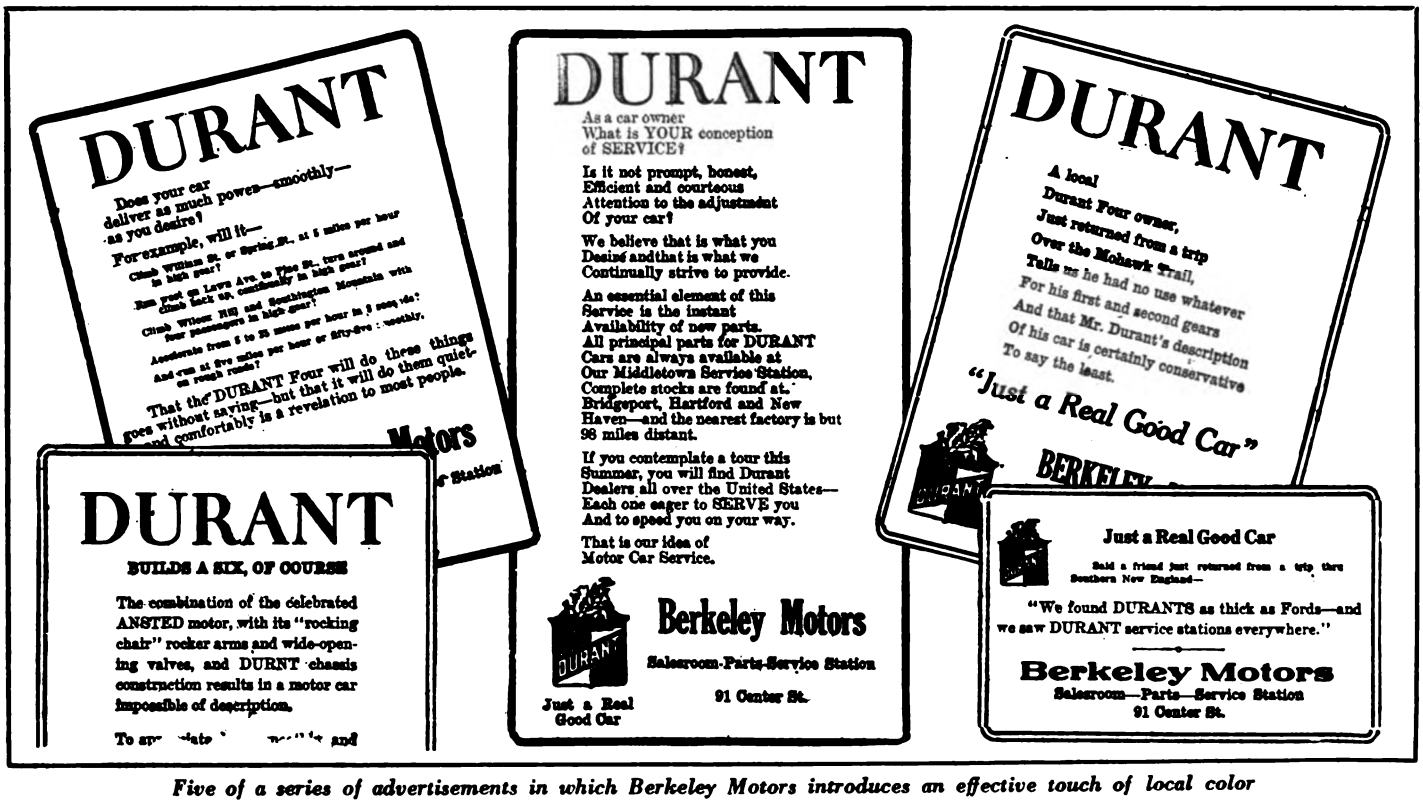
The number of trips that can be taken to different points of interest within a comparatively small radius may be pointed out to advantage. For the chances are that unless the prospect has already operated a car he is little acquainted with the country in which he lives.

Experiences of some present owner in successfully making some high grade in the vicinity may likewise be incorporated into the selling talk, as evidence of the merits of the machine. Favorable road conditions in the outlying districts is still another point which may be stressed.

The effect gained by the Berkeley Motors in its newspaper advertising may easily be duplicated in the sales letter. A few newsy paragraphs telling of the satisfactory performance recorded by some present owner during a trip through the surrounding territory would be of interest, there is little doubt.

In considering ways and means of working up an effective background for the sales picture there must be overlooked no plan by which the interest of the prospective buyer may be stimulated. It must be remembered, too, that what interests him most is how the purchase will affect him personally.

Given a general sales picture, to the dealer falls the task of filling in the proper amount of local color. And as the sales official already referred to pointed out—"The closer they bring that picture home to the public they're trying to reach, the better the results."



Five of a series of advertisements in which Berkeley Motors introduces an effective touch of local color

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LATEST OFFERINGS OF THE CAR MAKERS

Oakland Showing Two New Closed Body Types

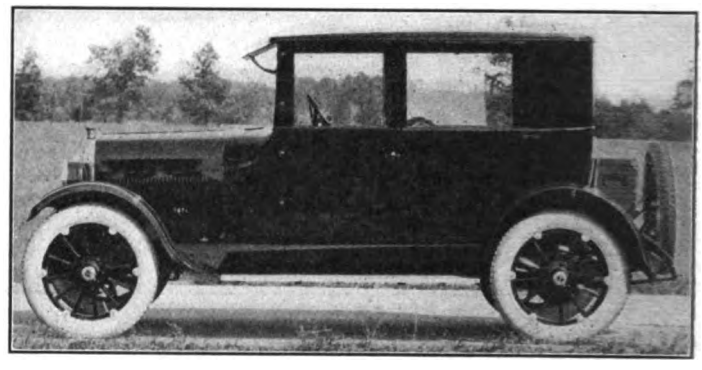
Five-Passenger Coupe Has Two Individual Seats and Full Cross-Seat —Five-Passenger Sedan Body New—Both Built by Fisher

TWO new closed cars are being shown in the 1923 series recently disclosed by the Oakland Motor Car Co., Pontiac, Mich. Chief interest centers in the five-passenger coupe, which takes the place of the former four-passenger model. The other new type is a five-passenger sedan with new body. The coupe is listed at $1,445 and the sedan at $1,545.

Both of these new bodies are being built by Fisher. A lower body belt line and slightly lowered roof are mainly responsible for the improved appearance of these models. Interior appointments and fittings are likewise new to conform with the exterior design.

Windows are deeper and wider, affording greater visibility for all occupants. All pillars are metal covered. Included in the new refinements are cross-bar type door handles, pull-to handles on the doors, lock with two keys on the right door, and inside locks on the others. Interior trimming on cushion and seat backs is plush mohair velour. Wall and head lining are of gray plush mohair velour, with carpet to match.

The five-passenger coupe has two wide doors opening to the front seats, these doors being ample in width to permit easy entrance to the rear seat when the front seats are tilted forward. The two front seats are of the pullman type. The rear seat for three passengers is placed just ahead of the rear axle.



NEW five-passenger coupe of 1923 Oakland line has two individual tilting pullman seats and full cross-seat. Trunk rack and body bars are regularly furnished

At the rear of the coupe a platform for carrying a touring trunk is provided. Trunk bars protect the back of the body.

In addition to those changes already mentioned, the sedan has a larger cushioned front seat, affording more room. On both models equipment also includes adjustable metal visor covered with water-proof fabric, rear view mirror, double windshield wiper, curtains for rear and rear quarter windows, crank regulators on door windows, dome light, and snubbers.

The two-passenger $1,185 coupe is continued. This body and the three open bodies are built by Oakland.

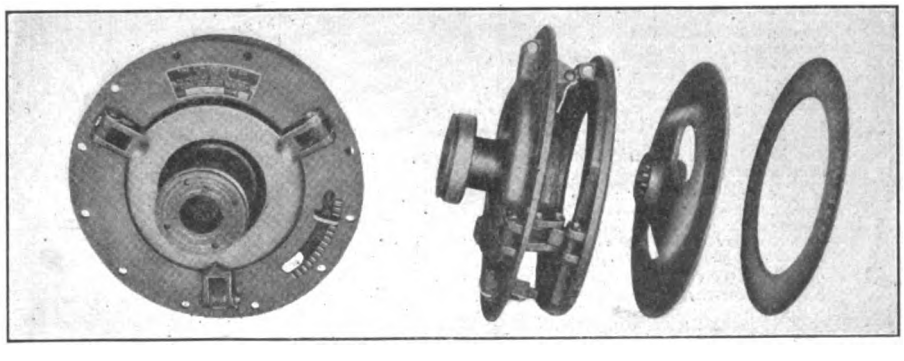
Dooley Clutch Presents Several Interesting Features

Unit Used in Velie Has Simple Adjustment and Unique Leverage Action

USE in the Velie model "58" during the past year has proven out the Dooley clutch. While this unit has several praiseworthy features two in particular are of unusual interest. One is the unique leverage action by means of which a powerful grip is obtained, at the same time necessitating only a light spring. The other is the simplicity of adjusting, a latch being handled entirely by the fingers without the use of any tools whatsoever.

The Dooley clutch is interchangeable with standard dry-disc clutches but differs in several ways. In the first place, it is installed as a unit and may be removed in the same way.

There is no floating disc, which eliminates any use of dowel pins in the flywheel to keep the floating disc from rotating. The driving disc is carried as a part of the clutch and obtains its drive through toggle action. This construction is said to avoid entirely the dragging action of the ordinary floating-ring type clutch, which comes from the sluffing off of material from the surfaces of the asbestos discs. This material, together with dirt, grit and the like, tends to choke up the slots in the floating ring until it fails to move freely and consequently causes the clutch to drag. In the Dooley design this cannot happen, it is claimed.



Dooley clutch parts showing finger-operated adjusting latch and leverage action

Positive release upon disengaging results since the various discs are pulled apart. There can be no drag, and on account of no loose parts, there is no noise upon engaging or disengaging.

The adjustment is highly interesting. It is accomplished by merely moving a little thumb latch with the fingers, this latch plainly showing in the illustration. Each notch takes up just the necessary amount of wear. As a result, by moving the latch one notch the clutch is placed in adjustment and it is unnecessary to try out the clutch as the results must be correct.

Several notches or degrees of adjustment are provided on the adjusting scale, each one compensating for just the amount of wear which makes the adjustment of the clutch necessary. Upon completion of the full adjustment scale, the wearing thickness of the Raybestos discs is entirely used.

Due to the ingenious toggle action employed, it is possible to use a much lighter spring than ordinarily. This

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lighter spring results in easy clutch operation.

This unit was designed and patented by C. H. Dooley. The entire output of the Dooley Clutch Co., Moline, has been absorbed by the Velie company up to the present time, but preparations are being made, it is understood, to care for an expanding equipment market which is anticipated from experiments and tests now being carried on by other car makers.

Kelsey Tells More of Geared Car

Further details of the geared car which the Kelsey Motor Co., Newark, N. J., is putting into production in addition to its friction drive model, as first told in these columns last week, are now available, together with the information that the six-cylinder models have been discontinued altogether. The four-cylinder geared car is practically the same as the friction drive model except that the following units are used: Detroit transmission, Snead propeller shaft and Thermoid disc universals, 10-inch Borg & Beck clutch, Standard Parts semi-floating rear axle, and 32 x 4 tires.

Foresees Two-Section Highways

There is little doubt, according to Vance Day, sales manager of the General Motors Truck Co., Pontiac, that the truck will continue to assume a greater share of the freight business of the Country for the next generation. If the business increases as rapidly in the next 10 years as it has in the past, Vance believes special roads will be necessary, these to be built in two sections, one for trucks and the other for passenger cars. This system is already followed in many sections of Massachusetts.

Gardner Ships Battery "Dry"

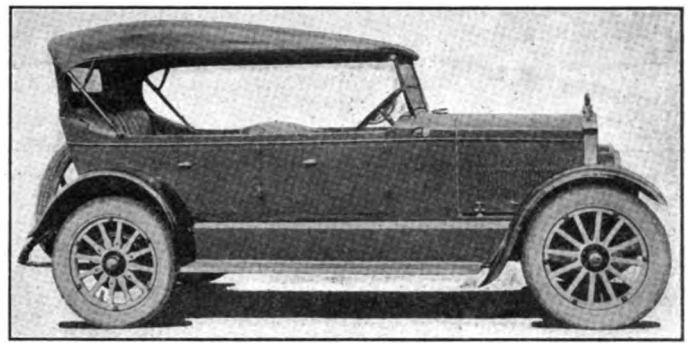
Gardner Motor Co., Inc., St. Louis, is shipping its cars with batteries "dry" to get away from some of the annoyances experienced especially in the Winter months. The bone dry battery will not deteriorate while standing. It is always new until it has been filled with solution and put into service. A booklet issued by the Willard company is available for dealers, this telling how to prepare the "bone dry" battery for service.

New Barley Six Makes Its First Appearance

Smaller Roamer-Built Touring Comes on Market at $1,395—Sedan Also Ready—Standard Units Are Used in 118-Inch Chassis

FIRST of the new Barley cars, the smaller and lower-priced six produced by the Barley Motor Car Co., Kalamazoo, Mich., maker of the Roamer, are being shown in some cities. Two models are being put out at this time, a five-passenger touring at $1,395 and a five-passenger sedan at $1,850. Two other types will complete the line, a five-passenger sport and five-passenger special touring sedan.

Among the furnishings are Moto-Meter, barrel-type head lights, cowl lights, cowl ventilator, door opening curtains, pockets in all four doors, individual space for tools in left front door, and polished aluminum instrument board. Chassis connections for Empress high-pressure lubricating system and lubricating gun are regularly furnished.

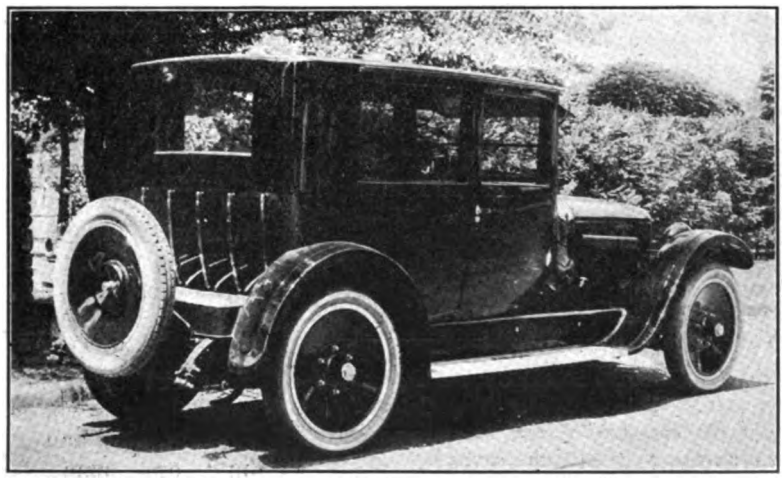


DISTINCTIVE lines serve to identify the new Roamer-built Barley six. The liberty-silver radiator, it will be noted, flares out at the top. Moulding, running around the entire car, sets off the body

The Barley bears no resemblance to the Roamer. In the first place the radiator, which has straight sides, flares out sharply at the top. On the open models, a moulding is carried around the entire car from the radiator back. On those models seen in New York this week, the liberty-silver radiator carries no name-plate.

Three colors are optional as to finish, blue, green and battleship gray. Then with the open cars a further choice is given between Spanish leather upholstery in either tan or gray.

Standard units are employed in the 118-inch wheelbase chassis. The six-cylinder engine is a Continental "L"-head, four-bearing crankshaft, 3⅛ x 4¼ type. Other units include Stromberg carbureter, fed by vacuum from a 15-gallon tank; Delco ignition and Delco two-unit starting and lighting; Prest-O-Lite battery; 10-inch dry plate clutch and selective gearset in unit with the engine; tubular propeller shaft with rubber and fabric disc universals front and rear; Columbia semi-floating rear axle; and Jacox steering gear. Wood wheels with 32 x 4 cords, non-skid on rear, are standard.



Wills Sainte Claire Adds a Brougham

LATEST of closed models in the Wills Sainte Claire line is a five-passenger brougham, listed at $3,375. This new Fisher body has 29-inch doors. Upholstered chairs in front tilt forward permitting entrance to the rear cross-seat from either side of the car. There is a trunk platform at the rear and nickel bars on rear body panel. Gasoline gauge is mounted on the instrument board

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IDEAS THAT LEAD TO GREATER SALES

A Penny Postal Card Tells the Story

DOES every car owner in your section know what a good-looking place you have? Does he know exactly what it looks like, so that he doesn't have to strain his eyes searching for your sign?

If not, there is no time to be lost in putting him wise to the fact that you have the best facilities in town for rendering him efficient service. And don't leave it all to his imagination. Send him a picture.

Wamsley & McClure who operate the Southeast Tire Shop in Kansas City, Mo., have found that it pays—this method of letting the car owner judge for himself as to the kind of a shop you operate. They are in a position to know, too, for they have practised it through the medium of the penny postal.

On the one side of this card, which is of the souvenir postal type, appears a picture in colors, of the Wamsley & McClure shop. In one corner is printed the name and street address.

The opposite side of the card has the usual space for address and greeting. At the top of the column in which the message is to be written appears a brief paragraph which describes the Company's conception of the word "Service."

As it appears on the postal the picture is a faithful reproduction of the shop it advertises. Every detail has been closely followed with the result that the recipient gets at one glance a clear idea of what the place looks like.

These cards were sent out as an invitation to visit the store. The proprietors were fully aware of the fact that it was not possible that all of Kansas City's car owners would deliberately seek out their shop and give them their business. So they determined to let them know what a good-looking place that had so that the next time Mr. Motorist happened by he would recognize it and stop in.

As a novel means of arousing interest in the public such a plan is worthy of consideration. It presents at least one solution to the problem that faces the merchandiser of how to get his name and place of business before the public eye, and keep it there.

The sales letter in some instances has been found to answer this purpose, the only objection to its use being that it is worked too hard. Then again it lacks the element of novelty which is so important a factor in winning attention.

The pictorial interest of the colored postal is its chief asset. Instead of seeing before him the usual typewritten matter the recipient beholds a picture.

His curiosity is aroused. Even though he be firmly convinced that it is merely a piece of advertising that has caught his eye he takes a second look. It is that second look that tells the story.

Undoubtedly the moment his curiosity is satisfied the whole matter is dismissed from mind. It would be unusual were he to go at once to the telephone and ask for the Wamsley & McClure shop.

Instead he is far more apt to go about his daily business much as though the card had never been received. But whether he realizes it or not the very fact that he has taken a second look—the very fact that he has not had to wade through several paragraphs of typewritten sentences creates an impression.

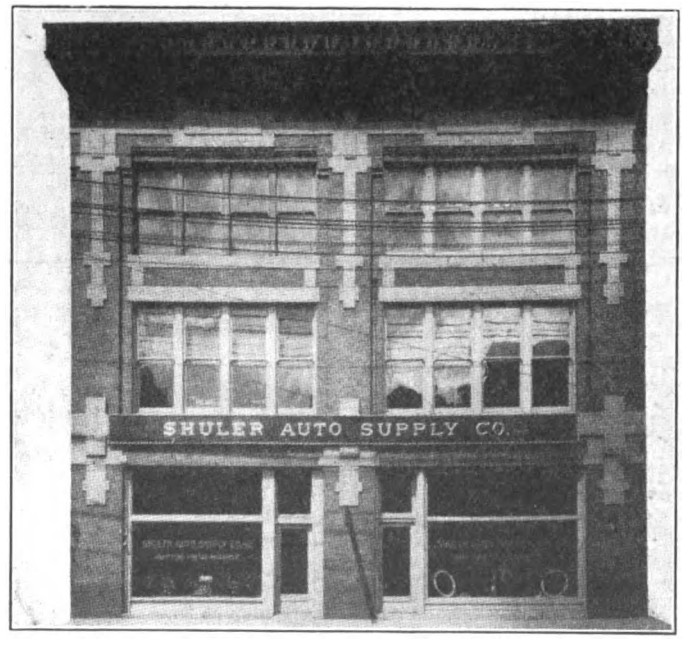
Thus it is not beyond the bounds of possibility that the very next time he passes by the shop this memory will become awakened. "I've seen that place somewhere or other," he'll say to himself, "the question is where?"

The first thing that he knows there will come before his mind's eye a colored postal on which appears the exact duplicate of the building he has just passed. "That's it," he'll exclaim in satisfaction. "It was on that penny postal I got a few days ago."

Results achieved by this form of appeal are best described by using Fred Wamsley's own words:

"Our experience with this medium of advertising has been very satisfactory," he states, "although we cannot point directly to many immediate sales that have resulted from these post cards, they have been beneficial in familarizing motor car owners with our location and keeping our name before them."

Well Known in New Orleans



FOR seventeen years the Shuler Auto Supply Co., Inc., has played an important part in the business life of New Orleans. It supplies "everything for the automobile" and keeps seven men traveling throughout the southern states

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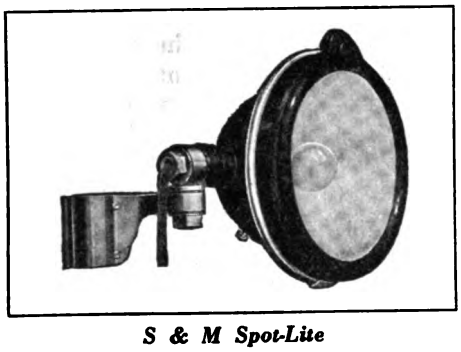
IN THE FIELD OF ACCESSORIES

S & M SPOT-LITE THROWS POWERFUL BEAM

A powerful light which is a complete unit within itself including bulb, bracket, cord and so on is being produced by the S & M Lamp Co., 118 West 36th street, Los Angeles, Cal., in the form of the S & M Spot-Lite. This throws a brilliant ray of light wherever needed and reveals all danger spots in the road ahead.

A scientifically accurate parabolic reflector is used which is polished to a high brilliance and heavily silver plated. Construction is strong and compact throughout, making the light proof against vibration of the car. Reflector is protected by a pressed steel casing.

To adjust the Spot-Lite to conform with legal requirements a legal bracket has been incorporated in its design. This acts in such a way that when the light is turned to either side it may be elevated



S & M Spot-Lite

at will. When properly adjusted, however, the bracket so governs its action when pointed straight ahead, that violation of the law is impossible.

An S & M Periscope or rear vision mirror is supplied at small extra charge. This is three inches in diameter, is planoconcave in type and reduces the image in size yet permits no distortion. It is designed so as to fit the Spot-Lite perfectly.

No. 90 which has a reflector diameter of 7½ inches and a light projection of 3,600 feet sells for $13. No. 80, with a reflector diameter of 6½ inches and a light projection of 2,400 feet is priced at $11. S & M Periscope is $1.60 extra. Lights are richly finished in nickel and black enamel.

CLEARVIEW CLEANS SHIELD ON DOWNWARD STROKE

Downward stroke is the stroke that cleans with the Clearview, a windshield cleaner that has been placed on the market by the Yale Corp., 124 West Fourth street, Los Angeles, Calif. This same downward stroke, moreover, may be extended to the lower glass as well. This feature has been incorporated as a result of experiments which have proved



Clearview windshield cleaner

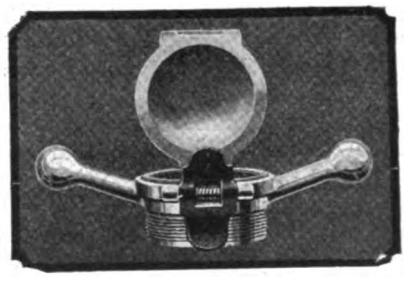
that if the channel so made is downward, the water will pass in a steady flow in that direction.

An operating handle is placed at one side of the windshield where it can be easily reached and controlled by the driver. A large space for vision is provided, and where it is desired to allow full vision for both driver and passenger, two cleaners may be installed.

Still another feature upon which emphasis is laid is the fact that when not in use the Clearview is practically out of sight. It is also stated that the upper and lower glass may be cleaned in one movement without difficulty or interference with the action of either upper or lower shield. It is adapted to all makes of cars and sells for $2.

BETHLEHEM "SNAPPY CAP" OPENS BY PRESSING TRIGGER

Filling the radiator without removing the cap has been made possible for the Ford owner through use of the Bethlehem "Snappy Cap." This product has been placed on the market by the Bethlehem Spark Plug Co., Inc., Bethlehem,



Bethlehem "Snappy-Cap"

Pa., and combines attractive appearance with extreme utility.

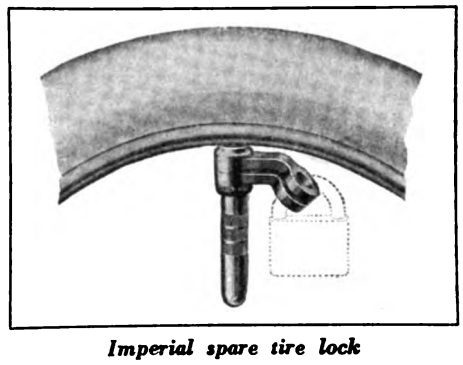
Simply "press the trigger" and quicker than a wink the lid is ready to open, describes the method of operation. Top of the device is fitted with a durable hinge and strong spring, and is held down by a flexible spring trigger.

It is constructed of heavy, special metal heavily nickeled, and the top is finished in black enamel. Whereas once it is screwed on it is attached for good, it is claimed not to "freeze" to the radiator. Price of the "Snappy Cap" is $1.25.

IMPERIAL SPARE TIRE LOCK PROTECTS THE VALVE

Where the valve stem protrudes through the rim of the carrier the Imperial spare tire lock protects the extra tire. This device which is made by the Imperial Brass Mfg. Co., 1200 West Harrison street, Chicago, Ill., consists of two heavy brass lugs.

The upper of these lugs slips up on



Imperial spare tire lock

the tire stem while the lower fits snugly against the upper one. When rotated one quarter turn it engages the threads in the valve stem. Any ordinary padlock then locks both lugs together.

This lock is made in two sizes—for standard size valve stems on tires over 3½ inches in diameter, and for standard size valve stems on tires 3½ inches in diameter or less. The larger size sells for $1.50 and the smaller for $1.25.

LAWCO MOTO-METER LOCK IS SCREWED ON RADIATOR

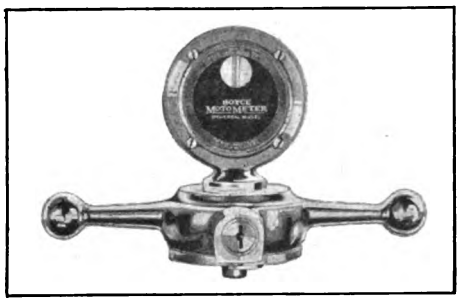
Screw the cap into place, and give the key a few turns. This is all that is necessary to assure protection to the Moto-Meter by use of the Lawco Moto-Meter lock, a device that is being offered by the F. H. Lawson Co., Cincinnati, O.

A bar type radiator cap to which the Moto-Meter is attached makes up the lock. When the cap is screwed into place the key is given a few turns. This operation runs a screw into a hole in the base which is fastened to the radiator filler neck with pointed set screws from

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the inside. Base will fit all round radiator necks.

The lock is constructed of heavy sand-cast bronze finely machined. It is finished in a heavy nickel triple plate with mirror-like finish. Emphasis is laid upon the fact that no changes on neck of radiator are necessary for fitting. It is quickly removable and is claimed not to interfere with the operation of the Moto-Meter.



Lawco Moto-Meter lock

With the lock is furnished a wrench for tightening the set screw when fitting the base to filler neck. Price of the Lawco complete is $6.

LITE-SITE AIDS MOTORIST IN EMERGENCIES

A spotlight with an attachment which enables it to be used to advantage by the motorist for emergency purposes has been placed on the market by the Light-Sight Products Corp., Warren, Pa. Whereas, the Model B light has been designed primarily for use on rifles or shot guns it has been found of equal value when employed on the automobile as a trouble light or emergency spotlight. It may be used with or without the clamp attachment.

The bulb is "unbreakable" and sets in a leather shock absorber below the head of the light, projecting through the aperture in the reflector. By unscrewing the head a reading lamp is available which is suitable for camp use.

Emphasis is laid by the maker upon the fact that the Lite-Site cannot be short circuited when placed on the engine or fender. It is also claimed to be waterproof and will not break when dropped on the floor or road. Complete with attachment and batteries the light sells for $6.

Offers Dealers Unique Display Stand

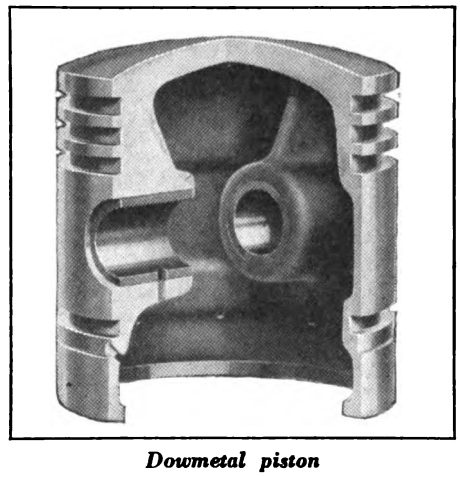
As a means of stimulating interest in its products the Black & Decker Manufacturing Co. is offering its dealers the use of an exhibition stand known as the "Bureau of Electric Tools." This provides a substantial work bench upon which the units may be actually demonstrated, together with a back piece which carries an assortment of machines on display as well as pockets for booklets. Side and front panels of the bench consist of colored slides. These are easily removed, it being the Company's purpose to supply new slides periodically.

DOWMETAL PISTONS MADE OF LIGHT ALLOY

Chief interest in Dowmetal pistons which were first introduced by the Dow Chemical Co., Midland, Mich., in 1921, lies in the material used. Dowmetal is claimed to be the lightest of all commercial metals and is the result of intensive development work carried on for many years by the engineering staff of the Dow Chemical organization.

It is an alloy containing a high percentage of magnesium and having a tensile strength of 22,000-24,000 pounds per square inch. With a specific gravity of 1.85, it has only one-quarter the weight of cast iron, or one-fifth that of copper. It is of a silvery color, rather brighter than that of aluminum, and can be machined with remarkable facility.

Many additions have been made to the line of Dowmetal pistons since they were first introduced until now there is offered pistons for practically all the more popular makes of cars. These are produced in standard size and regular oversizes.



Dowmetal piston

Town Plates Come in Neat Designs

Town plates of neat design are being offered the motorist by John C. Hoof & Co., 157-159 West Illinois street, Chicago. These are made of durable metal, embossed and enameled the same color as the state license tags. They may be had also in black and white or the color combination desired. Price is 50 cents a plate or $1 a pair.

RUSCO SAFE-T SEAT LOCK PREVENTS TOOL THEFTS

Use of the Rusco Safe-T seat lock eliminates the possibility of theft of tools from the locker under the seat. The device is sponsored by the Russell Mfg. Co., Middletown, Conn., and is offered in three sizes which will equip all models and makes of cars.

It consists of a band of tempered steel encased in artificial leather and with a strong lock. The hinged end of the strap is fastened by means of three bolts to the seat under the back edge of the cushion. The strap passes over the top and is fastened in front of the cushion by a patent spring lock.

Artificial leather used is made to match the upholstering on the majority of cars. Price of the lock is $2.

Bosch Ignition Offered for Overlands

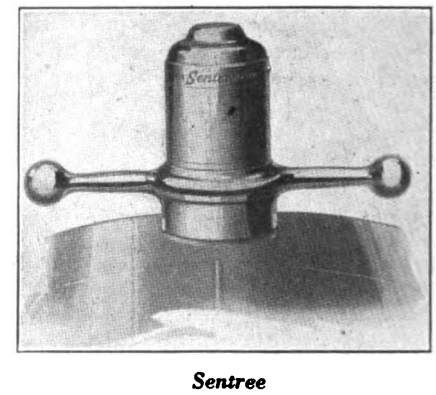
A special battery ignition system for Overland engines was recently put on the market by the American Bosch Magneto Corp., Springfield, Mass. It has the now well-known Bosch compensating governor that, unaided by the driver, keeps the spark always at the proper advance to get maximum efficiency. Introduction of this system is the second that the Company has made in its campaign replacement business, the first being one for Fords.

SENTREE WHISTLES TO WARN OF ENGINE TROUBLES

Keeps the water supply constant. Prevents any overheated engine. Notifies when the fan belt breaks; when water connections leak; when oiling system fills. These are some of the claims made by the Alert Alarm Co., 609 North La Salle street, Chicago, for the Sentree, a capable little condenser for the water vapor from the cooling system and a visible and audible warning of engine overheating. It is mounted in place of the radiator cap.

Action of the Sentree is based upon a sensitive piston which is raised by the increased pressure and which exposes a red warning signal. Before the effects of the engine overheating become disastrous the device sounds its shrill warning and continues to make itself heard as long as the excessive heat exists.

Vapors arising from the water cooling system pass through ports provided and circulate in a chamber where they are cooled by contact with the outer surface which in turn is kept cool by the rush of air created by the car in motion. Cooling of the vapors causes them to return to the liquid state and this liquid runs back into the cooling system.



Sentree

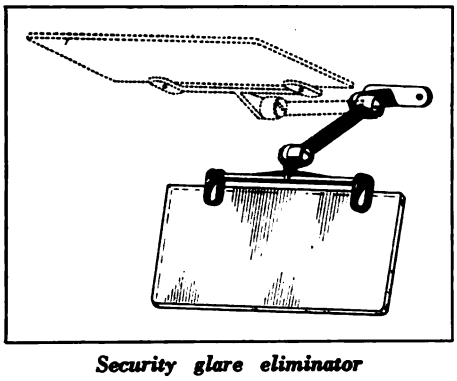
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In the event of engine trouble causing overheating, the increased pressure raises a piston which is extremely sensitive and consequently raises the cap, exposing a red surface. More heat and more pressure sends the piston a little higher and the compressed air or vapors rush through the opening and blow a whistle. Should the water in the radiator boil for any length of time the piston is raised higher and the steam will escape through the opening.

Simplicity of construction is a feature of the device, and installation takes but a few minutes. Price complete is $8.50.

SECURITY GLARE ELIMINATOR RELIEVES EYE STRAIN

Glare from approaching headlights and the rays of the sun has been eliminated by the Security Mfg. Co., 255 Mill street,



Security glare eliminator

Rochester, N. Y., by means of the Security glare eliminator. This shield is clamped on the top of the windshield on open cars and screws onto the frame just over the windshield in closed models. It may be had in blue, green, amber or amethyst.

When properly attached it is to the left of the steering wheel and not directly in front of the driver. The approaching machine must pass on the left, hence the glare is deflected when the lights are nearest. This leaves the vision unimpaired while looking directly through the windshield. In this manner the road is not darkened by looking through the colored glass and it is possible for the driver to take the full advantage of his own headlights.

A feature of the Security glare eliminator which is also worthy of mention is its easy adjustment. This is accomplished by two joints between the bracket and the glass which enable it to be placed at a convenient height. It can also be turned up straight along the top of the car and kept entirely out of the way when not in use.

Frame is substantially constructed of cast aluminum, enameled in black. Price, complete, is $2.50.

Offers Wide Line of Radiator Caps

Sixteen different models of Silver Bar radiator caps fitting practically all cars, are being produced by the M. L. Oberdorfer Brass Co., Inc., Syracuse, N. Y. Material used is attractively finished and the handles keep cool so that the caps can be removed when the radiator is hot. Metal is solid and there is no plating to wear off. Sizes range from a six-inch Ford type to one which measures 9¾ inches designed for the Willys-Knight.

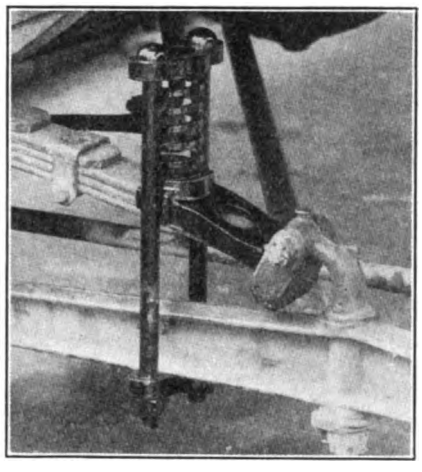
"REDEE" LOADS THE SPRINGS FOR EASY RIDING

Loading the springs in such a way as to produce the equivalent of a loaded car has been accomplished by the "ReDee," a sturdy and neat appearing shock absorber which has been placed on the market by the Detroit Motor Casting Co., 1067 Beaufait avenue, Detroit. Whereas this product is at present built for use on Fords only, it will be produced later for other cars as well.

Design of the "DeBee" is such that it puts 600 pounds of load on the spring but only 12 pounds (which is the actual weight of the shock absorber) on the tires. This has been accomplished by a stout coil spring riding on a cast saddle and held in compression on the regular Ford spring, thus furnishing the stabilizing load.

There is no checking or resistance to the laminated spring flexing when the car passes over a bump or hole, it is stated, but when the time comes for the rebound it is resisted by the constant pressure of the coiled spiral spring. The same mechanism that loads the spring also checks the rebound.

Installation can be accomplished in a few minutes without the change or removal of any Ford part. Price has been



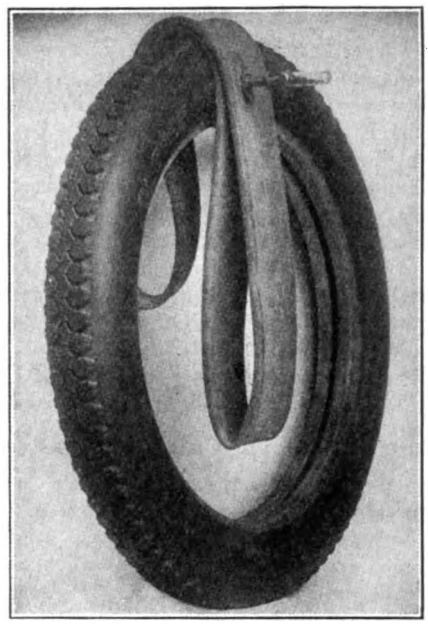
"ReDee"

fixed so as to make the device attractive to every Ford owner.

PAUL RUBBER MAKES FEATURE OF TIROMETER VALVE

Exact air pressure at a glance is shown by the Tirometer valve which is used on all extra heavy Clover Leaf red tubes produced by the Paul Rubber Co., Salisbury, N. C. This product which has been made for some time by the Tirometer Valve Corp., of America, Charleston, W. Va., has been taken over by the Paul Rubber Co., and, as has been pointed out in these columns already, a plant for its production is now being equipped in Salisbury.

A considerable increase in tire mileage is claimed for this valve due to the fact that the motorist has always before him



Tirometer valve on Clover Leaf tube

exact information as to air pressure. Design of the valve is such that it registers the amount of air that is pumped into the tire or while the tire is in service. Equipped with the Tirometer valve the Company's extra heavy Clover Leaf red tubes range in price from $2.75 for the 30 x 3 inch size to $6.60 for the 37 x 5 inch size.

Oilwatch Oil Gage Measures Accurately

A vertical tube extending through the floor-board of the car, the lower end of which is tightened to the lower pet-cock hole in the crankcase makes up the Oilwatch oil gauge for Fords which is being offered by Philip Schaefer & Co., 20 East Jackson boulevard, Chicago. A measuring rod with high, low and middle levels is clamped on the lower end of the rod. Oil rises in the tube to the same height as in the crankcase. Price of the device complete is $2.50.

Rose Lubricating System Complete

Considerable interest is being shown in the Rose high pressure lubricating system which is being produced by the Frank Rose Mfg. Co., Hastings, Neb. This system consists of a pressure pump, flexible hose, and fittings to go in place of grease cups. Pump is refilled by suction, pulling the handle straight back. Construction is durable.

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BOOKS: BOTH TIMELY AND INSTRUCTIVE

PIERCE SHOWS WHERE HIGHER EFFICIENCY LIES

Our Unconscious Mind and How to Use It, by Frederick Pierce. Published by E. P. Dutton & Co., New York. $3.

Those members of the trade who attended the Chicago convention of the National Automobile Dealers' Association need no introduction to Frederick Pierce who will be recalled as opening up new channels for thought along merchandising lines by presenting some of the fundamental forces that influence prospects and affect salesmanship. Opportunity for a closer study of the general principles presented at that time is now available through Pierce's book "Our Unconscious Mind and How to Use It."

The relation which the unconscious part of the personality of each individual bears to the conscious part is explained in plain, non-technical language. This knowledge is then put to practical use in discussing various applications among which are several that will prove of particular interest to the automobile man.

Those pages devoted to the new psychology in advertising and selling, for example, are to be specially recommended. Material used in this section is partly an expansion of that presented by the author in lectures before the Advertising Clubs of Cleveland, St. Louis, and other cities. However, the full value of its import cannot hope to be gained without a thoughtful reading of the preceding pages.

Greater efficiency is the goal toward which every automobile salesman is, or should be striving. Many times, however, he is handicapped through ignorance as to where lie the weak spots. Pierce shows them up and in so doing he makes of every reader not only a better salesman and business man but a better citizen in general.

DUNN'S SCIENTIFIC SELLING IS SALESMAN'S BIBLE

Scientific Selling and Advertising, by Arthur Dunn. Published by Harper & Brothers, New York. Price $3.

In presenting his system of scientific selling and advertising Arthur Dunn is offering the fruits of a wide experience is selling all sorts of commodities. As he points out in the introduction to his new volume, "It is not guess work or theory. It has been tested by the hard knocks of experience. It works."

The volume is divided into five parts: Service—Human Energy—Essentials of Success—Scientific Methods of Presenting Your Products—How Related to War and Reconstruction. The appendix is devoted to the application of the system.

It is a simple and clear exposition of the fundamentals of selling. It has been described as the salesman's Bible and may well be regarded as such by those who are anxious to waste no time in getting results.

THE VALUE OF READING

PROGRESS demands keeping in touch with the times and where possible keeping just a bit ahead of them. There is just one way to accomplish this—by constant study—by reading a certain amount each day on some subject that will prove mentally stimulating.

In response to a demand for the names of some of the more recent publications that the automobile merchandiser may well spend his time on, AUTOMOBILE TOPICS is offering for consideration the volumes mentioned in these brief reviews. Information on any others not appearing will be answered promptly.

In making these introductions and those that are to follow it is felt that a real service is being performed. Just how great this is, cannot be appreciated until sufficient time has elapsed to reap the benefits from well-chosen and regular reading.

TELLS HISTORY OF RUBBER IN INTERESTING STYLE

The Reign of Rubber, by William C. Geer. Published by The Century Co., New York. Price $3.

It is unlikely that anyone not thoroughly absorbed in his subject could have gained the effect obtained by William C. Geer in presenting in such interesting manner the story of rubber. Geer is well known to the industry as vice-president of the B. F. Goodrich Co., and an authority on the commodity with which he has so long been identified. With the publication of his volume entitled, "The Reign of Rubber," he is destined to attain an even wider reputation, for the general reader as well as those identified with the industry cannot help being interested in the fascinating information contained in its pages.

Geer has traced the history of rubber from the time of its discovery in crude form down to the present day. He tells the story of vulcanization; how the seed of rubber trees was taken from South American forests to England and then transplanted in Ceylon, and the beginning there of the great rubber plantations. Uses to which rubber is put and the needs it fills is then covered in detail with a conclusion forcasting future developments. Eighty-three illustrations scattered throughout add much to the interest of the text.

"The Reign of Rubber" is a fascinating book for the reader who wants to add to his general knowledge. For those whose business brings them in touch with the rubber industry it may well be regarded as invaluable.

CHARTERS OUTLINES PROBLEMS OF RETAIL SELLING

How to Sell at Retail, by W. W. Charters. Published by Houghton Mifflin Co., Boston, Mass. $3.

The most important single power which the salesman needs to cultivate is that of obtaining the confidence of the customer. Such is the opinion expressed by W. W. Charters in a new volume wherein he treats in detail of various aspects of the selling problem particularly as they affect those who stand behind the counter.

Whereas primarily this very exhaustive discussion of all that pertains to retail selling is addressed to the department store worker there is much in its pages that will be found of value to the accessory dealer. Through applying the lessons presented, to his own everyday problems he will find himself in the position where he can go about his work intelligently and with proportionately better results.

He will find much food for thought in a chapter devoted to the sizing-up process, while another on the general subject of handling customers will serve to reveal the necessity for looking at things through the eyes of those who come to buy. Among other chapter headings which will arouse his interest are: Interest and Courtesy; Remembering Names and Faces; How to Handle Two Customers at Once; Learning to Know Merchandise; Opening the Sale; Getting the Customer Interested in the Merchandise; Displaying Goods; When and How to Mention Price; Closing the Sale.

In preparing the data on which the book is based sixty difficulties encountered by retail salespeople were listed. A staff of 25 trained interviewers had conferences with 300 expert salespeople selected with unusual care from several large department stores. This material was then carefully put into text form.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

NEW YORK — NEW YORK. — At Sherman avenue and 163rd street a one-story garage will be erected which will be 65 x 151.—A petition in bankruptcy has been filed by Herz, Inc., automobile accessory dealer, which is located at 187 Locust street.—Motive Parts Corp. has leased the ground floor store and rear part of the basement at 796 Tenth avenue.

Eusebius D. Stewart plans to erect an automobile repair shop on the plot, 50 x 99, which he recently purchased. It will be located on the north side of 141st street, 331 feet east of Lenox avenue.—Traymore Garage Corp. has repurchased the two-story garage at 48 Jumel place, 100 x 100.—Albert Horstmann has sold to Joseph Sternberg the four-story garage, 43.3 x 75, at 4-5 Hall place.

A two-story garage, 80 x 100, to cost $50,000, will be constructed for Mrs. A. Wood at 3327-3331 Broadway.—General Motors Corp., through its subsidiary the Detroit-Cadillac Motor Car Realty Co., has purchased the flat at 78 Columbus avenue. The acquisition rounds out the company's ownership of the block front facing the Empire Hotel and extending 100 feet on 62nd street and 125 feet on 63rd street.

NEW JERSEY—NEWARK.—Hudson Motor Car Co. and the Foley Chevrolet Motor Co. will occupy for a term of years at rentals aggregating about one million dollars a large automobile showroom and service building, owned by the General Motors Co. The structure is situated at 957-963 Broad street, fronting 100 feet on that thoroughfare and extending 375 feet to Halsey street with a 25-foot outlet on Court street.

PENNSYLVANIA—GREENSBURG.—Mack truck distribution for Westmoreland county has been taken over by the Overholt Motor Co.

McKEESPORT.—George F. Reed has obtained the Moon agency for distribution in this territory.

PHILADELPHIA.—A salesroom and service station has been established by the Templar Motors Co., of Cleveland, Ohio. The new concern will operate under the name of the Templar Sales Co.

SOUTH

GEORGIA — ATLANTA. — A. C. Meixell has organized the Meixell Tire Co. to distribute the Fisk tire in this territory. Meixell was associated with the Fisk company for thirteen years.

FLORIDA—MIAMI.—A sales building and service station will be constructed at an approximate cost of $85,000 by the Bacon Motor Co., Studebaker dealer.

ALABAMA—BIRMINGHAM.—Consolidated Motor Co., automobile dealer located at 2301 First avenue, has been reported bankrupt.

MIDDLE WEST

OHIO—CLEVELAND. — A five-year lease has been taken by the Mall Motor Co. on quarters in the Koblitz building at 4814-4900 Euclid avenue. The Company was established seven years ago locating in the east room of the former Masonic Temple building at Superior avenue N. E. and East Sixth street, later constructing a building farther up Superior which recently was purchased by the Bryant Motor Co. In the new quarters the Mall company will handle the Gray car under the sales direction of Arthur Haas.—Lomar shock absorber agency has been taken over by W. M. Renick and Blair Pyle who will distribute the product in this territory.

COLUMBUS.—Economy Auto Supply Co. has been formed by Harry E. Smith who has purchased the stock of parts and accessories of the defunct United Auto Stores Co.

SALEM.—A Cadillac sales and service station has been opened here by the Elton Motors Co., of Youngstown. E. B. Drake has been appointed manager and A. D. Stewart placed in charge of service.

INDIANA — CONNERSVILLE. — Elgin distribution for this city has been awarded the DeCamp Auto Sales Co.

ILLINOIS—CARLINVILLE. — Mrs. Edna Homer has sold her garage and automobile repair shop to O. M. Cornelius who, with his son-in-law, O. C. Vanosdol, will conduct the business under the name of Cornelius & Co.

MICHIGAN — BAY CITY. — Geo. Dauer Tire Shop has filed a petition in bankruptcy with assets listed at $34,550 and liabilities at $43,126. The company conducts a tire and vulcanizing business.

ESCANABA.—Wolverine Delta Motor Co. will soon erect a garage here.

WISCONSIN — ANTIGO. — Carlson and Adams have purchased the Schubert Garage at this place.

APPLETON.—A two-story fireproof sales and service building, 80 x 89, will soon be constructed for the Herrman Motor Car Co. at 680 College avenue.

ARNOTT.—Buick distribution for this city has been taken over by J. A. Werachowski.

KEOWNS CORNER.—Robert Glau has established a garage and automobile supply business.

KEWAUNEE.—Steve J. Knedle has leased the Auto Service Garage from Joseph Salkowski. He will conduct the business under the new name of the Durand Service Garage.

LADYSMITH. — Aug. Buchholz, of Curtis, has purchased the City Garage from John Steinfort.

MENASHA. — Knute Ellinghoe has disposed of his interest in the Harper Ellinghoe Co., conducting an automobile repair shop. The business will be operated under the name of the Harper-Krieg Motor Car Co.

MENOMONEE FALLS.—L. K. Benson and Fred. Lalk, of Hartford, have leased the Minten Garage.

MINERAL POINT.—Harriet Grim and Roy Parkinson have taken over the Star Auto Co. at this city.

NEW LONDON. — A new store, garage, warehouse and service building, to be 50 x 120, will be erected for E. H. Ramm, who maintains a branch of his business at Clintonville, Wis.

NORTH CAPE. — Wilkinson has opened a garage in the Case building.

OCONTO.—Oconto Motor Sales Co., Reo dealer, has also taken on the agency for Maxwell and Chalmers distribution.

STANLEY.—William J. Sommerfield, proprietor of the Service Garage, has changed the name of his business to the Sommerfield Motor Co.

STEVENS POINT.—Auto Sales Co. has been purchased by Harry Fischer.

WISCONSIN RAPIDS.—Work has been started on the erection of an addition to the Robert Ebbe garage on Johnson street. The new structure will be 42 x 82, of concrete block walls, concrete floors and wood roof trusses.

IOWA — BETTENDORF. — Ernest Artzberger has purchased the Bettendorf Garage from Burkle Brothers. He will lease the building for automobile repair purposes.

SIOUX CITY.—Because of the increase in business, C. G. Cummins, Hupmobile agent, has found it necessary to obtain larger and more commodious quarters. He has secured a location on Eighth and Pierce streets, to where he will move from his present quarters on Douglas street.—A parts and accessory station will be opened by Ralph C. Schwimm in the Davidson block.

MISSOURI—BOLIVER.—Burleson & Son have purchased the Cowden Garage.

COLUMBIA.—Cook Brothers Motor Company has purchased the automobile service department of the Fred White-

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side Garage on North Seventh, and have started remodeling the building.

FAIRFAX.—Dissolution of the firm of Davis and Johnson, operating as the Victor Motor Co., has taken place.

FARBER.—Fire completely destroyed the garage of John Miller.

GRANT CITY.—Associated Tire store, located at 115 North Seventh street, has been purchased by L. A. Paulson and son. They have assumed the management of the concern formerly in the hands of J. L. Shoemaker.

KANSAS CITY.—E. C. Welsh has purchased the Sam F. Baker Motor Co., located at 335 Main street. The concern will continue to distribute Ford and Lincoln cars under the firm name of E. C. Welsh Motor Co.

KIRKSVILLE.—George McCormick, of Milan, recently contracted for the distribution of Hudson and Essex cars. He plans to open a store in the near future.

LEXINGTON.—A new firm, to be known as the Robertson-Latham Motor Co., will move into its quarters at 1217 Franklin about November 1.

MARSHALL.—A. G. Thomas Motor Service Co., authorized agent for Dodge Brothers cars, has located in its new quarters at 259 West North street.

MARSHFIELD.—A garage has been opened on West Jackson street by Tower & Clift.

NEVADA.—Bernard Brokaw, who has been conducting an automobile repair shop just north of the Herald office, has closed his business and is seeking a new location in El Dorado, Kans.

OAK GROVE. — Bedsaul Brothers have leased and taken possession of the building and business of the Hunt Garage, owned by W. D. Hunt.—Carl Phillips has been appointed Chevrolet distributing agent in the Oak Grove territory.

OWENSVILLE. — Henry H. Brinkmann has sold the stock and equipment of the Standard Garage to Edwin Boosch and John Palmer.

POLO.—A new salesroom has been opened by the Alspaugh Garage in the Elmore building which the concern recently rented.

ST. LOUIS.—In order to obtain larger quarters in which to conduct its business, the Mopham Motor Co., Chevrolet dealer, has moved to a new location at 2926 Locust street.

SEDALIA.—George Bartlett has purchased the interests of W. C. Cain in the M. and S. Tire and Rubber Co., located at Seventh and Ohio streets.

TRENTON.—A store has been opened by the Stephens Associated Tire Co. Harry Walker will assume the management.

WARRENSBURG. — Cassingham & Son have taken over the agency for Paige and Jewett cars for Johnson and Warrensburg counties.

WINDSOR.—H. L. Winzenried has sold the Buick Service Station on East Benton street to M. R. Green who has taken charge.

KANSAS—ABILENE.—A. R. Monroe has purchased the S. E. Barber building on First street where he will locate his garage and repair shop.

BAXTER SPRINGS.—Herbert Price has purchased the Buick Garage from M. M. and A. L. Wilson and Don French.

CHEROKEE.—H. B. Myers and Ed. O'Connor are leasing the Kelse building on the east side of Vine street where they will locate their new garage business.

ELDORADO.—Beatty & Wilson have established quarters at 110 West First avenue in the room formerly occupied by the Osburn Tire Co.

ELLIS.—Ray C. Hall has purchased the battery business of the Golden Belt Garage.

EUREKA.—Samples Garage, which has been owned for some time by Asel and Frank Samples, has been purchased by O. E. Faimusbee of Eureka, and J. Jarrett, of Towanda. The new owners will handle a line of automobile accessories.

FORT SCOTT.—Blugaugh Motor Co. has been established at 11 North National avenue.

GRIDLEY.—North Side Garage has been opened at this place by Fred. Jones.

HARPER.—J. W. Triplett, of Elkhart, has purchased a half interest in the Steven's Tire Chain Store with W. N. Bohannan.

HOXIE.—Robert Brunner and Clay F. Reed have purchased the Andregg Brothers Garage and will be associated with C. H. Beers, the Buick dealer, in the sale of that car.

HUTCHINSON. — New quarters at 111-112 Second West have been obtained by the Clark Motor Co., of which Scott Clark is manager.—Superior Motors Co. has moved into its new location at 110 First West with Charles Steinmetz as manager.

KENSINGTON. — Henry Dieckhoff has sold his interest in the Buick Garage to E. Landman who has taken charge as an active partner. E. Norden has retained his interest. As a result, the firm name has been changed to the Norden Buick Co.

LEAVENWORTH.—The partnership of Flannagan and Stack, which operated the Community Service Station, just south of Chestaw on Fourth, has been dissolved. Flannagan is now sole owner.

McPHERSON.—Work will be started on the erection of a modern garage building to be located on the plot behind the Peoples Bank building as soon as the old wooden structure has been removed.

MANHATTAN.—A permit has been granted P. H. Smith for the erection of a garage and carpenter shop at 1626 Peyntz avenue.

MARYSVILLE.—Krug Auto Co. has opened in the Holvering building on the corner of Sixth and Center. The company has been reorganized and its headquarters will be at this place. J. B. Robinson will manage the company's garage.

NEODESHA.—Bert Alley has completed the erection of a garage at the corner of Fourth and Wisconsin streets where he will soon locate his agency for the distribution of Durant, Star, Nash and Marmon lines.

OSAWATOMIE.—New quarters have been opened on South Sixth street by the Ferguson Auto Supply and Top Shop.

PARSONS.—In the Olson building at 1819 Broadway the Hudson-Essex Service Station has been established with S. E. Gloyd in charge.—Chevrolet distribution for this section has been secured by the Dieterich Motor Car Co.

SALINA.—A wholesale and retail battery station has been opened at 149-151 South Fifth street by the Luthy Battery Co.—A Reo automobile agency has been opened in the Nelson building at 122 South Fifth street. H. R. Conklin, proprietor and manager, plans to establish a service station in connection with his sales agency.—Distribution of the Chevrolet, formerly in the hands of Roger Nelson, has been taken over by Breen & Dischoff, automobile dealers from Hutchinson. They have moved the business from South Ninth to the Watkins Briggs building on North Seventh.

WINFIELD.—Lewis & Page Motor Co., located at 304-6 East Ninth, has been purchased by the Hughs-Elwell Motor Co. The new proprietors will continue to deal in Hudson and Essex cars.

NEBRASKA — BLADEN. — John Jenkinson recently purchased the South Garage.

COLUMBUS.—Fire damaged the L. C. Williamson Tire & Auto Accessory store at Thirteenth street. The loss is estimated at $5,000.

DODGE.—Metzer Battery Station has been sold to the Parris Garage who is now in charge of the business.

FAIRFIELD.—C. G. Loud and F. H. Cayet have purchased the North Garage from the Fairfield Auto Co. The concern will be known as the Fairfield Garage and Machine Shop.

FALLS CITY.—A new business will soon be opened by E. L. McQuillan, proprietor of the Falls City Auto Top Co., recently destroyed by fire.

GRAF.—Kahout & Dollarhide will use the new building of George Kahout as a shop and garage.

HARDY.—Earl and I. V. Garrison have purchased the Ideal Garage from Jensen & Dybre. Its name has been changed to the Service Garage.

McCOOK. — Distribution of Barney Oldsfield tires and tubes has been taken over by the H. H. Clemons Motor Co.

OMAHA.—A brick garage now under construction at 24th and Camden avenue will be opened this week with Fred S.

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IT'S natural enough that the U. S. Tire Dealer has a somewhat *different* view of trade conditions.

What appears to many dealers to be a wabbly retail market he recognizes as a *definite swing toward U. S. Tires.*

His confidence in his ability to sell is a measure of the public's confidence in what he's selling.

United States Tires are good tires.

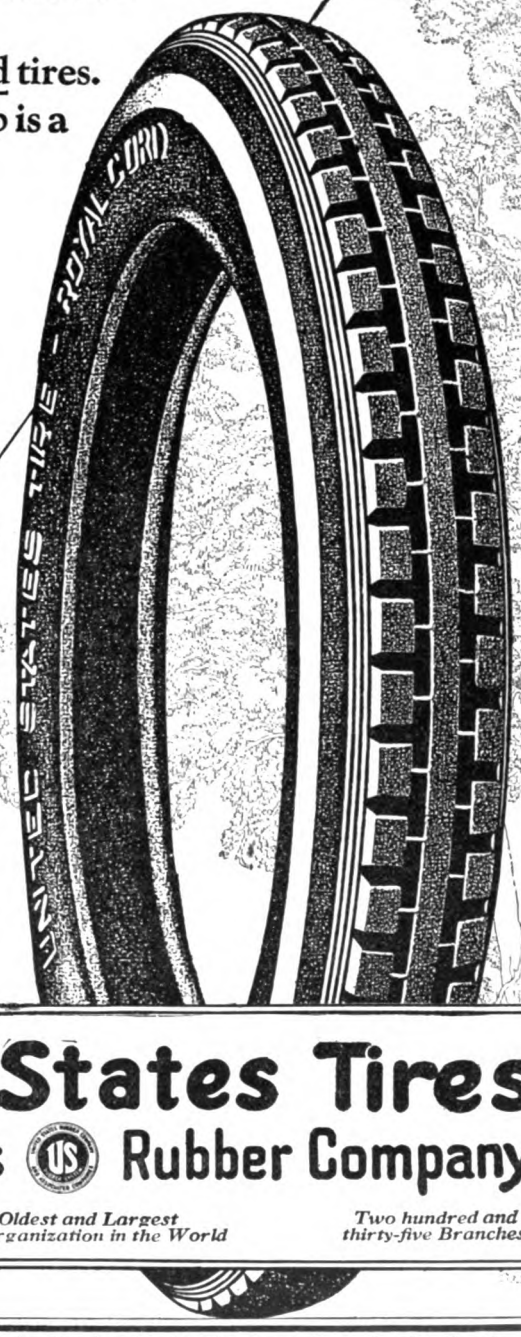
The U. S. Sales Relationship is a good relationship.

The U. S. Sales Relationship brings to the dealer's store the most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

Isn't this the kind of Franchise the tire dealer needs?



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

Copyright 1922, U. S. Tire Co.

United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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Peterson in charge.—Rusch Tire Service has been opened at 2205 Farnam street.

ST. PAUL.—Carl Dehn has purchased and taken possession of the tire repair shop formerly owned by John Wall.

WATERLOO.—John Diestal has purchased and taken possession of the stock and fixtures of the Mangold Garage.

NORTHWEST

MONTANA—BILLINGS.—An addition which will increase its sales space 50 per cent will be erected by the Billings Overland Co., 415 North 27th street. The new structure will be erected at a cost of $6,000.

DARBY.—B. J. Billings has purchased the Darby Garage from Frank Robertson.

FAIRFIELD.—Fairfield Garage has been established here by Jos. Marantette.

HAMILTON.—Leon and Loren Smith, of the Smith Auto Co., have purchased the Harold Nicol Garage in the Erickson Block on Third street.

SOUTHWEST

ARKANSAS—BENTONVILLE.—Bentonville Garage, operated by Frank Francis and Wayne Marshall, has filed a petition in bankruptcy with liabilities listed at about $3,000.

DE WITT.—Smith Tire Station has had a new building erected for it.

HOT SPRINGS.—S. W. Patterson has opened his business at 122 Market street, operating under the name of Patterson's Garage and Automobile Laundry.

STUTTGART.—H. E. Kyler has sold his service station to the 555 Tire & Service Co., of Little Rock. Jos. T. Dehmar, of Little Rock, has been made manager of the newly acquired business.

OKLAHOMA—ENID.—Harrington Motor Co., Hupmobile dealer, located on East Broadway, has been sold to F. M. Belveal, D. M. Diener and E. N. Wells.

OKEMAH.—Work has been started on the excavation for the foundation of the Parrett Garage and motor salesroom building. The structure will be one story and basement of brick and concrete, erected at a cost of $20,000.

OKLAHOMA CITY.—New quarters at 815 North Broadway have been obtained by the Wills Sainte Claire Motor Car Co.

SAYRE.—A. C. Bridges has purchased the Sayre Auto Supply Co. from F. C. Lowry.

TEXAS—AMARILLO.—Crudgington Motor Co. has moved from its location at 307 Polk street to new quarters at 115 East Tenth street.

DALLAS.—Advance Battery Co., under the management of J. V. Falson, has moved from 2016 Main street to 2112 Cabell street.

GATESVILLE.—Ford Fixers' Garage has secured the Dodge Brothers service department and will carry a line of Dodge Brothers parts.

PITTSBURG.—Robinson Motor Co. has rented the Luedecke building, formerly occupied by W. W. Franklin.

WAXAHACHIE.—With F. A. Bailey as manager, the Waxahachie Motor & Generator Works has been opened in the Brodhead & McCarter building at 108 East Jefferson street.

ARIZONA—PHOENIX.—Henry Lutjens and Whitton McLellan have taken over the management of the Palace Garage, which is located at 425 West Adams street.

ROCKY MOUNTAINS

NEVADA—WINNEMUCCA.—E. A. Smith, proprietor of the Smith Garage, has taken over the Ford agency for distribution in Humboldt county.

PACIFIC COAST

WASHINGTON—CENTRALIA.—W. L. Bronson has taken over the Paige distribution for this territory.

ONALESKA.—G. E. Wakefield will open his garage in a new building, 60 x 100, which is now under erection.

CALIFORNIA—ANTIOCH.—Roy Griffiths has sold Griff's Service Station to H. A. Roberts in exchange for Roberts' interest in the O. K. Garage.

BENICIA.—Benicia Garage, handling Ford and Fordson, has been enlarged to double its former size.

BERKELEY.—F. H. Dailey Motor Co., of Oakland has opened a branch at Shattuck and Durant avenues with F. H. Fuller as manager. The concern is dealer of Maxwell and Chalmers cars.

CHICO.—T. B. Green has purchased the half interest in the California Storage Battery Co. owned by J. F. Cheshire. The business is located on Second street. Green was formerly employed in the manufacture of batteries in San Diego.—G. W. Kelly has leased the business of the Oaks Garage from M. S. Strauss.

CHINO.—Jacob Bertschinger has opened the White Garage in a new building containing 10,000 square feet of floor space.

COACHELLA.—Paxton & Taylor, of the Coachella Battery & Ignition Works, have taken over the battery department of the Coachella Garage.—W. J. Briggs has purchased the Coachella Service Station from Roy J. Lyon.

CORONA.—E. G. Gilliland and W. Hooker have taken on the Dodge Brothers agency locating at 504 Ramona avenue.

COVINA.—Having obtained the Durant agency for this territory, F. B. Miller has located on South Citrus street.—Emerson Taylor has purchased the business of the Merritt Motor Co., Chevrolet agency. He will operate it under the new name of the San Gabriel Valley Chevrolet Agency.

CULVER CITY.—F. F. Thomasson has opened the Culver City Motor Co. on Van Buren street.

DOWNEY.—Sachs & Sons have purchased the Redfield Brothers Garage.

EL MONTE.—Ray Morgan has bought the Central Garage from C. J. Glasser and J. Chasson.

ESCONDIDO.—Additional service, repair and parts rooms are being erected for the Guarantee Garage.

FULLERTON.—A garage will be built for the Wickersheim Implement Co. on the site of its present building, 115 West Commonwealth avenue. The new structure will be two-stories and cost approximately $50,000.—Murray & Sanderhoff have sold their garage and battery shop to McGraw Brothers.

GARDENA.—H. N. Griffin has taken on the Buick agency for this section.—M. T. Boyer has sold his interest in the Gardena Ford agency to W. T. Spears.—F. D. Ray has established an agency handling the Ford and Lincoln lines.

GLENDALE.—Pietro and Rodolfo Pellegrini have opened the Pellegrini Brothers Garage at 1321 San Fernando Road.—J. H. Sherman has taken over the battery department of the Triangle Garage which is situated at 1528 San Fernando Road.—C. A. Helms has established the Helms Motor Co. at 233 South Brand boulevard.

GLENDORA.—Morris & Zerker have reopened the Vermont Avenue Garage.

HERMOSA.—Victor J. Huff has bought the Chevrolet agency from J. N. Windley who is located at Redondo and Hermosa streets.—H. H. Boyer and J. S. Surg have purchased the G. W. Tire Shop, 1227 Hermosa avenue.

HOLLISTER.—Samson truck distribution has been taken over by the Chappell Motor Co., Buick agency.

HUNTINGTON PARK.—Chevrolet distribution for this territory has been granted Kilgore & Sopp.—Charles G. Boster has sold the accessory department of the Pacific Auto & Supply Co. to Charles Marcellus. Boster will concentrate on the sale of Buick cars.—Harry Hillier has taken on the Hudson and Essex agencies, locating at 211 South Pacific boulevard.

KING CITY.—W. J. Hamilton has bought the interest of his partner, F. E. Gause, in El Camino Garage.

LAKEPORT.—J. A. McFadyen of the A & A Garage has sold it to C. A. Anderson and F. R. Ralfe.

LaVERNE.—Jack McIntyre has opened the McIntyre Auto Co. on Bonita avenue.—W. E. Horne, J. F. Slagle and F. H. Wilkins have opened the Chevrolet Garage.

LIVERMORE.—A. F. Young has opened the Stage Center Garage on the Altamont Road.

LONG BEACH.—A $40,000 brick building will be erected for Glenn E. Thomas at 1029 American avenue.—Clay D. Bizant and W. F. Hackers have established a garage at 626 Pacific avenue.—J. L. Francisco has opened at 443 American avenue with the Maxwell and Chalmers agencies.

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"Three Dollars per car for Service"

By C. A. Earl

ONE striking fact on which Earl distributors and dealers seem entirely agreed is the very low cost of keeping the Earl in order. Mr. M. J. Moriarty, General Manager of Brown-Moriarty Motor Company, our Chicago distributors, put this general recognition of Earl quality into six words the other day when he wrote that on nine hundred Earl cars sold in the Chicago district, the service cost had amounted to no more than three dollars a car.

As in the case of Mr. Myers of Pittsburgh and Mr. Woods of Nashville, whose enthusiastic opinions I have quoted the last two weeks, Mr. Moriarty was answering the inquiry of a prospective Earl distributor as to the sales possibilities and money-making opportunities of an Earl sales territory. His letter follows:

"We have been in the automobile business for fourteen years and have had experience with a number of different concerns which build a great many more cars than the Earl's present output. No one of these other companies, however, has been so particular to build quality into its car and to make so sure that the car will give owners lasting and satisfactory service as do Earl Motors.

"We are doing a very fine business and have been quite successful for some months now with the Earl car. I can safely say that it has not cost us $3 per car for service during that time, though we have placed somewhere near 900 Earls in the Chicago territory.

"We believe, therefore, that the Earl franchise is now and will continue to be the best offered by any motor car in its price class.

"I do not want to seem over-enthusiastic about this matter, but if you line up with Earl Motors, you will find its executives are men of their word and that they will go farther to keep their dealers and owners satisfied than any other company we have ever dealt with. If there is any other information that we can give you about the Earl, we shall be glad to do so."

What Earl distributors and dealers have accomplished in their districts, you can do in yours. If there is no Earl representative in your city, write or wire for the facts about our contract and the quality Earl line. Earl closed cars alone offer a great and immediate opportunity.

President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Jerome Tire Co., Manhattan, N. Y. Capital $10,000. Incorporators: D. J. Gutman, A. A. Jacobs, J. C. Robb.—Knickerbocker Checkers, Manhattan, N. Y. To conduct a taxicab business. Capital $5,000. Incorporators: C. H. Boosendahl, R. B. Murphy, F. B. Walker.—Mack Lock Co., Manhattan, N. Y. To manufacture and deal in automobile locks. Capital $20,000. Incorporators: C. Mack, C. Nessler.

Safety Combination Auto Lock Corp., Manhattan, N. Y. To manufacture and deal in automobile locks, etc. Capital $290,000. Incorporators: F. H. Butehorn.

Curran Mfg. Co., Albany, N. Y. To manufacture and deal in automobile accessories. Capital $500,000. Incorporators: E. T. Curran, P. J. Nolan, T. Kennedy.

Five Corners Garage, Lynbrook, N. Y. Capital $10,000. Incorporators: F. C. Stegeman, C. Hufnagel, Jr., N. Gallo.

Newburgh Auto Light Co., Newburgh, N. Y. Capital $100,000. Incorporators: H. Grenis, G. J. Wohltman, D. Grenis.

Cross Roads Garage, Roslyn, N. Y. Capital $25,000. Incorporators: C. H. Hechler, E. Anderson.

DELAWARE.—American Filling Stations, Dover, Del. Capital $100,000.—Diver & Reed, Dover, Del. To deal in automobiles. Capital $50,000. Incorporators: Frank W. Diver, Grandon C. Reed, Henry R. Isaacs.—J. G. Still Co., Dover, Del. To manufacture and deal in motors, automobiles and trucks and their accessories. Capital $100,000.

Weaver Motor Co., Dover, Del. To manufacture and deal in automobiles, motors, and trucks. Capital $100,000.—Windsor Motor Stabilizer Corp., Dover, Del. To manufacture motors, etc. Capital $100,000.

Eastern Auto Products Corp., Wilmington, Del. To manufacture spark plugs and all supplies used in connection with the manufacture of automobiles and cars. Capital $750,000.—Lewis Automobile Co., Inc., Wilmington, Del. To manufacture and sell automobiles. Capital $100,000.—Sharp Rim Corp., Wilmington, Del. To manufacture and deal in rims to be used on automobiles, trucks, tillers, tractors and other vehicles. Capital $250,000.

United Lunch Wagons, Inc., Wilmington, Del. To acquire and dispose of automobiles, trucks, wagons, tractors, etc. Capital $100,000.—Wright Ordnance & Automobile Co., Wilmington, Del. Capital $1,000,000.

MASSACHUSETTS.—Springfield Commercial Body Co., Springfield, Mass. To deal in automobile bodies. Capital $200,000.

CONNECTICUT.—Connecticut Automobile Sales Co., New Haven, Conn. Capital $100,000.

FLORIDA.—Tampa Cadillac Co., Tampa, Fla. To establish a distributing agency for the Cadillac line of cars. Capital $50,000.

ALABAMA.—Modern Truck Manufacturing Co., Mobile, Ala. To establish machine shops for the manufacture of truck parts. Capital $50,000.

TENNESSEE.—Chevrolet - Nashville Co., Nashville, Tenn. To distribute the Chevrolet in Nashville territory. Capital $50,000. Incorporators: A. W. Davis, H. A. Batchelor, Carroll Strohm.

OHIO.—Morgan & Hathaway Motor Co., Cincinnati, O. Capital $50,000. Incorporators: William Morgan, William E. Karnes, E. M. Hathaway, Evans Burbank, Harry B. Miller.

Vim Sales & Service Co., Cleveland, O. To operate a sales agency and service station for trucks, tractors and passenger cars. Capital $10,000.

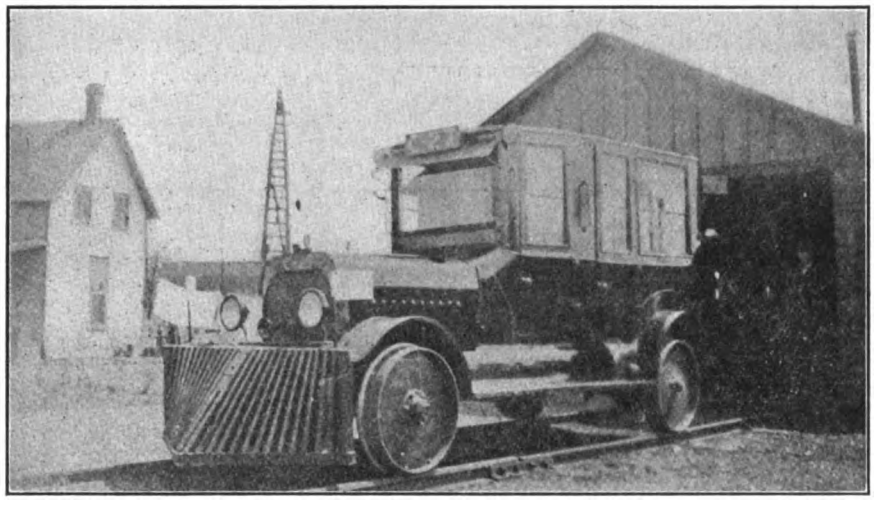
Mansfield Chevrolet Sales Co., Mansfield, O. Capital $25,000. Incorporators: T. J. Chamberlain, Herman W. Wentz, R. E. Hutchinson.

Reinhart-Roberts Auto Sales Co., Toledo, O. Capital $10,000. Incorporators: George M. Reinhart, Maude Reinhart.—W. H. Upp Motor Co., Toledo, O. Capital $30,000. Incorporators: Walter E. Phelps, R. G. Corwin.

ILLINOIS.—Lightning Sparker Mfg. Co., Chicago, Ill. To manufacture spark and ignition devices for cars, etc. Capital $100,000.—R. & S. Service Co., Inc., Chicago, Ill. To manufacture and deal in automobiles, trucks, accessories, etc. Capital $3,000. Incorporators: Frank Noblick, G. Souhrada, William A. Spanier.—Universal Taxi Service Corp., Chicago, Ill. To deal in accessories, lubricants, etc. Capital $150,000. Incorporators: Walter Heggem, Henry L. Schroeder, William Wyers.

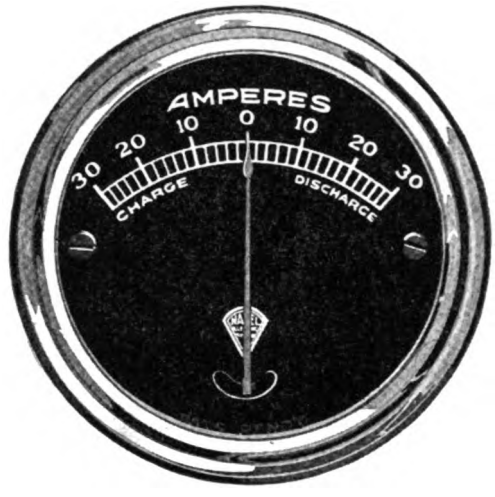
North Shore Garage, Inc., Evanston, Ill. To engage in a general garage business. Capital $10,000. Incorporators: W. Lister, W. Cocroft, Elsie Cocroft.

Driven Ninety Thousand Miles and Still Running



AFTER being driven 10,000 miles by its first owner and 80,000 by its second, the Buick sedan pictured has been converted into a private railroad car. The wheels were removed and disc wheels, similar to regulation locomotive wheels, with rims which just fit the rails, added. A cowcatcher and special radiator shell and hood were installed and a top, constructed mostly of glass with special ventilation holes, was built over the usual Buick body

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THREE MILLION

Recognized by automotive engineers as the best indicator of battery and generator performance, the Nagel Ammeter is now standard equipment on more than fifty well-known makes of motor cars and trucks. The total number of Nagel Ammeters that have been installed is over three millions.

NAGEL
AMMETER
THE W.G.NAGEL ELECTRIC CO.
TOLEDO OHIO

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CALENDAR

Berlin, Germany, Sept. 25-Oct. 3.—Automobile Show, auspices of the German Automobile Manufacturers' Assn., Kaiserdamm Hall.

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Rochester, N. Y., Oct. 2.—Society of Automotive Engineers, joint meeting of Electrical Equipment Division, Standards Committee, with Automotive Electric Assn.

Detroit, Mich., Oct. 2-7.—Fourth International Steel Exposition and Convention of the American Society for Steel Treating and the American Drop Forging Institute, General Motors Building.

Ventura, Cal., Oct. 4-8.—Automobile Show, in connection with the Ventura County Fair, Automobile Exhibition Tent, Fair Grounds; Paul Hutchinson, manager.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

Dallas, Tex., Oct. 6-16.—State Fair.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention, National Farm Equipment Manufacturers.

Akron, O., Oct. 18-21.—Open Air Automobile Exhibit, auspices Akron Motor Vehicle Assn., East Market Street.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Los Angeles, Cal., November.—Tent Show, auspices of the Motor Car Dealers' Assn. of Los Angeles.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

NEW YORK, N. Y., JAN. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

CHICAGO, ILL., JAN. 27-FEB. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Assn.; C. E. Holgate, manager.

Boston, Mass., Mar. 10-17.—Passenger Car, Truck and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

FOREIGN TRADE OPPORTUNITIES

Reserved information may be obtained from the Bureau and its district and cooperative officers by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Iuquiries should be addressed to the Bureau of Foreign and Domestic Commerce, Washington, D. C., or to any of its following branch or cooperating offices: New York, 734 Customhouse; Boston, 1801 Customhouse; Chicago, 1424 First National Bank Building; St. Louis, 402 Third National Bank Building; New Orleans, 214 Customhouse; San Francisco, 307 Customhouse; Seattle, 848 Henry Building; Baltimore, Export and Import Board of Trade; Cleveland, Chamber of Commerce; Chattanooga, Foreign Trade Secretary, Southern Railway System; Cincinnati, Chamber of Commerce; Los Angeles, Chamber of Commerce; Philadelphia, Chamber of Commerce; Portland, Ore., Chamber of Commerce; Dayton, Chamber of Commerce; Pittsburgh, Chamber of Commerce.

Automobile tires and accessories—South Africa. Purchase desired. Quotation, f. o. b. New York. File 3632.

Veneer polish for cleaning and polishing automobiles, with special spray for applying — England. Purchase desired. Quotations, c. i. f. Liverpool. File 3621.

Marine motors, automobiles and accessories, and gas oil for motors—Spain. Agency desired. Quotations, c. i. f. Corunna. File 3620.

Automobiles and accessories—Sweden. Purchase and agencies desired. Quotations, c. i. f. Goteborg or f. o. b. New York. Terms, payment against documents or by letter of credit in New York. File 3668.

Bicycles and accessories, including tires—China. Purchase desired. Quotations, c. i. f. Antung. Catalogues and prices are requested. Terms, cash. File 3704.

Motor cars, motor lorries, tractors, drills and tools, electric plants, machinery, and any lines required by the Government or general merchants—South Africa. File 3673.

Automobiles, steel hardware, etc.—Hungary. Agency desired. Quotations, c. i. f. Budapest if possible, or Hamburg. File 3619.

Automobile accessories, industrial supplies, etc.—Canary Islands. Representation of export houses desired. Quotations, c. i. f. Santa Cruz. Terms, cash against documents. File 3636.

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More and more manufacturers of leading motor cars are using the famous black tread Ajax Cord tires as original equipment. Thousands and thousands of new customers are being made, therefore, for Ajax dealers.

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AJAX RUBBER COMPANY, INC.

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PUBLISHER'S OBSERVATIONS

HIGH WAGES MAKE MARKETS

SIX months' good business, six months' hot competition, then six other months of rising labor costs and labor troubles leading into a secondary inflation. This is the forecast of Edward S. Jordan, who is quoted in the week's news to that effect. Jordan is a close observer and a careful reasoner, who chooses his words wisely. Therefore many of his published utterances are worthy of consideration, but this more so than some others, especially the last point he makes.

¶ Panic over "unemployment," plus homage to the vote of the wage earner, led a not allwise Congress to place certain restrictions upon immigration. The provision seemed to many to be justifiable at the time, and despite the strange and often tragic effects of it upon individuals, many still approve. But its influence upon the Country at large is destined to be far reaching.

The present control of the foreign influx ought to teach America to think about its future. It ought, above all else, to teach the employer to think about his future. For the great contest is not between native and foreign labor, nor between capital and labor, but between labor and mechanism.

¶ The greatest need of the moment is for more machinery and machinery of new kinds, in order that common labor may be minimized and in order that high wages may be justified by the fruits of what is still labor, though it may be skilled, instead of unskilled. This is something Congress could not perceive.

The United States is all set for a continuance of high wages and a continuance—partly in consequence thereof and partly through habitual extravagance—of high prices. Organized labor is active and powerful, though less robust than it was a few months back. But labor is not the actuating cause, it is not even the mainspring of the movement. Labor is merely capitalizing the demand for high wages; the thing that causes that demand is the urge toward equivalency—if you want to give it a new name.

That which is really responsible, and which constitutes the real problem of the Country's future, is the stepchild of freedom and equality. You and I are as good as the next one, and therefore we want as many possessions as the next one has.

¶ Every family wants a phonograph and an automobile. The children, going to school, must be well dressed. The workers in the stores, offices and shops are the aptest followers of fashion. Advertising has accomplished wonders in making markets for branded products, and readymade food has become as much a matter of course as readymade clothing.

But all these improvements cost money. Can the worker live on lower wages? Say, rather, if the worker's wages were reduced, what would become of the vast market that has been built up around him? The rich can stand reverses, but never the poor, meaning those who cheerfully and consistently spend as much as they can lay their hands on. These would rather starve than work for less, because they have become habituated to what may seem extravagance, but is actually the weedy overgrowth of that honest but dangerous germ, the idea that all men are equal.

¶ Jordan speaks of the lack of men due to curtailed immigration and also of "the disinclination of the sons and daughters of men who immigrated to this Country during the last 25 years to do ordinary labor." That is a grave and very true observation. But what of the sons and daughters of Americans who scorn to work with their hands?

Immigration must be controlled, if for no other reason than because the too rapid absorption of foreign blood tends to political turbulence and breeds disrespect for law and order. Immigration must be controlled, if for no other reason than that the importation of common labor to work at wages on which native labor would not exist is productive of many serious problems and tends toward national degradation. But if so, what then?

Higher wages for common labor carry upward the pay of skilled and trained workers. The general drift toward inflation is apparent and seemingly incurable. If the wide domestic market for American manufactures is to be preserved, then wage earners must be encouraged to live well and they must be paid well enough to satisfy the tastes that are bred in them by every manufacturer having goods to sell.

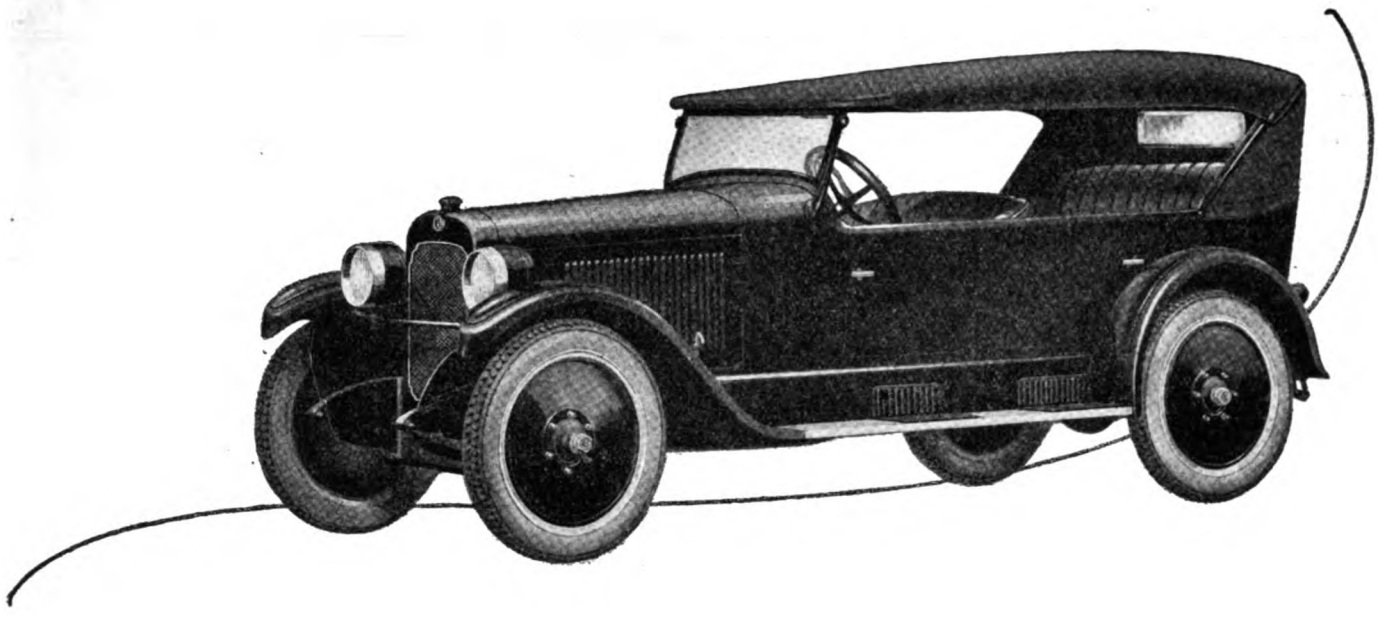
¶ The problem is economic. So is its solution. Goods must be produced more cheaply by reducing labor costs, but not the laborer's pay.

Quantity production, wider standardization of products and elimination of needless varieties. This seems to be the starting point. Reduced costs of doing business, avoidance of duplication and waste. These should follow.

¶ This is neither to question nor argue whether or when another period of inflation may be coming. It will come sooner or later, as will another period of depression, and still others after that. But is it not wise to take note of the fact that contractions affecting the payroll affect the community as a whole; that it is as bad for the village, the town, the city or the industry to pay its help too little—in terms of living standards—as it would be to pay too much?

In the one case there is incitement to extravagance and discouragement of industry through fostering love of ease. But in the other case there is direct curtailment of buying and discouragement of heart through worry over money. Both are bad and the wise employer chooses the middle ground where the payroll is concerned and concentrates on getting more work out of his equipment.

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Those who make careful comparisons find it necessary to go hundreds of dollars higher in price to find a car that even approaches the Chalmers Six in beauty and fine performance.

For the Chalmers Six was designed and is produced with the very definite purpose of meeting the need for fine motoring at reasonable cost.

Chalmers Six Prices

5-Passenger Touring Car, $1185 *Roadster, $1185*
7-Passenger Touring Car, $1345 *Coupe, $1595*

Prices f. o. b. Detroit. Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada, Limited, Windsor, Ontario

The CHALMERS SIX

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In Jamaica, N. Y.—

"We formerly handled no less than five different makes of automobiles—all standard makes—and can honestly say that we never knew what real business was until we took on the Olds line one year ago last January. And this considering we handled the other cars during what was conceded to be the best period—1918 to 1920. One reason that we have made some real money is the fact that it has been necessary to give so little service on Oldsmobile cars in general—for instance on the Model 47 it is not worth while mentioning. Long live the Oldsmobile!"

—SCHMIDT & KASTNER MOTOR CO.
R. Schmidt

Can you say the same thing about the line you handle? Do you feel that you've made a friend with every car you sell?

And do your customers stay sold without a lot of gratis service? Is your present connection a happy one? Are you proud of it?

It's a good thing occasionally to take an inventory of your contract just as you take a periodic inventory of your parts department. If the count isn't satisfactory it's time to look around.

Be an Oldsmobile dealer and you have a complete line of famous cars with a wide price range, with one factory connection, one deposit, one parts account, one advertising message, and with the privilege of using the strong General Motors financing plan which has no equal in the help and cooperation given the dealer.

If you want this kind of a factory contract, communicate with us at once—don't hesitate because you think the territory may not be open. We may have plans which will give you just the opening you want.

The first step is yours—write, wire, or phone.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation



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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												**FOUR-CYLINDER PASSENGER CARS**																(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter-Dem.Wheels	3¾x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	H	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2		760§	4				3⅝x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680§	2	860	5	C	3 7/16x4	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5		3⅝x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980§	2	1,440	5	C, K, N, P	3 7/16x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3 9/16x4¼	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3 7/16x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,095‡	5	1,385	5	B	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	1,235	4	1,335	5	C, D, K, P, T	3⅝x4½	Own	L	H	T	...	Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3 7/16x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D, H	895	2	C, D, H	1,095§	2	1,345	5	C, D, H	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5		3⅜x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5		1,075	4	C, D, M, P, Z	1,375§	5	1,595	5	P, V	3 7/16x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	Own	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5		985	2		1,400	3	1,450	5		3½x5	Gry	H	H	T	...	Soo	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5		1,155	5				1,450	5		3½x5	Gry	H	H	T	...	Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, O	1,095	4	D, E, G, O	1,395	3	1,395	5	D, G, N, O, V	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, D, H				1,245§	5				3½x5	Own	N	H	T	S	Own	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Cor	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3 1/16x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C,D,H,N,O,P,T,U,b	3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, O, N, P, V	3¼x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	5		1,795	4	1,795	5		3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B	1,235	2	B	1,795	4	1,950	5	B	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,475	7	B						2,195	7	B	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3⅜x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T	...		Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5½	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4			B, D, H, J, L, O, U	4½x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T	...	Til	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800	...	4,000	...		3¾x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "475-E"	3,485	4	A, D, G, J, L, Z	3,785	2	A, D, G, J, L, Z			4,650	4		4½x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "475-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	5,250	7	B, G, 2I, L	3¾x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
Brewster	5,000	5	G	5,000	2				7,000	5	G	4x5½	Own	S	C	P	...	Str	Ber	USI.	Own	Own	Own	L	4.25	34x4½	125	Brewster
												SIX-CYLINDER PASSENGER CARS																
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	1,550	5	B, D, C, G	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4½	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4½	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, V	3½x5	Own	L	H	P	...	Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2 15/16x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3 1/16x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4½	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1,185	2	C, K, P	1,595	4				3½x4½	Own	L	C	T	...	Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P				1,450§	4				3½x4¼	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	3	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3⅜x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R	1,395	4	R			2,040	5	D, R, V	3½x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G	1,250	2	B, C, D, G	1,875	4	2,050	5	B, D, G, S	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3½x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z						1,795	5	E, O	3½x4¼	Con	L	C	P	...	Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

(SEE FOOTNOTES)

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Elgin "K-1"	$1,295	5	C, D	$1,345	4	C, D, H, K, Z	$1,695	4	$1,695	5	C, H, N	3½x4¼	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Moon "6-40"	1,295	5	B				1,595	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	D, H, P, Z						1,850	5	D, H, P, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B		Col	S		32x4	118	Barley
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, P, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3¼x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, H, K, O, T, Z	1,695§	2	2,095	5	C, D, H, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	34x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3⅝x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, O	1,895	4	D, E, G, J, K, O, W	2,275	4	2,345	5	D, O	3⅝x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3⅝x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	2,355	4	2,435	5	B, G	3⅛x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5					1,885	4	1,985	5		3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3⅝x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O, P	1,545	2	D, G, H, K¹, O, P	2,095§	3	2,395	5	D, G, H, K¹, O, P, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3⅛x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, D, H	1,525	4	B, D, H	1,625§	5	2,295	7	B, D, H, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Davis "61"	1,595	5		1,695	4		2,095	4				3⅝x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3⅛x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3⅝x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6	A	1,595	4		2,450	4	2,550	7	A	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.11	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, O, S	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K¹, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅝x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y Z	2,145§	5	2,545	5	U	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B, Z	1,885	5	B, X, Z			2,485	7	B, N, U, V	3⅝x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3⅝x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,485	5	2,485	5	B, D, Z	3¼x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅝x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Y b	1,895	2	F H 2I 2J K R T V W X Y	2,195	3	2,695	5	F H 2I 2J K R T V X Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5		2,150	2		2,800	4	2,950	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Col	S	4.5	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3⅝x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3¼x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5⅛	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Roamer "9-N"	2,485	4	A, G, H, L, J, Z	2,750	4	A, G, H, J, L, Z	3,585	4	4,250	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "9-N"
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3¼x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, O, M						3,525	7		3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3⅝x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**SIX-CYLINDER PASSENGER CARS—Continued**																											(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X	.....	...	$3,795	4	A C F G H J K O P T X	3½x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5	.....	2,975	2	.....	.....	...	4,500	5	.....	3½x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5⅛	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6	.....	3,100	4	.....	.....	...	5,500	5	.....	3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, O	3,300	4	A, B, C, D, G, L, O, X, Y	4,300	4	5,100	7	A, B, D, G, N, O	3⅝x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	33x5	132	Winton "40"
Ogren	3,750	5	.....	3,750	4	.....	4,500	4	4,800	5	.....	3½x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	.....	3,800	4	.....	4,600	4	4,800	7	.....	3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z	.....	...	.....	4,900	3	4,900	5	A C D G H J M O T Z	3½x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y	.....	...	6,500	5	A, G, H, O	3½x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5	.....	.....	...	.....	.....	...	6,825	7	.....	3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M O Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4	.....	.....	...	8,900	7	.....	4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X	.....	...	11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	...	B&B	Ber	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	10,900	2	.....	.....	...	12,900	7	.....	4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
	EIGHT-CYLINDER PASSENGER CARS																											
Oldsmobile "47"	1,375	5	C, D, O, P, T	1,675	4	F H K O P Q T W Z b	1,875	4	2,025	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	Own	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P	.....	...	2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	W-M	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, V, Z	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G	2,395	4	A, D, G	2,750	4	3,200	7	A, D, G	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, G	2,620	4	.....	3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A, B, G, M, N, O, X	2,685	4	A, B, G, M, N, O, X	3,385	4	3,685	7	A, B, G, M, N, O, X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.45	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3¼x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5⅛	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,090	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2	.....	5,350	4	6,000	...	.....	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	.....	6,500	4	.....	7,800	4	7,800	7	.....	2⅞x5	Own	H	V	P	...	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
	TWELVE-CYLINDER PASSENGER CARS																											
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

† TWO-DOOR CLOSED TYPE: Regular coupe listed except where low-priced two-door closed model is included in line. Latter is distinguishable by symbol §. **‡ Four-Door.**

ENGINE: **Ans**—Ansted; **Con**—Continental; **Dus**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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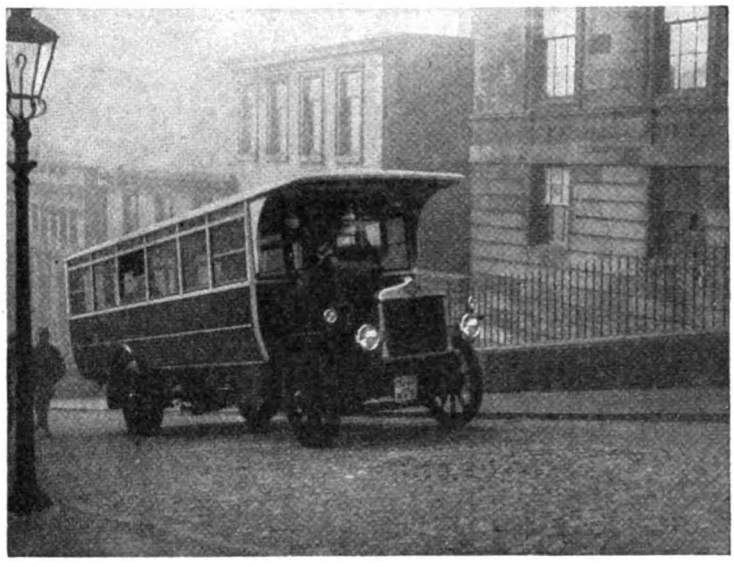
TIMKEN
Tapered
ROLLER BEARINGS

The A. E. C. bus shown here negotiating the stiff Scott Street Hill, in Glasgow, is Timken-equipped throughout the wheels



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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and in Glasgow, Scotland

The A. E. C. 38-passenger single deck bus shown herewith — produced by the Associated Equipment Co., Ltd., of Walthamstow, London — has a splendid reputation for efficiency and economy, both in Great Britain and on the Continent. In fact, it is admittedly one of the most advanced types of busses in operation.

It is, therefore, gratifying to The Timken Roller Bearing Company to know that the "Builders of London's Busses" have not only extensively used Timken Tapered Roller Bearings for years in these 4½-ton jobs, but that Timken Bearings are the only part specifically named in their catalog.

The Timken Roller Bearing Co
CANTON, OHIO

Timken Tapered Roller Bearings are manufactured and distributed through Great Britain, Europe, and Asia by British Timken, Ltd., Birmingham, England, and Societe Mecanique de Gennevilliers, Paris, France

TIMKEN
Tapered
ROLLER BEARINGS

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TIRES
TUBES

Not for everybody

'WAY back before the automobile was developed the makers of G & J Tires knew they couldn't please every tire user.

So they concentrated on the class of men who wanted a little better value than the average—

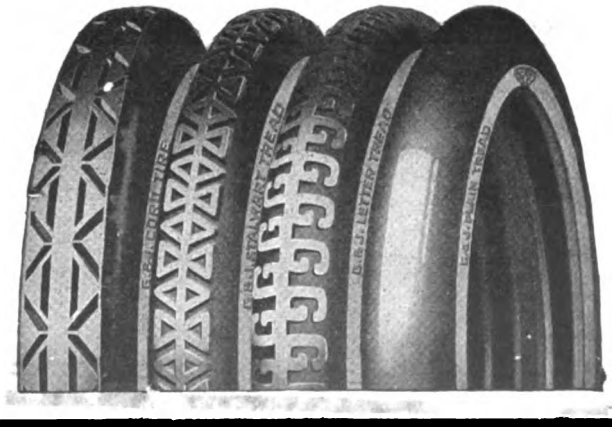
Who didn't haggle over a reasonable price but who were cranks for quality—

Who came back to the brand that gave them a generous money's worth and to the dealer who handled it.

Not much wonder that G & J Dealers have been able to count on a steady and growing tire business from year to year.

G & J TIRE COMPANY

1790 Broadway New York

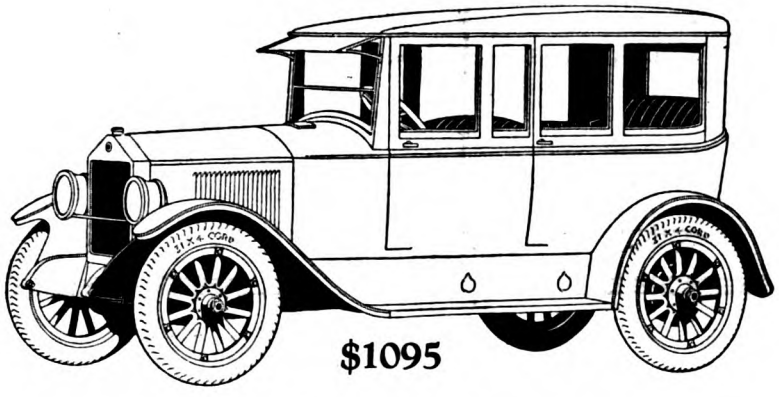


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DORT

Quality Goes Clear Through

The most positive and outspoken evidence of the great value of this Dort Yale Sedan is found in its brilliant record of success. During the nine months following its introduction in January, the demand for this car has broken all records established in the many years of successful Dort manufacture. Despite a tremendous increase in production sales continue to outdistance output.



$1095

Six models from $885 to $1385; Light delivery car, $825; at Flint

Dort Motor Car Company, Flint

(1448)

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Did You Know

The Parts Makers' Vital Relation

Eleven manufacturers supply 44 makers of automobiles with engines for 51 different models.

Eleven other specialists supply 73 makers with clutches for 89 models.

Ten builders of axles supply 74 manufacturers with equipment for 84 models.

This statement demonstrates the vital relation of the parts maker to the automobile industry as a whole. It also demonstrates the usefulness of

AUTOMOBILE TOPICS
Table of Passenger Car Selling Points
(Copyrighted)

The facts were obtained by making a simple count of 3 columns in the table.

There are 27 columns of information capable of being similarly compared.

The table appears on page 667 of this issue. It is revised to date from information supplied directly by the manufacturers. Every issue is printed from new plates to ensure legibility.

AUTOMOBILE TOPICS
The Trade Authority
1790 Broadway **New York City**

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Rickenbacker

A CAR WORTHY OF ITS NAME

120 cars in 6 months

That's what the York Motor Sales Company of Buffalo have accomplished with this great car.

240 cars in 5 months

is the astonishing record of Leon T. Shettler—Los Angeles.

125 cars in 5 months

That's Don Hogan's record in Denver.

There are scores of others. Why shouldn't you be doing likewise?

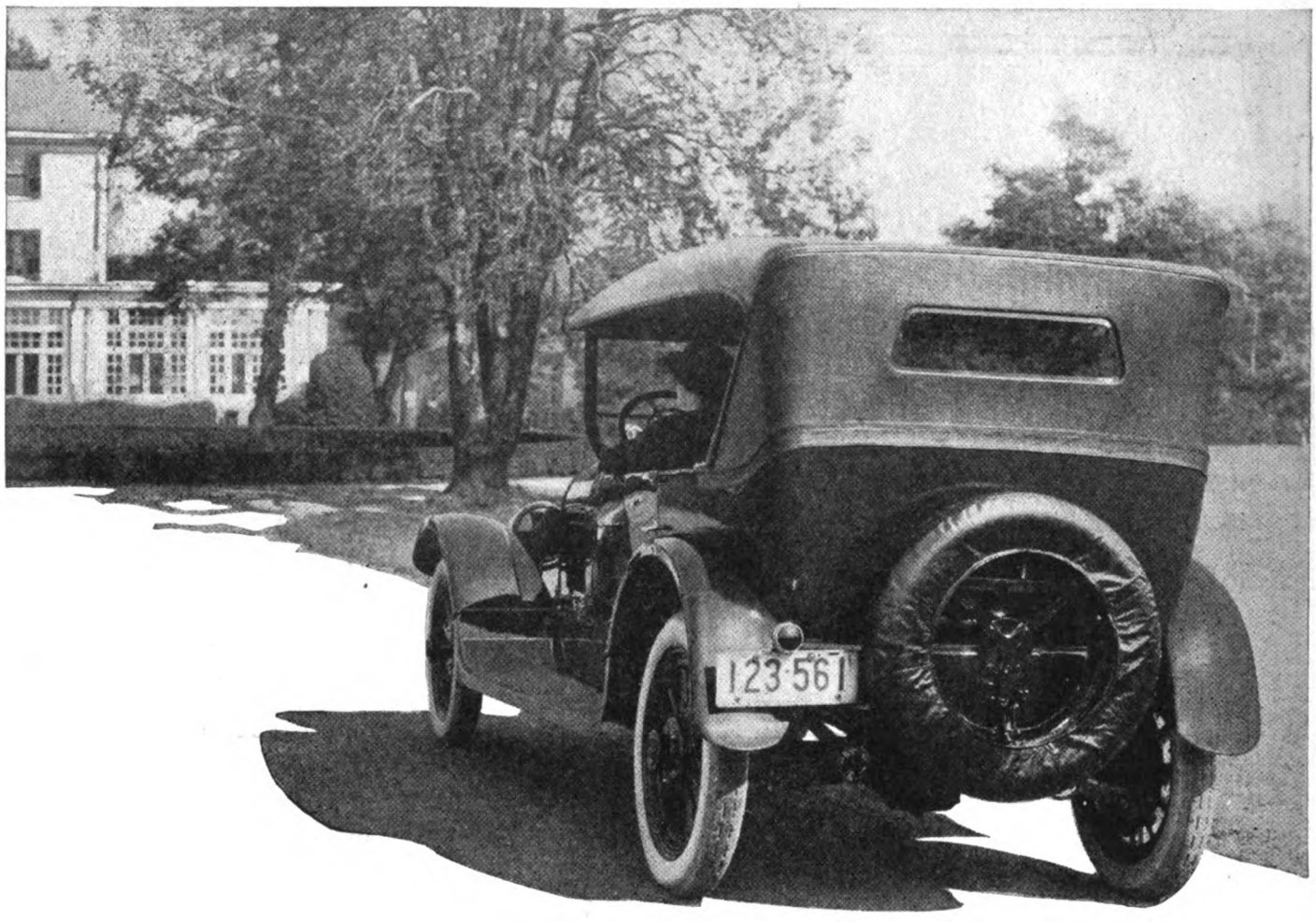
Write us for full particulars concerning the fastest selling quality car in America.

Rickenbacker Motor Company
Detroit Michigan



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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"Good-looking from every angle"

THE modern automobile top is a work of art. It must be designed and cut more carefully than a fine suit of clothing. In finish and workmanship, it requires the best.

Neverleek Top Material has made possible the smart tops that distinguish good cars to-day. Neverleek was the first material made especially for top purposes. Its quality has never been approached by any of its imitators.

Style and beauty are the dominant selling arguments of the year. Neverleek, with its proved durability and lasting richness, is the natural choice for cars that are built and sold with pride.

Samples and full information will be furnished promptly on request.

F. S. CARR COMPANY, 31 Beach Street, Boston, Mass.

DETROIT ST. LOUIS CHICAGO ATLANTA

NEVERLEEK

TOP MATERIAL

Trade Mark Reg. U. S. Pat. Off.

Predominates

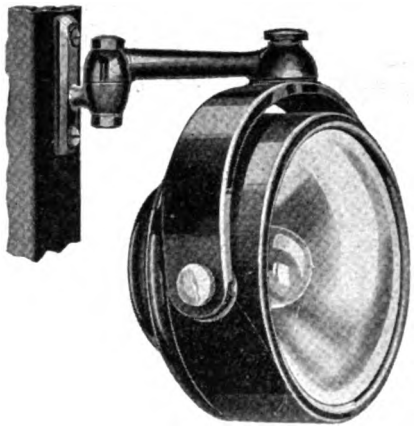
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Stewart Searchlights Priced to Increase Dealer's Sales

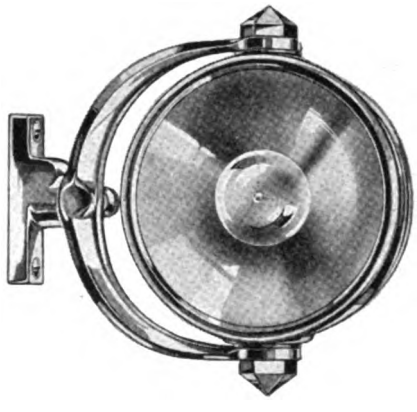


This is the ideal model for the low priced car. It is nicely finished in black enamel with silvered reflector. The "on and off" switch mounts on instrument board.

For open or closed cars, with mirror attached, $6.00—without mirror, $5.00.



A very popular model for medium priced cars. An attractive, well-balanced design. Finished in rust-proof black enamel. The rear vision mirror is a useful feature. Dash board switch for open or closed cars. $7.50.



This miniature De Luxe model is but four inches in diameter. A more beautiful, efficient and handy a light has never been designed. Although suitable for any car, it is particularly attractive on sport models or special body designs. Rear vision mirror and dash board switch included, $12.00.

THE dealer who handles Stewart Searchlights has a model for the man with the over-flowing purse or for the car owner whose means are limited. He loses no sales because of being unable to satisfy the customer as to price. And there are three distinct types from which a buyer

All Stewart Searchlights are so constructed that the light-ray may be easily thrown in any direction. The roughest roads fail to jar the light out of the position in which it is set.

Increase your Fall business by displaying this attractive line of quality products.

Stewart-Warner Speedometer Corporation
CHICAGO, ILL., U. S. A.

Stewart

PRODUCTS
USED ON 7 MILLION CARS

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Of course!! it sells!!

That's a bethlehem *specialty*



"A whole tool-kit all by itself!"

THIS staunch hexagon handle of high-carbon steel, cyanide-hardened and tremendously tough, gives gigantic leverage. Either end fits all sockets that come with the QUICK-WAY kit. Sockets, turned on screw-machine from special steel, are cyanide-hardened, and tapered inside so nuts seat perfectly yet simply will NOT bind.

PRACTICAL to the last degree. And packed in the sort of neat, compact, durable case the motorist appreciates. A seller, gentlemen all! A sure-enough seller.

THIS is the THIRD of the Bethlehem Betterments which forecast a winning line of sellers from this plant. Heavily advertised now for the trade's benefit. Dealers who have trouble getting these sellers from their jobbers will be wise to write us direct for quick action.

Bethlehem Spark Plug Co., Inc.
Bethlehem, Pa.



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Five years from now what car will you be handling? A volume car with a short margin and high pressure? Or a car of limited production with low servicing cost, steady market and larger profit per car?

You can handle the H. C. S. line with less capital, make more on the same or less amount of money, operate on a conservative overhead and do business with less worry and at more profit.

In the five years to come the H. C. S. is one of a few accounts that will be prized more and more.

Correspondence invited.

H. C. S. Motor Car Company

INDIANAPOLIS, U. S. A.

Make this Your Personal Car

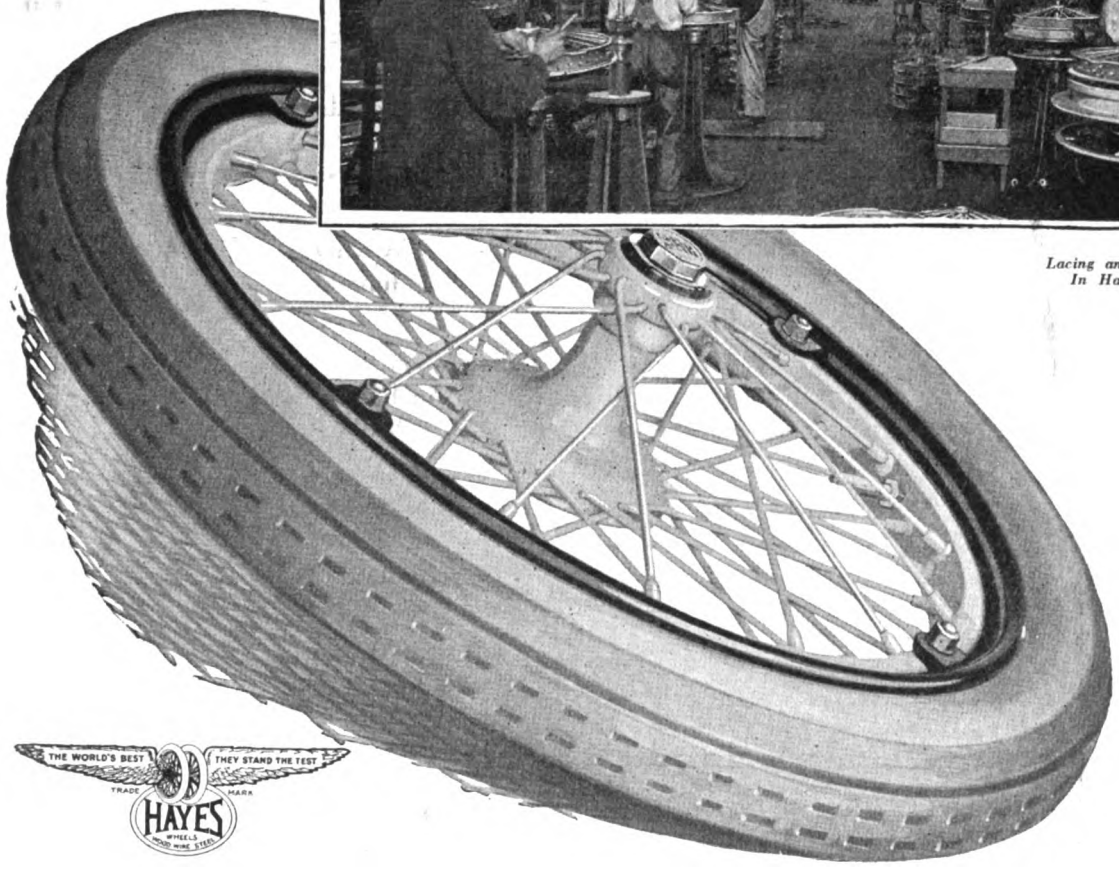
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HAYES

DEMOUNTABLE AT THE RIM



Lacing and Tightening Spokes In Hayes Wire Wheels



FROM rough steel to finished product, not one operation on Hayes Demountable at the Rim Wire Wheels is performed by hand that can be done with equal or greater efficiency by labor-saving, automatic machinery. Where hand labor is required, it is performed by craftsmen who are unequalled in their knowledge of wheel building, while a rigid inspection system assures a truly faultless and flawless product. Every minute of time, every scrap of metal is utilized and conserved to the end that the manufacturer of motor cars can offer his customer the added inducement of Hayes Wire Wheels at the lowest possible price consistent with quality. Every resource of this organization is at the service of the automotive manufacturer in planning our product to meet efficiently his particular requirements.

(48)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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What builds this Kind of Loyalty in a Sales organization?

In a personal letter to me, a valued Stephens distributor raises a point I want to touch on before I step aside and let him and others like him tell you what they know about the Stephens Six, the men who make it and the profit possibilities in the Stephens franchise. He writes:

"I sometimes hear from competitors and other folks that the Stephens cars are not sold as widely in many districts as in our own.

"As you know, I am keen about the Stephens and you people at the factory, and it hurts my feelings when such remarks are made. Having the finest organization, the fairest dealer policies and the best car in its class, you should also have the best sales organization in the country."

With such loyalty inspiring distributors and dealers, the only way you can better a field organization is to enlarge it. Wherever we have territories open, that is what we are proceeding to do.

The Stephens idea has been to make haste slowly—to hold a territory open until we could put the interests of Stephens owners in the hands of a real automobile merchant—a business man of character, responsibility and vision beyond the current season.

We might have thrown together a selling force to give greater immediate volume—just as we might have run up production on an average car by assembling stock units and bodies. Instead, we have built a sales force as dependable as the Stephens Six itself. We are still actively building it.

Our distributors and dealers are prosperous. They have no distressing trade-in problems. Stephens re-sale values are high. Stephens owners drive their cars 60,000, 80,000, 100,000 miles, or more. When they buy again, they buy Stephens cars. In any community they form a dependable *repeat market* and an auxiliary sales force. If the Stephens is not represented in your city, let us send you a new catalogue of body types and our contract terms.

R. W. Lea

Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.

Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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SALESMANSHIP!

is more important to-day than at any time in the history of the automotive industry, and every automobile, truck and tractor dealer in the country needs this new and vital reading course in

Automotive Salesmanship

which has been prepared by some of the leading automotive executives in the country. It has been divided into three parts as follows:

PASSENGER AUTOMOBILES

Course Consists of Seven Books

The subjects discussed in this course include:

Simple mechanical definitions that salesmen should know.

Building methods of factories.

The various inspections each part receives.

Manufacturing procedure in motor car factories.

The work of the engineering department.

How the different assemblies are put together.

The natural laws in automobile salesmanship.

How to deal with competitors.

How to secure a prospect.

How to approach him after you have secured him.

How to interest the prospect.

The steps necessary in selling a car.

Face to face with the prospect.

The points you should emphasize.

What constitutes beauty, comfort, convenience, durability, style, easy riding, etc.

The woman in the case.

How to close a sale, etc., etc.

MECHANICAL TRACTORS

Course Consists of Five Books

The subjects discussed in this course include:

The history of the motor tractor. How it is constructed. Mechanical terms every tractor salesman should know. The different tasks the tractor will perform on the farm. The number of tractors in use in the United States. A survey of the future market. The average life of a tractor.

How to determine the relative values and capabilities of the various makes of tractors on the market.

How to demonstrate a tractor. Five important features to emphasize during a demonstration. The various grades of farm soil and how they are classified.

The Science of Scientific Farming.
Finding the tractor market.
The value of sales vision.
The banker and how he aids in tractor promotion work.
How to approach the farmer.
Handling the question of price.
How to figure horse power.
What draw-bar pull means.
Figuring the cost of farm labor.
The number of acres of hay and grain the horse consumes yearly in the United States.
The year-'round utility of the tractor.
When to close a sale. And how.
Procrastination and how to defeat it.
The use of sales letters.
The worth of "word of mouth" advertising.

MOTOR TRUCK

Course Consists of Eight Books

The subjects discussed in this course include:

The growth of the truck industry.
Truck salesmanship and its responsibilities.
The mechanical units of the motor truck.
The cost of motor compared with animal transportation.
The industrial value of the motor truck.
Its adoption for long distance transportation.
The potential market.
How retail truck business is conducted.
The dealer's relation to the manufacturer.
Retail store salesmanship.
The use of advertising literature in the store.
How to handle the man who comes in to "look around."
How to show a truck to a prospect advantageously.
How to draw out a prospect.
The point of contact.
The time for launching your sales talk.
Encouraging the prospect to ask questions.
Meeting the prospect on his own level.
How to explain the mechanical details of the truck. And when.
Meeting your prospect's arguments.
Using your competitor's claims for sales weapons.
Handling the question of price.
Closing the sale.
The matter of service.
Selling the man who is to drive the truck.
Keeping a prospect file.
How to discover valuable sales leads.
How to systematize your selling efforts.

The whole course of twenty booklets sent complete for $10.00. Parcel Post Paid

ORDER BLANK

.....192....

AUTOMOBILE TOPICS,
1790 Broadway, New York, N. Y.

Gentlemen:—I enclose $10.00 for which please send me prepaid:

....The combined course of twenty books covering passenger car, motor truck and tractor salesmanship.

Name .....

Street.....

City.....

R. F. D. No.....State.....

You Must Work as You Never Worked Before

Every live dealer in the country needs these books right now. Manufacturers need them. The average salesman is especially in need of this stimulating reading course. It is the first complete sales course to be offered to the automotive industry.

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Intensive Methods a Necessity

The use of broadside or shot-gun methods of advertising —skimming the surface—is wasteful and inefficient when contrasted with the intensive methods of Outdoor Advertising, in the development of a market.

We speak with assurance for the reason that we have seen with our own eyes, time after time, what can happen when excellent manufacturing and good selling is backed up by good advertising on carefully selected Painted Bulletins.

We have educated the masses—we have created a desire among them—we have changed the whole popular idea of a product by the Power of Suggestion.

More than that—we have increased the consumption of a product to quantities greater than the most enthusiastic advertiser had ever expected.

National Advertising through the medium of Painted Bulletins will make big strides forward during 1923.

And we are equipped to serve you from the Atlantic to the Pacific—we are prepared to render a service that a few years ago would have been beyond the bounds of possibilities.

Drop us a line and mention the market that interests you —and we will advise you how to follow the Road to Increased Sales without stepping beyond your appropriation.

OUT DOOR ADVERTISING EVERYWHERE

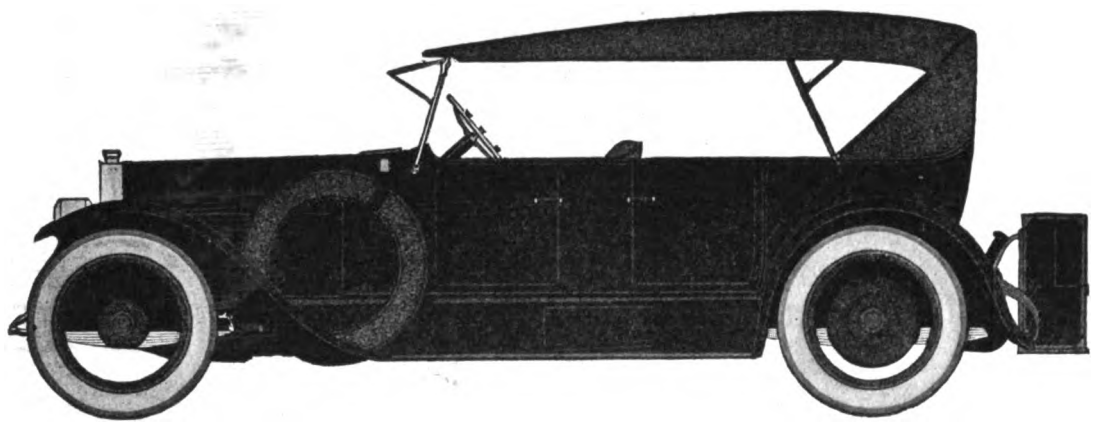
The O.J.Gude Co.,N.Y.

550 WEST 57th STREET

BRANCH OFFICES:—

Chicago
St. Louis
Cincinnati
Cleveland
Pittsburgh
Richmond
Atlanta
Akron
Philadelphia
Providence

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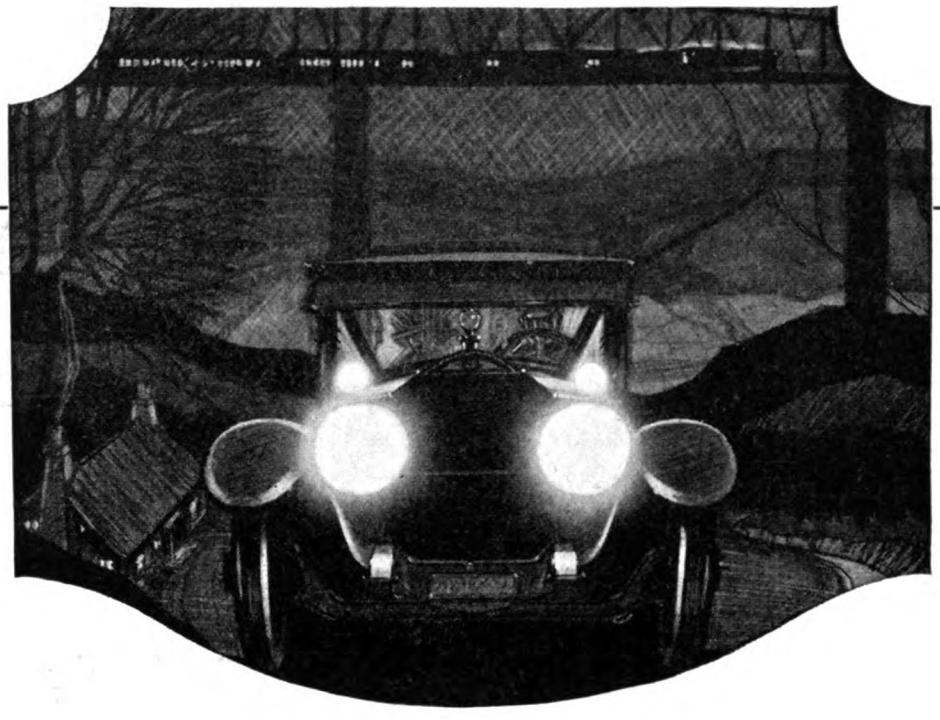
Seven-Passenger Custom-Body Touring $7,150

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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THE favorable impression of Westinghouse-built products has led users to expect more than ordinary quality or service from everything bearing the name. Westinghouse Batteries will not be permitted to disappoint them.

The car manufacturer or owner who wants the very finest battery Westinghouse can build, is offered the oversize *Westinghouse Standard* with unusual guarantee features.

For the lighter-weight cars—for the man who wants the lowest-priced *good* battery he can buy, Westinghouse makes the rubber-case *Westinghouse Wubco Special.*

And to the dealer or battery service operator who is impressed with the advantages an association with Westinghouse unquestionably carries, Westinghouse offers an attractive sales proposition.

WESTINGHOUSE UNION BATTERY CO.
Swissvale, Pa.

WESTINGHOUSE BATTERIES

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MERCER

Mercer is Going to Mean More than Ever to Dealers

YOU'VE heard about "psychological moments" and "getting in on the ground floor." Here is a tip from headquarters—Mercer is going to mean more than ever to dealers.

Responsible dealers who believe in the automobile business and not in the automobile "game" will be able to gain some very interesting news by approaching us sincerely on the subject of a Mercer agency.

MERCER MOTORS COMPANY
TRENTON, N. J.



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WIRE WHEELS

—and the advantages they provide for the car owner

When a car manufacturer designs a particularly smart model—something of a DeLuxe nature—he invariably equips it with Wire Wheels. Not only because Wire Wheels enhance the attractiveness and distinctiveness of the car, but because:

—they provide the utmost in easy-riding qualities and comfort for the passengers;

—they provide the motorist with a tire-changing convenience that makes motoring more enjoyable;

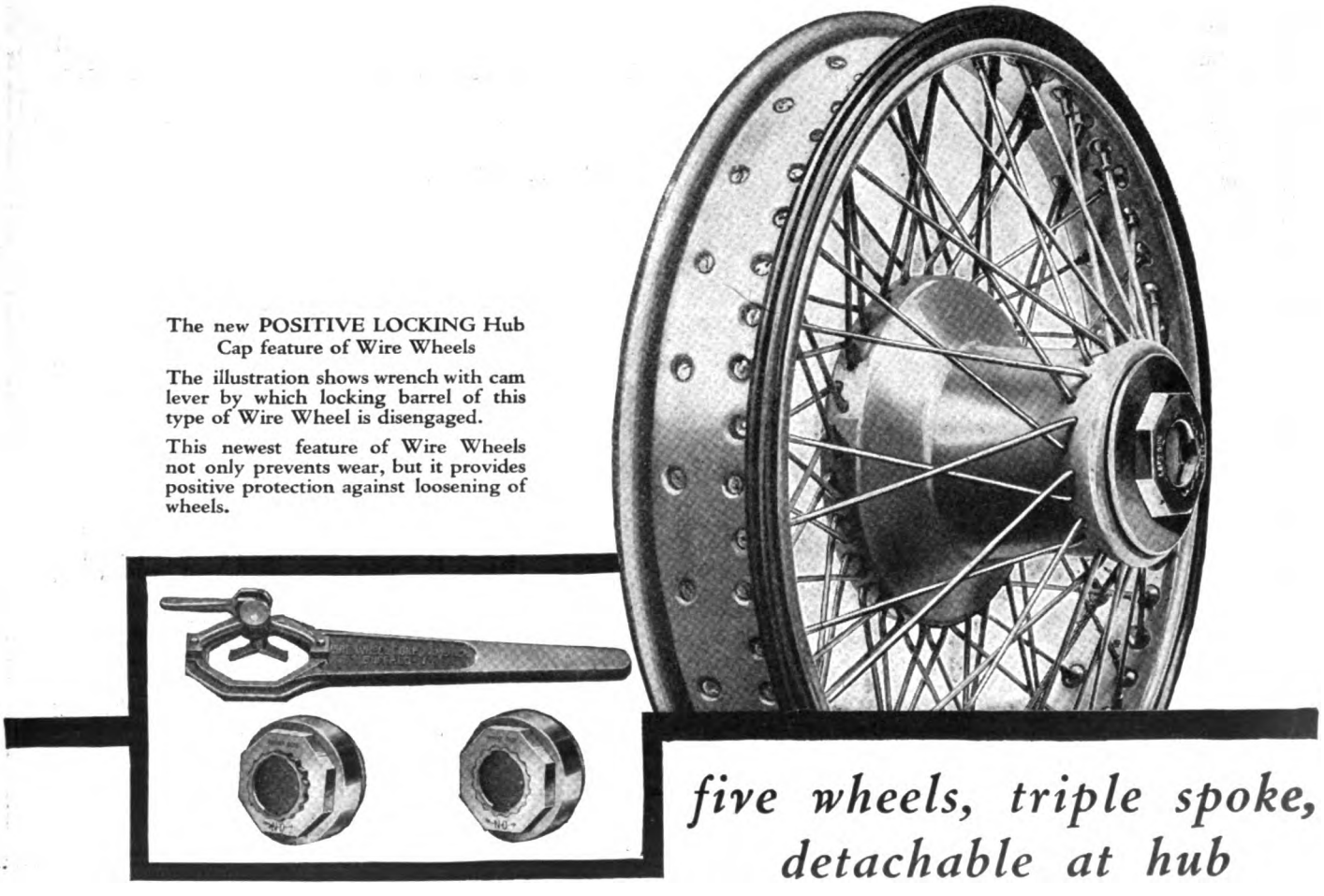
—they provide advantages that insure greater mileage from tires and, therein, save money for the car owner;

—they provide greater safety for the passengers by reason of the extreme strength of the triple rows of spokes.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:

New York—835 11th Ave. at 57th St.
Philadelphia—328 North Broad St.
Chicago—2900 So. Michigan Ave.
Detroit—433 Leland Street
Los Angeles—1216 S. Grand Ave.
San Francisco—1690 Pine St.



The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

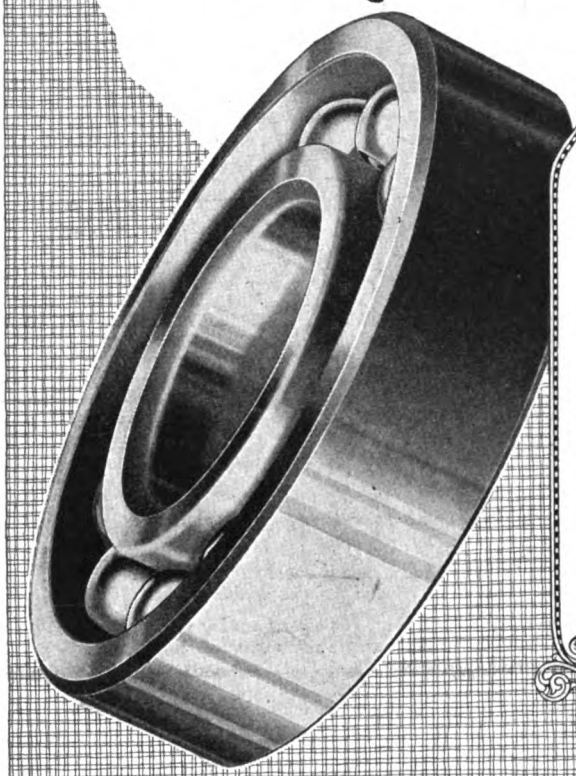
The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.

five wheels, triple spoke, detachable at hub

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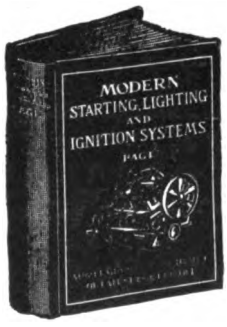
New Departure Ball Bearings



"TO make the best bearing humanly possible" has been the ideal of the officers and men of the New Departure Company for years.

To have grown from nothing to the largest maker of ball bearings in the world in the space of twelve years shows that those who buy and those who use believe we have attained that ideal. This growth is in the face of the fact that New Departures cost more to make than other types.

THE NEW DEPARTURE MFG. CO.
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BY VICTOR W. PAGE, M. E.

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THIS practical volume has been written with special reference to the requirements of the non-technical reader desiring easily understood explanatory matter relating to all types of automobile ignition, starting and lighting systems. It can be understood by any one, even without electrical knowledge because elementary electrical principles are considered before any attempt is made to discuss features of the various systems. These basic principles are clearly stated and illustrated with simple diagrams. ALL THE LEADING SYSTEMS OF STARTING, LIGHTING AND IGNITION HAVE BEEN DESCRIBED AND ILLUSTRATED WITH THE CO-OPERATION OF THE EXPERTS EMPLOYED BY THE MANUFACTURERS. WIRING DIAGRAMS ARE SHOWN IN BOTH TECHNICAL AND NON-TECHNICAL FORMS. ALL SYMBOLS ARE FULLY EXPLAINED. This is a book of REAL MERIT.

A COMPREHENSIVE REVIEW OF MODERN STARTING AND IGNITION SYSTEM PRACTICE. INCLUDES A COMPLETE EXPOSITION OF STORAGE BATTERY CONSTRUCTION, CARE AND REPAIR. Explains all types of starting motors—Generators—Magnetos and all ignition or lighting system units.—Considers the systems of cars in use.—A book everyone needs.

Nothing has been omitted, no details have been slighted. A book you cannot afford to be without.

CONDENSED SYNOPSIS OF CONTENTS:

1. Elementary Electricity, Current Production, Flow, Circuits, Measurement, Definitions, Magnetism, Battery Action, Generator Action. 2. Battery Ignition Systems. 3. Magneto Ignition Systems. 4. Elementary Exposition of Starting System Principles. 5. Typical Starting and Lighting Systems; Practical Application; Wiring Diagrams; Auto-Lite, Bijur, Delco, Dyneto-Entz, Gray and Davis, Remy, U. S. L., Westinghouse, Bosch, Genemotor, North-East, etc. 6. Locating and Repairing Troubles in Starting and Lighting Systems. 7. Auxiliary Electric Systems; Gear-Shifting by Electricity; Warning Signals; Electric Brake, Entz Transmission, etc.

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ONE DROP OF OIL MAY RUIN A SPARK PLUG!

Where there is excessive lubrication, a drop of relatively cold oil may be thrown on the heated end of the insulator. If it's an ordinary insulator, it will likely break or chip.

But, if it's the "775" insulator, it will carry on as if nothing had happened. "775's" are built to withstand such abuse. That's why they give far superior service. When you buy spark plugs look for "775" on the insulator.

"775"

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"Established 1910—Busy Ever Since"

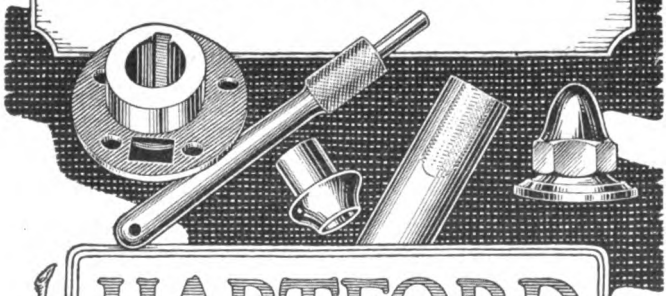
STANDS THE TEST

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ONE part may only cost four cents—but it may cost forty cents in labor and delay if it is not interchangeable.

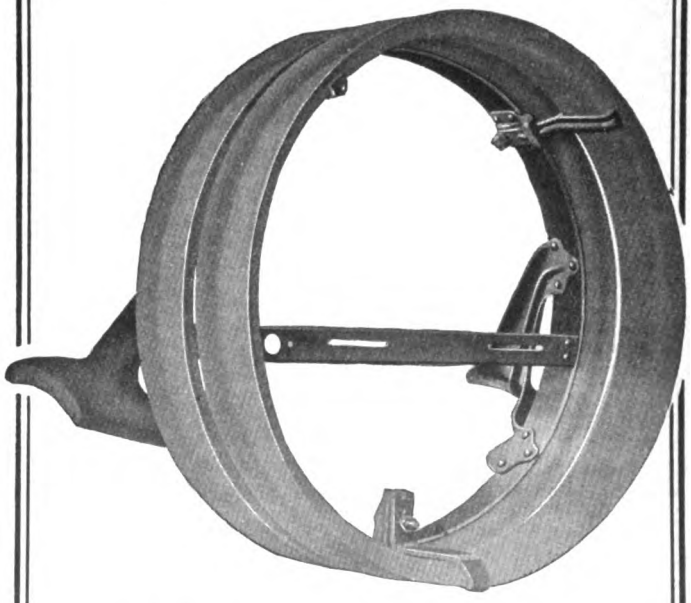
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Let us figure on your specifications.



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Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.

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100 tire beads cleaned in five minutes

THE beads are so clean that when the tires are moulded the rubber adheres to them without the use of cement, that was formerly necessary.

The beads are cleaned with Oakite, at a very low cost. Oakite not only does a better job, but saves a lot of time because it used to take a man 2 hours to clean 100 beads with benzol. Now it takes only 5 minutes with Oakite. You can imagine what a saving in labor costs this means on big production.

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Let's get together on your job. There is no obligation on your part in doing so. It is likely that out of our wide experience in cleaning all kinds of work that we can offer suggestions that will save money for you.

Write us a letter about the kind of work you clean and the sort of results you would like to have. Then we can get down to brass tacks and offer you suggestions about methods, materials and equipment for doing the work. This is a part of Oakite Service.

This Advertisement is one of a series based on actual occurrences.

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A-O-SMITH CORPORATION

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Refer your cam and accessory drive problems to Morse Engineers

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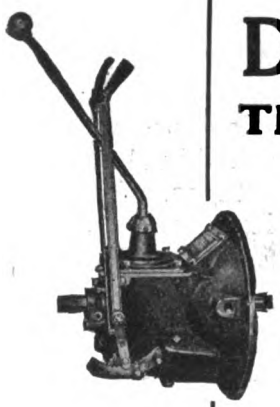
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Firestone Cord Tires are cured on air-bags. Internal expansion during this important operation aligns and straightens each separate cord, insuring equal distribution of strain under load.

Most Miles per Dollar

Firestone

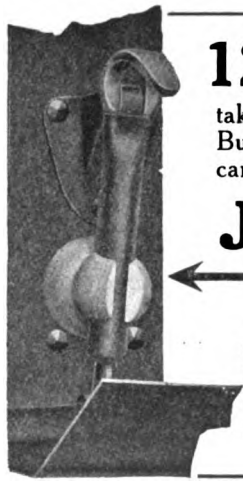
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taking the hood rattles out of 30,000 Buick, Chandler, Dodge and other cars! That's the gripping story of the

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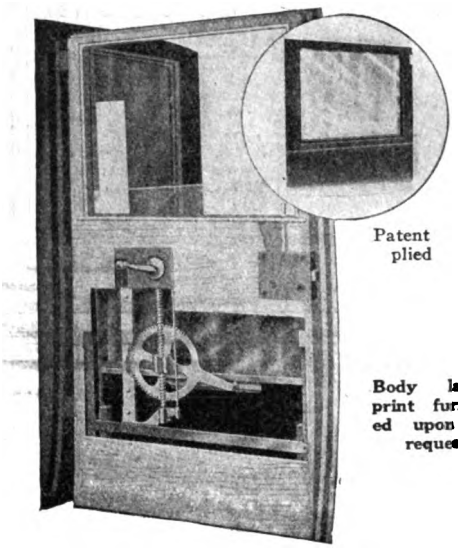
The Crankshaft Makers

Worcester Division
WORCESTER, MASS.

Ingalls-Shepard Division
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Innovation in Mechanical Window Lifts



Patent applied for

Body layout print furnished upon request

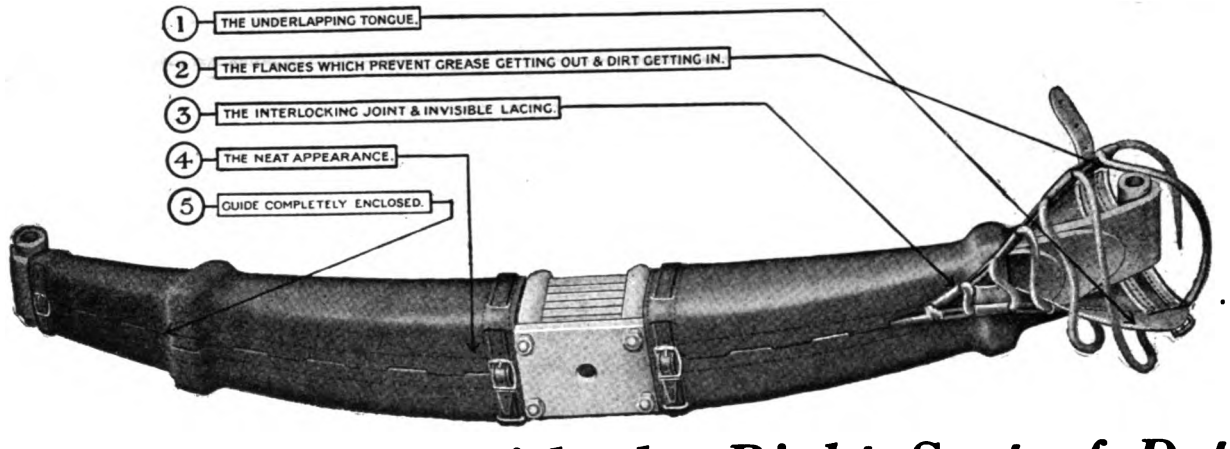
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The Spring Cover with the Right Sort of Detail

Distributors:
We want a limited number of worthwhile distributors. Write for information regarding territory still open. No large stock required. Daily shipments from factory.

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Enhancing the appearance of any car, Wefcos are form-fitting and indestructible. They will outlive the car itself.

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High Pressure Lubricating System
FOR ALL MOTOR CARS AND TRUCKS
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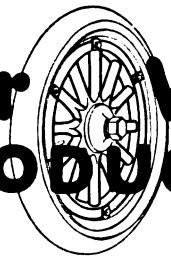


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YALE are the highest grade, most durable batteries ever built for automobile use. Sold on a positive guarantee of satisfying service. A permanent, profitable contract for distributors and dealers. Write us.

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Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

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The Coachbilt
ANDERSON
LIGHT ALUMINUM SIX

Touring Car $1195
Coach $1450
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Is there an Anderson dealer in your town?—if not, write us.
Anderson Motor Co., Rock Hill, S. C.

OVER 50,000 MILES

now reported on "Whitney" High Efficiency Front End Motor Chain Drives and still in good condition.

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Both at Syracuse, N.Y.

Six body types, from $1,395 to $2,165

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Dealers — Write for "Courier" literature

A GOOD HUSKY SIX
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"The Most Completely and Conveniently Lubricated Car in America"
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ALEMITE
High pressure lubricating system

Lubricates thoroughly, quickly, economically

THE BASSICK MANUFACTURING COMPANY
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Grant Six

—an excellent car

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Union Drawn Steel Co
Beaver Falls, Pa.

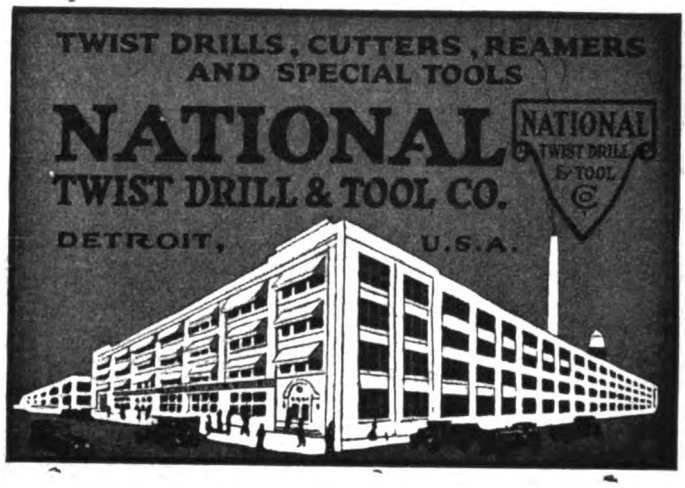
Manufacturers of
BRIGHT FINISHED STEEL SHAFTING, SCREW STEEL CHROME NICKEL and CHROME VANADIUM STEELS in FLATS, SQUARES, ROUNDS HEXAGONS and SHAPES; also ELEVATOR GUIDES

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Blooms, Bars, Billets, Strips, also Sheet Steel and Hot Rolled Strips
The Central Steel Company
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COUNTER-BALANCED CRANK SHAFTS
HEAVY DIE FORGINGS
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SHARON
PRESSED STEEL
MOTOR CAR and TRUCK FRAMES AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.
SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
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Highest Quality—Correct Finish
AUTOMOBILE
Body, Hood and Fender
Sheets
This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

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Rates for advertising in this department, 45 cents per line, per insertion. Minimum charge $2.25. Cash with order. Each line contains about seven words.

LET US MARKET YOUR PRODUCT

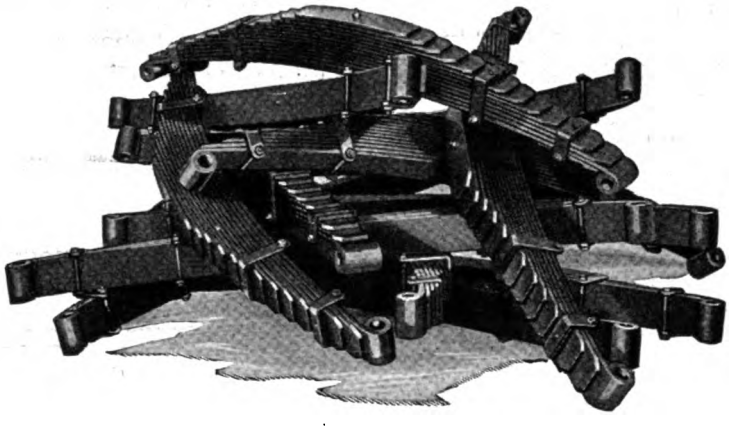
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There is not one serious argument to be advanced in favor of not buying a tire-pressure gauge.

Every man, woman or child who runs an automobile not only should have one, but MUST have one if he, she, or it, cares anything about the mileage to be gotten out of tires and gasoline.

Running on under-inflated tires not only wears out the tires long before their time, but uses up a lot of gasoline for nothing.



Do not hesitate to press upon your customers the purchase of a TWITCHELL gauge.

It shows that you are interested in their getting maximum service out of their tires and maximum efficiency out of their fuel consumption.

PRICE $1.25

We are increasing our advertising in Consumer publications, and registration records show a million more car owners this year than last. This means a greater demand for Twitchells. Be ready to meet this demand.

TWITCHELL GAUGE CO.
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The Bearings Company of America

Lancaster Penna.



Manufacturers of Thrust Ball Bearings of all types, also Angular Contact Thrust Bearings, Angular Contact Radial Bearings.

Let our Engineers help to solve your Bearing problems.

Detroit, Mich., Office, 1012 Ford Bldg.

N

INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc.... 663
American Sheet & Tin Plate Co..... 696
Anderson Motor Co..... 695

B

Bassick Manufacturing Co. 695
Bearings Co. of America.. 698
Bethlehem Spark Plug Co., Inc. 678
Bowen Products Corp..... 694
Bower Roller Bearing Co. 694
Brown-Lipe Chapin Co.... 695
Brown-Lipe Gear Co..... 695
Budd Wheel Co..... 616
Buick Motor Co..... 617
Bunting Brass & Bronze Co. 689

C

Cadillac Motor Car Co.... 636
Carr Co., F. S..... 676
Central Steel Co..... 696
Chalmers Motor Car Co... 665
Champion Machine & Forging Co..... 691
Cleveland Automobile Co.. 700
Courier Motors Co..... 695
Crosby Co..... 691

D

Detroit Carrier & Manufacturing Co..... 690
Detroit Pressed Steel Co.. 606
Dodge Brothers..... 618
Doehler Die-Casting Co.... 691
Dort Motor Car Co..... 673
Durant Motors, Inc., Back Cover
Durston Gear Corp..... 692

E

Earl Motors, Inc..... 659
Eclipse Machine Co..... 694
Edmunds & Jones Corp... 690
Electric Auto-Lite Co..614, 615

F

Fedders Manufacturing Co. 694
Firestone Tire & Rubber Co. 692
Fisk Tire Co., Inc..... 613
Flint Varnish & Color Works 611
Frenchtown Porcelain Co.. 690

G

G & J Tire Co..... 679
Gabriel Manufacturing Co. 694
Goodrich Rubber Co., B. F. 619
Grant Motor Car Corp.... 695
Gude Co., O. J..... 683

H

H. C. S. Motor Car Co.... 679
Hartford Machine Screw Co. 690
Hayes Wheel Co..... 680
Hupp Motor Car Corp., Inside Pack Cover

J

Jordan Motor Car Co., Front Cover
Jorgensen Hood Silencer Co. 692

Digitized by Google

INDEX TO ADVERTISEMENTS

M

Mather Spring Co..... 697
Mercer Motors Co..... 686
Morse Chain Co..... 692
Motor Wheel Corp..... 694

N

Nagel Electric Co., W. G. 661
Nash Motors Co..... 620
National Twist Drill & Tool Co..... 696
New Departure Manufacturing Co..... 688
Nordyke & Marmon Co., Inside Front Cover
Norma Co. of America.... 607

O

Oakley Chemical Co..... 691
Olds Motor Works..... 666

P

Packard Electric Co..... 691
Park Drop Forge Co..... 696
Perfect Window Regulator Co. 612
Powell Muffler Co..... 605

R

Remy Electric Co..... 608
Rickenbacker Motor Co.... 675

S

Sharon Pressed Steel Co.. 696
Smith Corp., A. O..... 692
Smith & Co., Joseph N.... 693
Stephens Motor Car Co., Inc. 681
Stevens-Duryea, Inc..... 684
Stewart-Warner Speedometer Corp..... 677
Stromberg Motor Devices Co. 695
Studebaker Corp. of America 609

T

Timken-Detroit Axle Co... 695
Timken Roller Bearing Co., 670, 671
Twitchell Gauge Co..... 698

U

Union Drawn Steel Co..... 696
Union Switch & Signal Co. 696
United States Rubber Co. 657

V

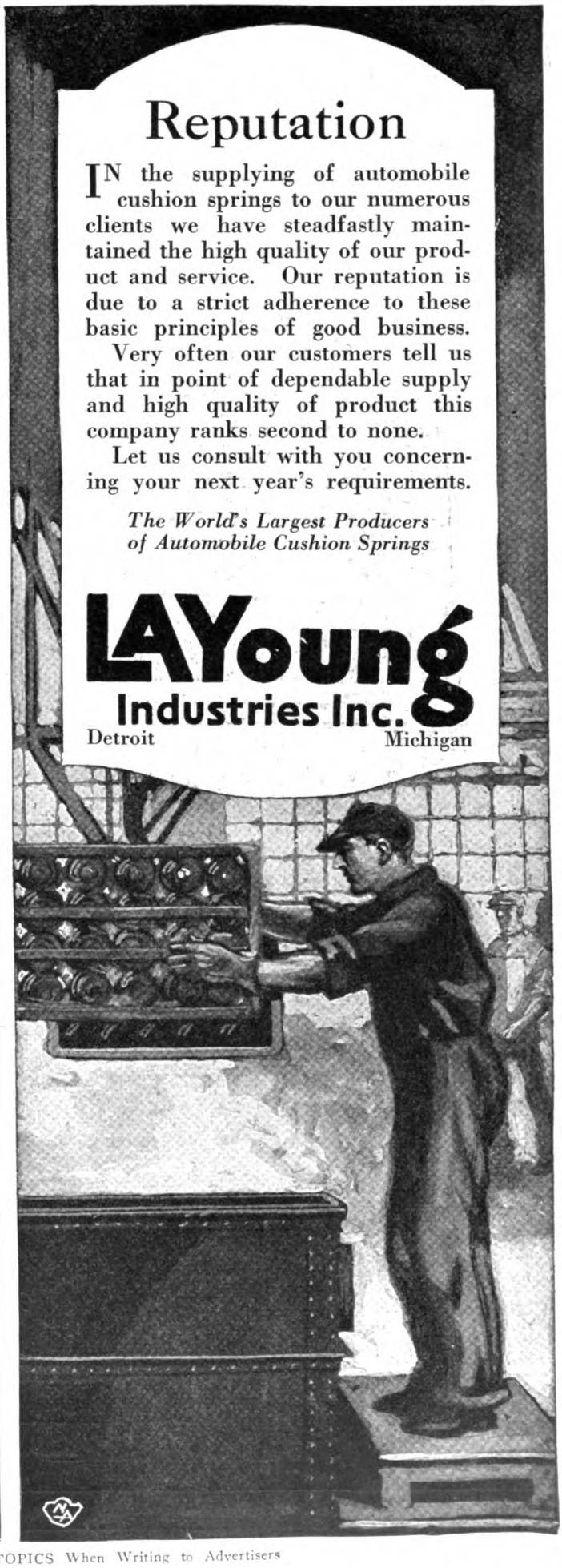
Vanadium Corp. of America 610

W

Warner Gear Co..... 694
Wefco Co..... 693
Westinghouse Union Battery Co..... 685
Whitney Manufacturing Co. 695
Wire Wheel Corp. of America 687
Wyman-Gordon 692

Y

Yale Storage Battery Co.. 694
Young Industries, Inc., L. A..... 699

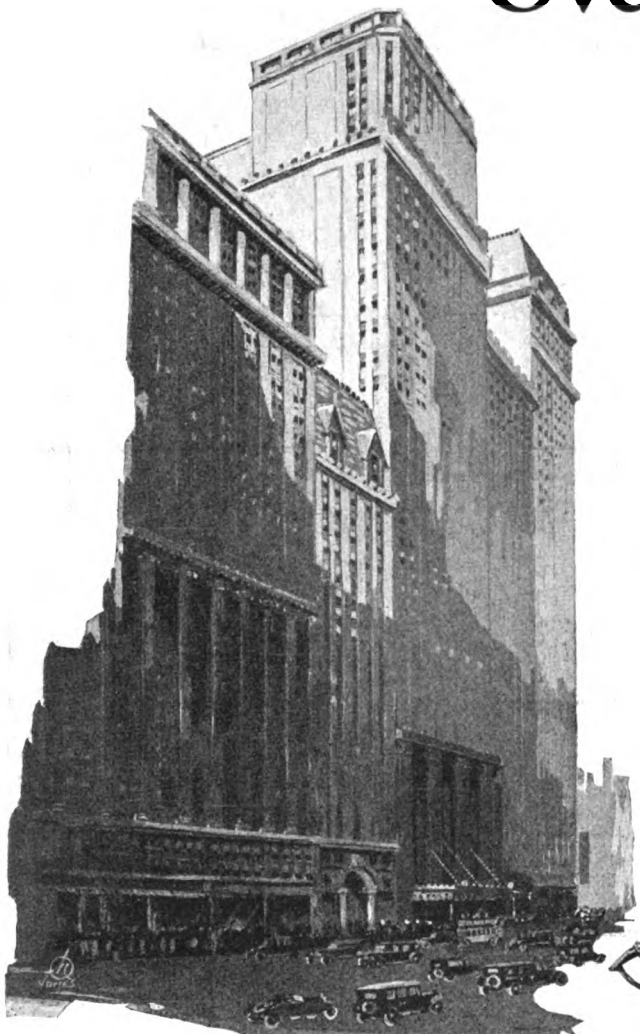


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CLEVELAND SIX

THE WONDER CAR OF THE YEAR

Overshadows Its Field



In the new Cleveland Six Sedan buyers find the fullest measure of satisfaction in the four great essentials:

PRIDE—in the new smart style of its Fisher-built body, and distinctive beauty of line and finish—

PLEASURE—in its dynamic, responsive, flexible power and rare riding comfort—

THRIFT—in its new low price for extraordinary quality and in its remarkable economy—

SECURITY—in its sturdy strength, low-hung stability, powerful brakes, and other safety features.

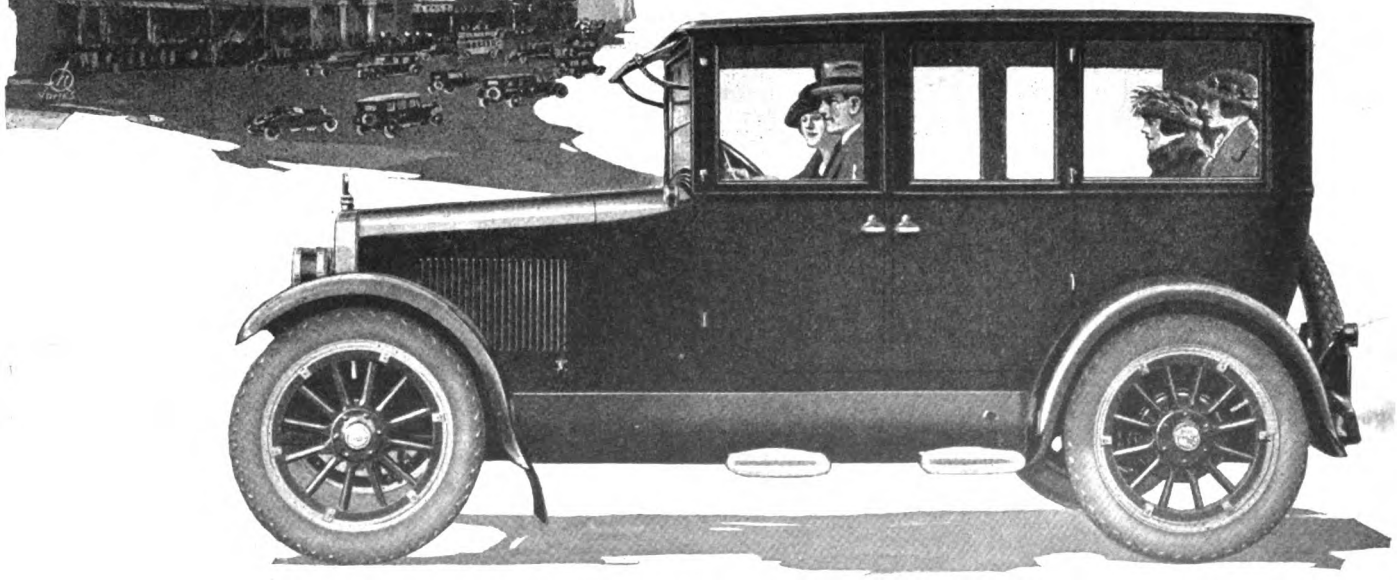
These qualities make Cleveland Six an easy car to sell—and a difficult car to compete against.

Inquire whether your territory is permanently closed.

Sedan now $1585

COUPE	$1495	SPORT CAR . . .	$1260
TOURING CAR . .	1095	ROADSTER	1085

All Prices F. O. B. Cleveland



CLEVELAND AUTOMOBILE CO., Cleveland - Export Dept. 1819 Broadway, New York City - Cable Address "Cleveauto"

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Hupmobile Eclipses Summer Sales Record

Demand for Hupmobile Strong Everywhere—
Dealers in all Sections Enthusiastic

Hupmobile dealers have experienced the most prosperous summer in Hupmobile history.

More Hupmobiles were sold than in any previous summer season.

Naturally, our dealers are enthusiastic. They look forward to even larger sales during the fall months.

Hupmobile Held in High Favor

When you get right down to it, the real reason back of this eagerness for the Hupmobile is explained by the simple statement that everyone has a good word for the car.

This goes straight back, of course, to the fact that the Hupmobile gives remarkably trouble-free service, month after month and year after year.

It is a brilliant performer; but, more than that, it is a consistent performer—and everyone seems to know it.

An Opportunity for Good Business Men

Increased production at the Hupmobile plants has enabled us to add a number of good dealers. Many of these have been sound business men without previous automobile experience; many others have been established dealers.

There are territories in many sections which hold profitable Hupmobile business which has not yet been developed. This is particularly true of the smaller cities and towns.

You should be interested in Hupmobile sales records, and in the Hupmobile dealer's proposition. Write direct to the factory.

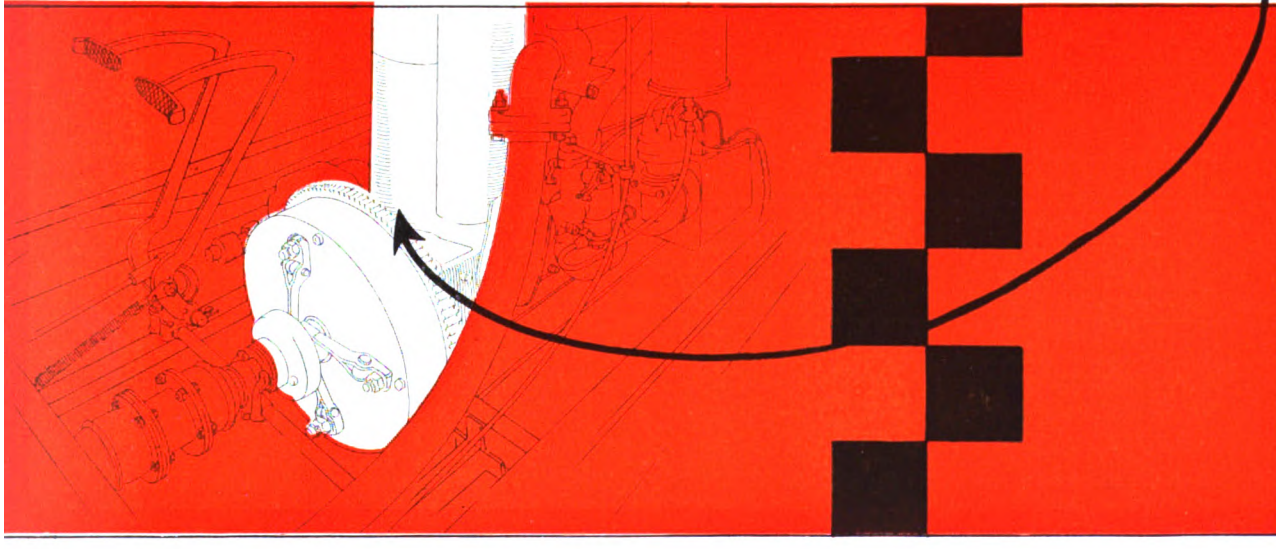
Hupp Motor Car Corporation
Detroit, Michigan

Hupmobile

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"Just a Real Good Car"

The Durant clutch and power plant are mounted separately—either may be removed without disturbing the other. There is similar accessibility in the individual parts of the power plant.



DURANT

DURANT MOTORS, INC., *1819 Broadway, New York City*

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 8 | PUBLISHED WEEKLY NEW YORK, OCTOBER 7, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



More than 424 American and European manufacturers of motor cars, trucks, and tractors employ Timken Tapered Roller Bearings.

What similarly vital automotive part has ever gained acceptance as universal?

TIMKEN
Tapered
ROLLER BEARINGS
Canton, Ohio

© 1922, The Timken Roller Bearing Co. Canton, Ohio

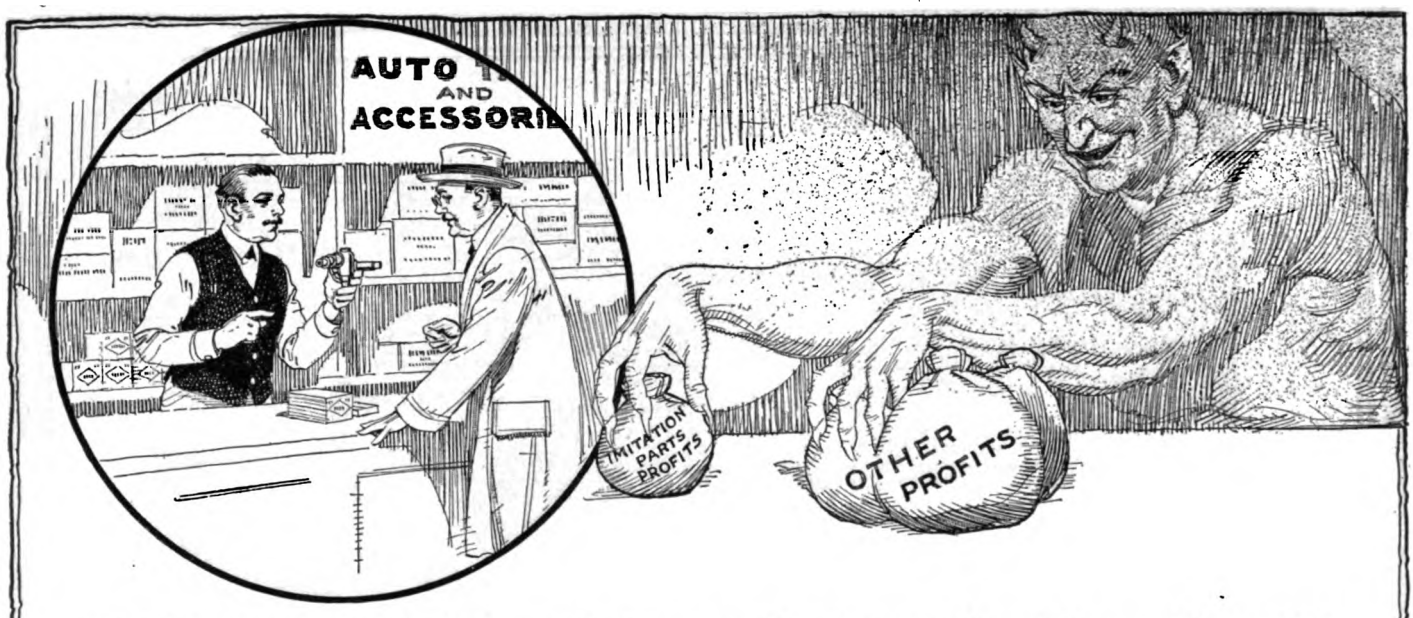
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LAIDLAW
CLOSED CAR UPHOLSTERY CLOTH

THERE is to be considered the all important factor that stamps any closed car as being in the quality class in the opinion of the buying public—that factor is the use of a Laidlaw Closed Car Upholstery Cloth.

THE LAIDLAW COMPANY, INC.
16 West 60th Street
New York

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PROFIT is the life blood of your business. When handled properly, it is that which makes your "game" practical and keeps the account books balancing on the right side. Goods that yield the bigger profit hold the greater attraction. There may be a few pennies more profit in non-genuine replacement parts but the dealer who handles them gambles with the "Imitation Parts Monster"—a two-faced demon—a wolf in sheep's clothing.

His attractive front—the few additional pennies made on each imitation part sold—crumbles under close inspection. To gamble with him means eventual financial loss and business failure. He plays two leading cards, "No, it isn't genuine, but it's just as good,"—"It looks the same as the genuine, and you can make a little more 'profit' on it."

An imitation part may have an *appearance* similar to the genuine, but in the acid test of Performance it fails to qualify—it cannot withstand the test. The invariable result is a disgruntled and irate customer, and a loss of more than your profit. Dissatisfied customers do not return.

The Stewart-Warner Speedometer Corporation has followed for years the practice of marking their parts with a conspicuous Red Tag—no replacement part leaves our factory without one. We do it to protect the dealer, the customer and ourselves. The Tag—on Stewart parts *identifies* them—you *know* they are Genuine.

Through consistent advertising, the motoring public has been taught to "Look for the Red Tag!" They have learned—some through sad experience—that an intricate mechanism cannot give satisfactory service after a foreign part has been installed. That's why they demand the Genuine.

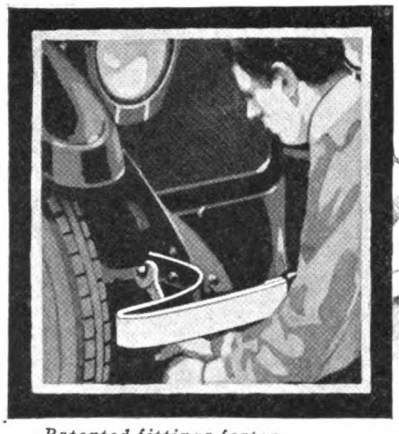
Handle only *Genuine* Stewart Replacement Parts.

You can't afford to do otherwise.

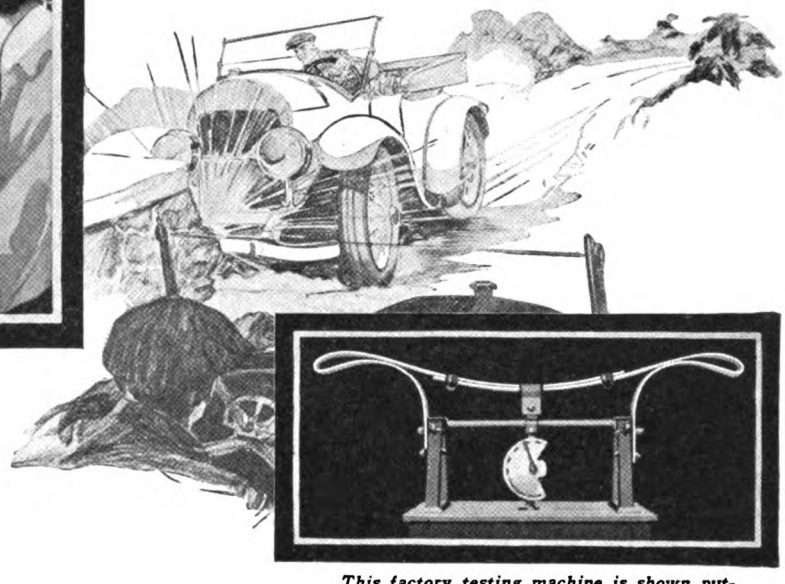
STEWART-WARNER SPEEDOMETER CORPORATION
CHICAGO, U. S. A.



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Patented fittings fasten every Lyon Bumper securely; no drilling or frame alterations are necessary.



This factory testing machine is shown putting a Lyon Spring Bumper under a strain of 2200 pounds—equal to most severe bump of a car in motion.

Consider the "Plus" Value

THINK this over. If all bumpers were as protecting and as resilient as Lyon Spring Bumpers, wouldn't they equal Lyon Bumpers in sales and popularity? Well, they don't! There are more Lyon Spring Bumpers sold than all the others put together.

That's why thousands of car agents and accessory dealers have considered the "plus" value of Lyon Spring Bumpers. They have helped us put over a million Lyon Spring Bumpers in service—and every one of them made, and are making, substantial profits.

Lyon Spring Bumpers sell fast. When an unprotected car stops for gas or oil, "ask 'em to buy!" This is how hundreds of Lyon dealers are building up a mighty profitable bumper business. You can do it too; your jobber will send you our proposition.

***Jobbers:** Here is an accessory that needs no introduction. Write for our proposition.*

Retail prices, $10 to $25

METAL STAMPING COMPANY, Long Island City, N. Y.



Lyon Straight Bar Bumper



Lyon Convex Bumper

LYON RESILIENT BUMPERS

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Automobile Topics
THE TRADE AUTHORITY

VOL. LXVII NEW YORK, OCT. 7, 1922 NO. 8

TABLE OF CONTENTS

Closed Car Prices In Downward Trend 717
Car Makers Draw for National Show Space ... 717
Production 1,667,402 in August 717
Englishmen Interested in G. M. C. Arrive Here.. 718
Ross with Chevrolet as Bowman Dissolves 718
Inderrieden Sales Head for Warner-Patterson .. 718
Buick's Big Output Proves No Surprise 719
500,000 Want Stars as Operations Start 719
Oakland Output 150 Daily 719
Chamber Urges Snow Removal on Highways .. 720
The Traffic Problem 720
Defines Status of Financing Company 721
Show Willys-Knight to Britains on Nov. 3 721
Ratify Merger of Alloy Steel Companies 722
Saxon Refinancing Progresses Nicely 723
Plan Reorganization for Republic Truck 723
Continental Motor to Expand 723
Entries Coming in for New York Salon 726
Paris Salon Brings Out Record Exhibits 726
New York Trade Has Its Moving Day 726
Erskines Give Park Site to South Bend 727
Packard Returns to Racing Oval in 1923 727
Canada's Motor Industry Is Expanding Rapidly 727
Tells of Lobby for Motor Truck Makers 728
Truck Survey Shows Big Growth in Year 728
Trucks are Widely Used for Milk Distribution . 728
Car Makers to Urge Tariff Equalization 729
Ask Candidates How They Stand on Taxes 729
Poland Rebuilds Wrecked Homes with Trucks.. 729
New York Show Was Builder of Business 730
Sales in September Show Slight Slump 730
A. A. A. Starts Drive on Town Speed Traps 731
1922 Safety Program Announced by Board 731
N. M. A. Adds More Members 731

FEATURES IN THIS ISSUE

"You Made It—Help Solve It" 735
Selling Goods at Retail 739
Faunce Welds Chain of Merchandising Links .. 740
New Closed Models in Popular Lines 743
Products That Aid in Quick Repairs 745
With the Wholesalers and Retailers 747
Calendar 754
Table of Passenger Car Selling Points (copyrighted) 759

Alphabetical Index to Advertisers 806

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
WORCESTER, MASS. CHICAGO, ILL. CLEVELAND, OHIO

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No Automobile Man Should Overlook These Facts

READ the list printed below. Note how many passenger car and truck manufacturers here and in Europe standardize on Zenith Carburetor equipment. Manufacturers, automobile and accessory dealers should not overlook this evidence of Zenith preference. A Zenith fixed adjustment carburetor will give greater economy, better acceleration, easier starting, more uniform operation, and added power to any motor vehicle,—facts a demonstration will prove.

Irrefutable Proof of Zenith Supremacy

PASSENGER CARS

United States
Anderson
Brewster
Chalmers (export)
Chevrolet
Crow Elkhart
Daniels
Driggs
Elgin
Fox
Hatfield
Kurtz Automatic
Maxwell (export)
Meteor
Monroe
Noma
Norwalk
Oldsmobile
Ranger
Romer
Standard Eight
Tulsa
Wills St. Claire
Washington

France
Alba
Aries
Ballot
Beck
Bazelaire
Bedelia
Bellanger
Benjamin
Bignan
Brasier
Bugatti
Charron
Colda
Corre-la Licorne
Cottin Desgouttes
Crespelle
De Dion Bouton
Delage
Delaugere Clayette
Doriot-Flandrin & Parrant
Farman
Gobron
Gregoire
Hotchkiss
Irat
La Buire
Leon Bollee
Lorraine Dietrich
Mors
Motobloc
Mourre
Paquis
Paulet
Peugeot
Philos
Rochet Schneider
Rolland Pilain
Roy
Salmson
Th. Schneider
Sidea
Sigma
Slim
Soriano-Pedroso
Turcat Mery
Vermorel
Vinot-Deguingand
Voisin
Zebre
Zedel

England
A. B. C.
Angus Sanderson
Argyll
Arol Johnston
Austin
Beardmore
Belsize
Blackburn
Briton
B. S. A.
Calcott
Calthorpe
Charron Laycock
Cluley
Enfield Allday
Ensign
Galloway
Guy
Hampton
H. E.
Hillman
Jowett
Lagonda
Orpington
Palladium
Phoenix
Ruston Hornsby
Standard
Star
Swift
Talbot
Vauxhall
Vulcan
Waverly

Germany
Adler
Audi
Beclowen
Benz
Benz-Sochne
Dux
Elite
Horch
Joswin
Ley
N. A. G.
N. S. U.
Protos
Richard & Hering
Simson
Steiger
Stoewer
Szawe
Wanderer

Belgium
Abadal
Belga
d'Acoust
Dasse
F. N.
Metalurgique
Minerva
Niesse
Nagant
Pipe
Somea

Italy
Alfa Romeo
Ansaldo
Bianchi
Chiribiri
Diatto
Isotta Fraschini
Itala
Lancia
Nazzaro
S. C. A. T.
Spa

TRUCKS

United States
Abbot-Downing
Acme
American
American Motorbus
Armleder
Atlas
Atterbury
Beaver
Belmont
Biederman
Buffalo
Casco
Clydesdale
Collier
Commerce
Dart
Day Elder
Dearborn
DeMartini
Dependable
E. A. Denz
Double Drive
Eagle
Elgin St. Sweeper
Facto
Fageol
Federal
Forschler
Gotfredson-Joyce
Hahn
Hall
Hawkeye
Hercules
Higrade
Huffman
Hug Co.
H. R. L.
Huron
Indiana
J. T. Tractor
Koehler
Kelly-Springfield
Kerns Dughie
Keystone
Kimball
Larrabee-Deyo
Maccar
Mack
Massey-Harris
Moreland
National
Nelson
New England
Northway
Norwalk
Oklahoma
Olympic
Oshkosh
Penn
Perfection
Power
Rainier
Ranger
Rowe
Samson Tractor
Sanford
Schacht
Southern
Sterling
Stewart
Stoughton
Sullivan
Tower
Towmotor
Traylor
Veteran
Vim
Wachusetts
Walker Johnson
Watson
White
Witt-Will

England
A. E. C.
Albion
Austin
Beardmore
Belsize
Daimler
Enfield Allday
Guy
Halley
Hallford
Karrier
Marathon
Mandslay
McCord
Pagefield
Palladium
Scrammell
Star
Tilling Stevens
Vulcan

France
Aries
Cottin Desgouttes
DeDion Bouton
Peugeot
Rochet-Schneider
Saurer

Italy
Spa

Switzerland
Berna

Germany
Adler
Benz
Horch
N. A. G.
Richard & Hering

ZENITH CARBURETOR COMPANY, DETROIT, MICHIGAN

Factories at: DETROIT LYONS LONDON TURIN BERLIN

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Insuring the Quality and Making the Price Possible

A vital reason for the outstanding value of Studebaker Sixes is the fact that they are built practically complete in Studebaker plants.

Studebaker buys and tests its own raw materials—and makes sure they are of highest standard.

These materials are fabricated in Studebaker factories, under most exacting supervision. There are 9,500 inspections before cars are passed for delivery.

Studebaker has established precise standards of workmanship, beyond which no motor car manufacturer goes.

Because of this exactness of manufacturing and the elimination of middlemen's profits, the dollar-for-dollar value of each Studebaker model is unparalleled.

Building dependable vehicles is a 70-year tradition with Studebaker.

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*	BIG-SIX *7-Pass., 126" W. B., 60 H. P.*
Touring ..... $ 975	Touring $1275	Touring $1650
Roadster (3-pass.) 975	Roadster (2-pass.) 1250	Speedster (4-pass.) .. 1785
Coupe-Roadster (2-pass.) 1225	Roadster (4-pass.) 1275	Coupe (4-pass.) 2275
Sedan 1550	Coupe (4-pass.) 1875	Sedan 2475
	Sedan 2050	Sedan (Special) 2650

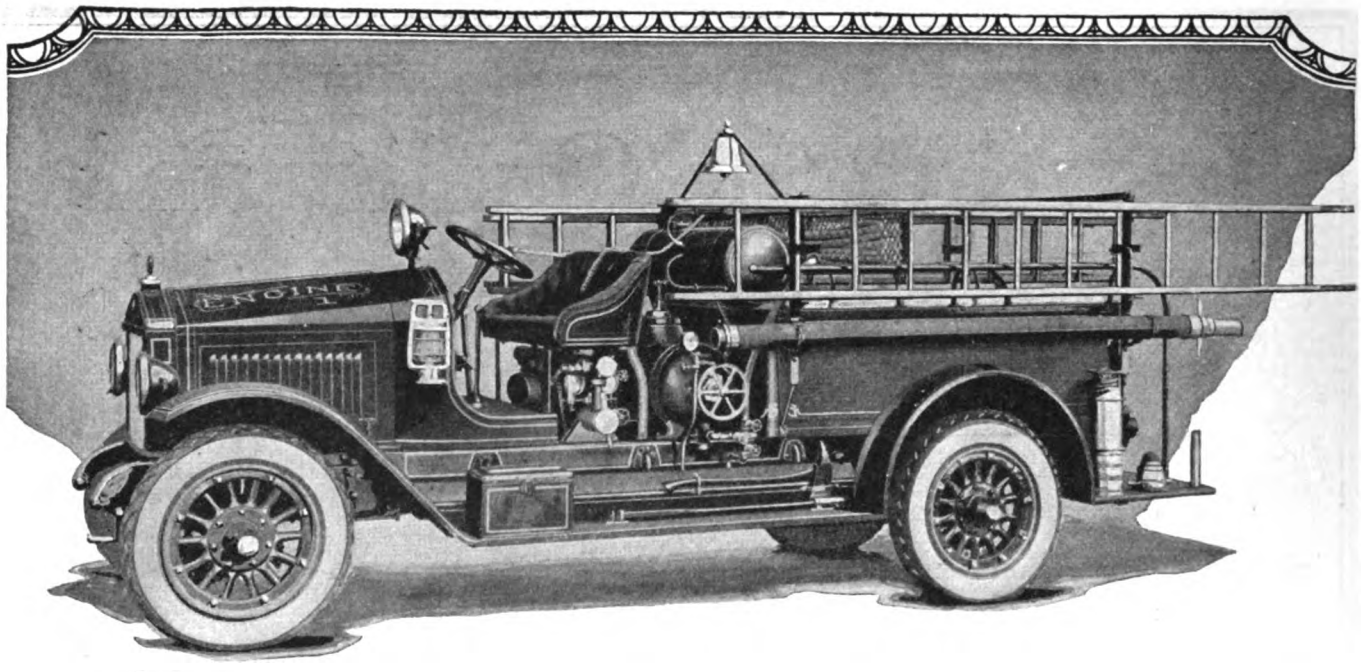
Cord Tires Standard Equipment

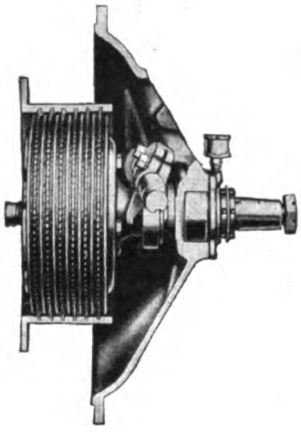
THE STUDEBAKER CORPORATION OF AMERICA
SOUTH BEND, INDIANA

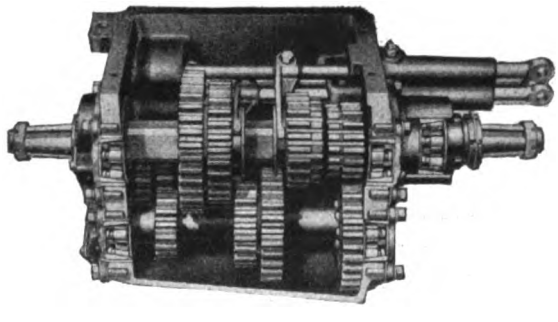
Studebaker

THIS IS A STUDEBAKER YEAR

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Where Life and Property Loss Threatens

STURDY, sure-working units are nowhere so necessary as in automotive fire-fighting apparatus. In no other service is the strain so heavy, the danger of collision so great or the penalty of a breakdown so costly.

High in importance among these units is the transmission; for upon it, as in the apparatus shown above, depends both the ability to reach the location quickly and to pump the flood of water that quenches the flames.

Brown-Lipe Gear transmissions have proved their great value in this work, just as they are doing every day in thousands of motor trucks and cars. Also, in case of a smash-up, genuine replacement parts are quickly obtainable.

BROWN-LIPE-GEAR
TRANSMISSIONS
BROWN-LIPE-CHAPIN
DIFFERENTIALS
Both at Syracuse, N.Y.

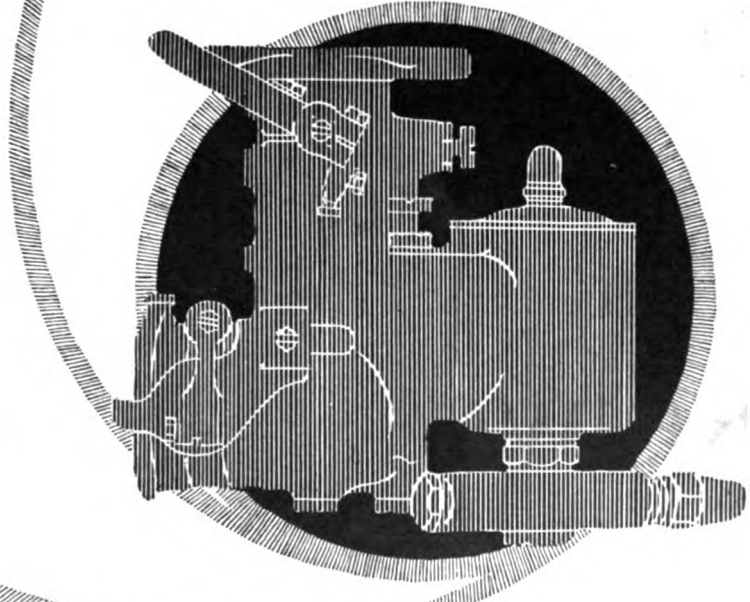
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HOLLEY

The QUALITY CARBURETOR

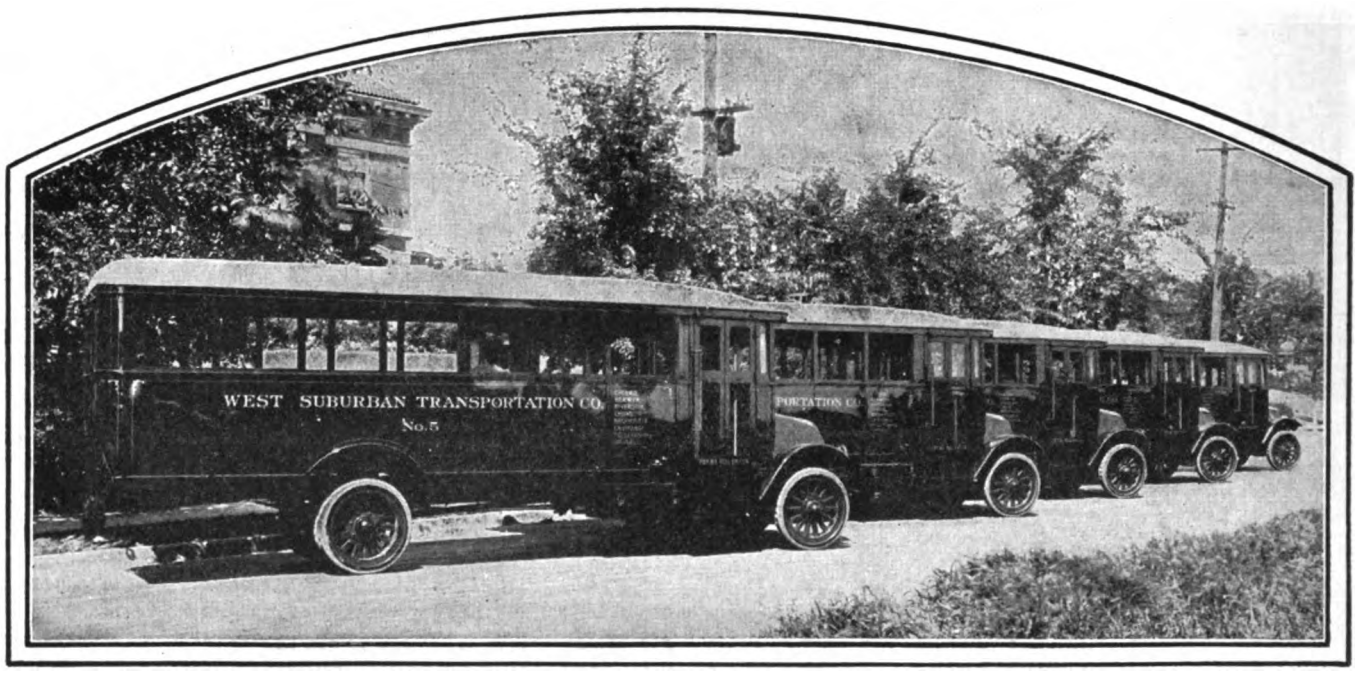
Perfect combustion, the result of an exact metering of gas and air, is an outstanding characteristic of every one of the 1,200,000 new Holley Quality Carburetors now in use.

HOLLEY CARBURETOR COMPANY, DETROIT



Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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The New Model 52 Opens Up Another Market to the International Motor Truck Dealer

EVERY DAY new bus transportation companies are being formed, or established companies are adding to their fleets. This business is at the doorstep of the energetic motor truck dealer—and the man who sells Internationals can profit now through the introduction of the new Model 52 special motor bus chassis. This model, with its long wheel base, high road speed, ample passenger capacity, and other special features, is a valuable addition to the already complete International haulage line. There is now no phase of industrial or passenger transportation closed to the International Motor Truck dealer.

Remember the motor bus! It is already a power in the successful transportation of passengers. Great fleets are being operated in and around all of our larger cities, and nearly every community has one or more lines running to and from neighboring cities. Don't let this attractive business slip through your fingers! For the larger enterprises you can sell the Model 52, and for lighter duty, the Speed Truck (chassis $1250, f. o. b. factory) equipped with standard cross-seat body. Begin to prepare now to put more and more of these busses into service in your territory. If you are not already an established International Motor Truck dealer, you will do well to write for complete dealer information. There is good motor truck and bus business all around you—and you can get your share of it through the International Line of "Low-cost Hauling" Trucks.

Don't delay—Our catalog and information is ready now!

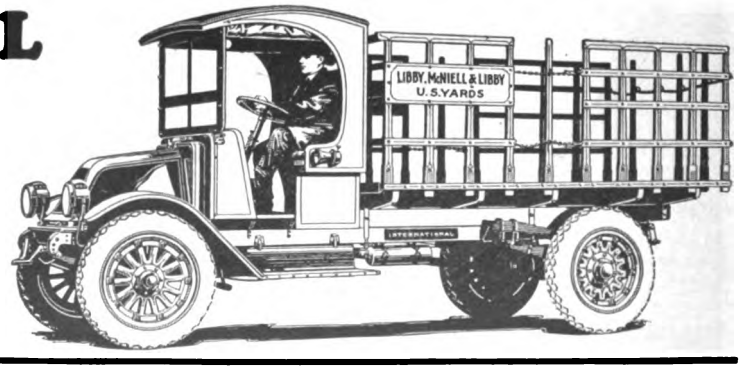
INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)
CHICAGO U S A

93 Branch Houses in the United States

INTERNATIONAL MOTOR TRUCKS

Sizes:
2,000-lb. Speed Truck

Model 21, 2,000-lbs.	Model 52, 5,000-lbs.
Model 31, 3,000-lbs.	Model 61, 6,000-lbs.
Model 41, 4,000-lbs.	Model 101, 10,000-lbs.



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"Two Years Without a Single Complaint"

Good-will is like gasoline. Without gasoline, your car gets nowhere. Without good-will your business stands still, rusts out—and dies.

Read this letter—and then ask yourself why not let Red-Top create good-will for you:—

COLE BROS. GARAGE
501-3 Second Ave. N.
Nashville, Tenn., July 7, 1922

The Fisk Tire Company, Inc.,
Nashville, Tenn.

Subject: Why We Sell Fisk Tires

Gentlemen:

First: Because we know Fisk Red-Top Tires give more miles of continuous service than any other tire sold in Tennessee.

Second: It has an extra ply of fabric, and an extra heavy tread, making this tire run more miles than is claimed for it.

Third: We have been selling the Fisk line for the past two years and at this writing have not had a single complaint.

Fourth: Fisk policy is by far the best policy of any tire company in the South.

Fifth: Once a Fisk user—always a Fisk booster.

Very truly yours,
COLE BROS.,
By A. D. Cole.

Read the second paragraph again—Mr. Cole writes the whole Red-Top service story in twenty-three words.

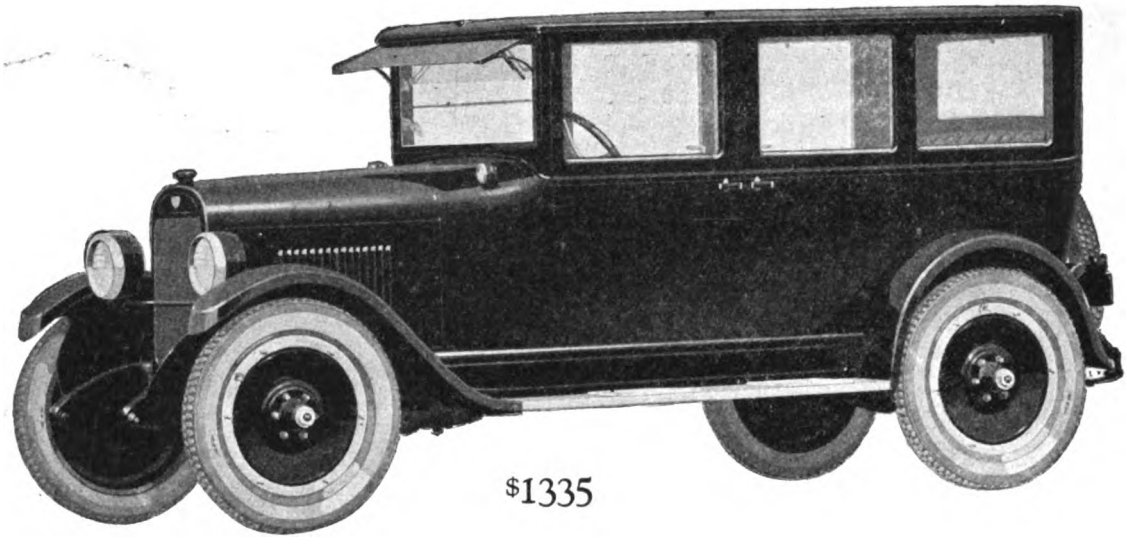
The customer-creating, profit-making, trade-building, Red-Top Tire will work for YOU this winter if you ask us about it now.

There's a Fisk Tire of extra value for every car, truck and speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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In every part subjected to stress and wear, accepted standards are not good enough for the good Maxwell. Instead, margins of safety are insisted on that make sure of continuous, low-cost operation without the necessity of frequent repairs.

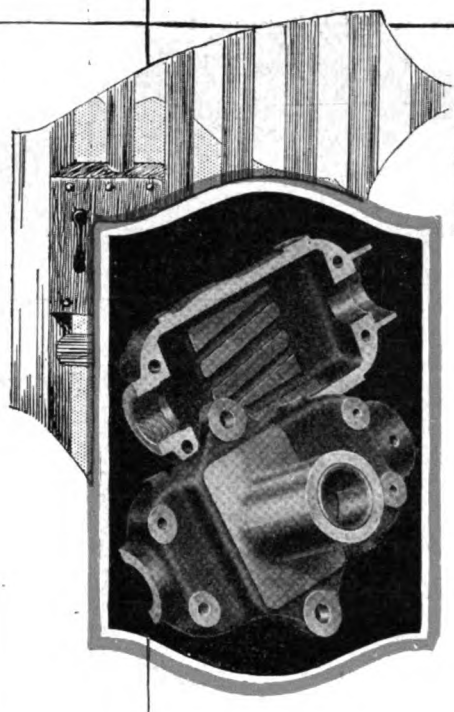
Cord tires, non-skid front and rear; disc steel wheels; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; new type water-tight windshield. Touring Car, $885; Roadster, $885; Coupe, $1235; Sedan, $1335. Prices f. o. b. Detroit. Revenue tax to be added

MAXWELL MOTOR CORPORATION, DETROIT, MICHIGAN
MAXWELL MOTOR CO. OF CANADA, LTD. WINDSOR, ONT.

The Good

MAXWELL

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Each Drop of Oil Held Prisoner Here

IN perfecting the Lavine "Pilot" —*the new standard of steering gear value*—the gear housing or case was given special study by the Lavine staff of steering gear experts.

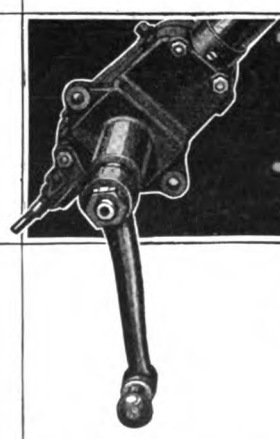
The "Certified Malleable" castings which form the housing are straightened under a 30-ton drop hammer and have a tensile strength of not less than 50,000 pounds. They are absolutely free from all defects, core-shifts, sand holes and blow holes.



Within the housing, the pumping action of the sliding heads forces a continuous flow of lubricant to every bearing surface. This, combined with the perfect oil-tightness of the housing, makes the "Pilot" as nearly wear-proof as a gear can be.

Throughout this gear are features that distinguish it from former practice. Discriminating manufacturers of fine cars—whose product is their reputation—will find in the Lavine "Pilot" surpassing durability, safety, smoothness of action, ease of adjustment and freedom from rattle.

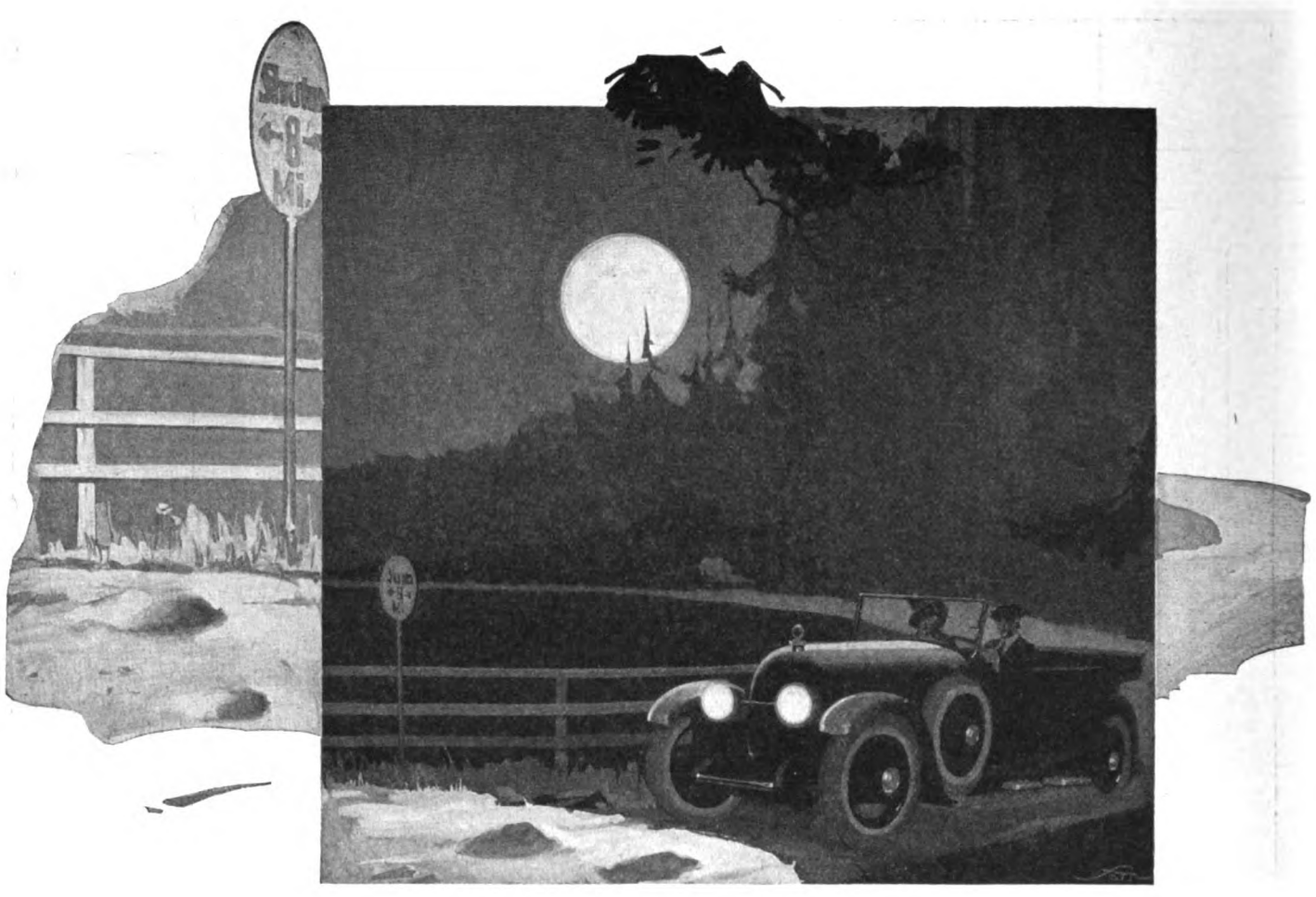
LAVINE GEAR COMPANY
MILWAUKEE WISCONSIN



LAVINE "PILOT" STEERING GEAR

Let us exchange specifications—send us your blue prints and we will quote on your requirements. (You will approve Lavine "Pilot" prices.)

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All Bumps Look Alike At Night



—but Gabriel Snubbers enable you to roll along with comfort and safety. They take the jolt out of the bumps and keep you on the seat.

Best for results—regardless of price.

GABRIEL MANUFACTURING COMPANY, 1421 E. 40th St., Cleveland, Ohio



GABRIEL SNUBBERS

65 Leading Cars Equipped With or Drilled for Snubbers at Factory—

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Buick Buyers "Come Back" Again And Again

The traditional Buick dependability and satisfying performance lead Buick owners to continue buying Buick motor cars year after year. This repeat order business is one of the many profitable advantages enjoyed by the possessor of a Buick dealership. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS SEDAN

With this car, Dodge Brothers have literally created a new type of sedan.

They have combined open car ruggedness with closed car protection and smartness.

They have demonstrated, once for all, that a sedan can be as practical and almost as inexpensive as an open touring car.

The Body is built of hand-welded steel because steel is sturdy, and will take a permanent, oven-baked finish, eliminating forever the cost of repainting.

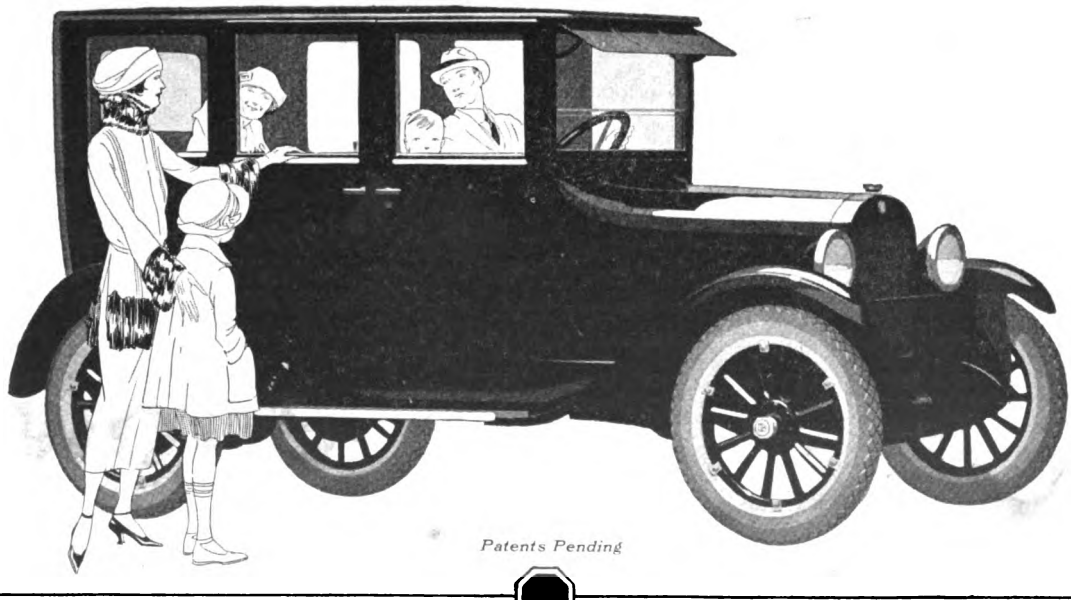
The seats are upholstered in attractive, genuine Spanish blue leather, because leather will wash and wear.

To further enlarge the car's usefulness, the rear seat, back and side cushions, seat frame and foot rest are quickly removable, giving sixty-four cubic feet of loading space in the rear compartment. The manifold uses made possible by this unique feature are readily imagined.

The top and rear quarters are of non-rumble, fabric construction, conforming with the present attractive vogue. From cord tires to curtain cords, the fittings, inside and out, are distinctive and complete.

In fact, every detail of the car emphasizes its striking adaptability to business as well as social use.

The price is $1195 f. o. b. Detroit



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One Quality Only

The Silvertown is the pioneer cord tire of America. Its history is the record of every important development in cord tire construction. From the start it gave the motorist a new idea of tire service. *The Silvertown is made by an organization with 52 years' experience* in rubber manufacture.

There is only one quality in Silvertown Tires. The materials and workmanship in one are the same as in all others. The name of Silvertown is always a symbol of good quality.

Write or wire for complete details of how you can profit by joining the Goodrich Organization

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

Established 1870

Goodrich

Silvertown CORD TIRE

"BEST IN THE LONG RUN"

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"Nash Leads the World in Motor Car Value"

What About the Enclosed Car Orders You Couldn't Fill?

Take out your pencil and figure the profits you could have made if you had been able to get the enclosed cars you wanted when the season's demand was there.

You'll find it runs into money. Sometimes it is the difference between breaking even on the year and showing a handsome profit.

Here is just another point where the Nash dealer has the edge.

The biggest unit of the great Nash body building plant at Milwaukee is being increased to twice its former size.

Nash dealers are going to get the profit many dealers lose because they can't fill the enclosed car orders.

That's real profit protection, and when you think of the Nash franchise think of this linked up with another Nash dealer-help *—price-protection in time of list reductions.*

A few good dealer territories still open. Write about them.

Reduced Prices

SIXES		FOURS	
5-Passenger Touring	$1240	5-Passenger Touring	$ 935
7-Passenger Touring	1390	Roadster	915
7-Passenger Sedan	2190	Coupe	1385
5-Passenger Sedan	2040	5-Passenger Sedan	1545
4-Passenger Coupe	1890	2-Passenger Cab (enclosed)	1195
Roadster	1210	5-Passenger Carriole (enclosed)	1275
Sport Model	1645		

(f. o. b. factory)

The Nash Continuous Contract—Not Annual—Protects Dealers Against Decline in Price

NASH

THE NASH MOTORS COMPANY

KENOSHA, WISCONSIN

"Nash Leads the World in Motor Car Value"

(641)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCTOBER 7, 1922 No. 8

CLOSED CAR PRICES IN DOWNWARD TREND

Analysis of Complete Line-Up Shows Prices of Sedans 20 to 60 Per Cent Over Touring Car Prices—Fours, Sixes, and Eights Included.

With the establishment of the closed-car business on a basis representing more than one-third of the total volume of automobile sales, AUTOMOBILE TOPICS presents a comparative study of the market, as of October 1, 1922. Thirty-one four-cylinder sedans are included in the summaries, 82 sixes and 14 eights. These range in price from $645, the price of the Ford and Star cars, to the Rolls-Royce at exactly ten times that figure, or $12,900, and include the essential details of practically all the active lines now on sale.

Analysis of the market shows that present prices for sedans for the most part run from about twenty to sixty per cent over the corresponding touring car prices. In fact, 62 out of the 127 models listed are priced between 20 and 50 per cent in advance of the touring models in the same lines; 14 at less than 30 per cent; 47 cost more than 50 per cent more than the corresponding touring cars. The very low-priced sedans, by comparison with touring cars have been introduced recently as "second string" offerings in lines already having standard sedans of a more expensive order. The very high-priced sedans, relatively speaking, are those in lines that have not yet advanced into this division of the field, or else cater exclusively to purchasers of wealth.

In general, of course, the four-cylinder lines are the lower priced, the sixes—of which there are a great number—intermediate, and the eights, the higher-priced. That there is sufficient overlap so that the purchaser need be by no means embarrassed in making his selection, however, is perfectly evident. The Mercer sedan at $5,250, for example, is the highest-priced four-cylinder job listed, whereas the lowest-priced six is the Columbia Light Six, at $1,395. This is also the price of the Buick Four, Chevrolet "FB" and Dixie Flyer, while between the Columbia and the Fox, at $4,900, a list of 72 six-cylinder sedans intervenes.

Similarly, the lowest-priced eight, is the Oldsmobile "47" which is listed at $2,025. The highest-priced eight is the Duesenberg at $7,800.

To express the general price relation differently, there are five models listed below $1,000; 11 between $1,000 and $1,500; 22 between $1,500 and $2,000; 24 between $2,000 and $2,500; 17 between $2,500 and $3,000; 13 between $3,000 and $3,500; 9 between $3,500 and $4,000; and 25 costing upwards of $4,000.

In other words, the range of offerings is complete. Except at the extreme ends of

(*Continued on page 724, first column*)

Production 1,667,402 in August

Motor vehicle registration for the first eight months of this year totaled 1,667,402, divided into 1,507,495 passenger cars and the balance of trucks, according to Department of Commerce figures issued this week. August, the last month reported, was second best this year, as the National Automobile Chamber of Commerce found. Output that month was 246,941 passenger cars and 24,064 trucks, according to the government's figures.

Car Loadings Heaviest in Two Years

Revenue-freight car loadings on U. S. railroads for week ended September 23 totaled 973,291 cars. This is the largest week since that of October 29, 1920, and equals 96 per cent of the peak loadings of all times, reported in the week of October 15, 1920. Furthermore, the total was 27,372 cars over the previous week and 99,650 cars, or 11.5 per cent, over the same week last year.

CAR MAKERS DRAW FOR NATIONAL SHOW SPACE

Twenty-Third Annual Event to Present Many Improved Models—September Production Set at 205,950 Motor Vehicles—Prospects Fair to Good.

With 86 lines of passenger cars represented, the drawing for space at the New York and Chicago national automobile shows was held this week at the National Automobile Chamber of Commerce, New York. In that number of scheduled names there appear some new ones. At the same time some who exhibited last year were not present at the meeting.

As in past years it was privately disclosed that many contemplate the exhibition of new and what are believed by the originators to be startling models when the show portals are thrown open. S. A. Miles, show manager, declares that "the variety of models to be offered, in open, semi-closed and closed types presents the best products at the best values the public has even seen."

In the list which drew for spaces at New York, nearly all the Chamber members are represented naturally. Concerns which were "new" last year, as the Wills Sainte Claire, the Durant, the Rickenbacker and the Handley-Knight all have achieved remarkable results, the drawing disclosed. The Star, Barley and Yellow Cab were new comers among the 76 members who drew for space. Among those whose names did not appear on the lists were the Briscoe, Holmes, Maibohm, Kentucky Wagon, Stevens-Duryea, Monroe, Hanson, DuPont and Commonwealth. The United States Bureau of Roads will have a booth at both shows through the courtesy of the N. A. C. C.

Prior to the drawing, the directors, at

(*Continued on page 720, third column*)

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ENGLISHMEN INTERESTED IN G. M. C. ARRIVE IN U. S. A.

Representatives of Foreign Stockholders Escorted to Detroit by Officials

Escorted by the directors and officials of the General Motors Corp., a distinguished party of Englishmen, interested in the G. M. C., who arrived in New York on the *Majestic* this week, will make an inspection tour of the various plants of the huge Corporation. The party is headed by Sir Harry McGowan, a member of the board of directors of the G. M. C. With him is Sir Albert Stanley, formerly a Detroiter, and George Watson. Sir Harry comes to America as representative of the foreign stockholders of General Motors.

After being entertained in New York, the party left for Dayton, where the corporation's research laboratories are located. There they were the guests of C. F. Kettering. From Dayton they will go to Detroit where a dinner will be given for them at the Statler hotel, October 10. Accompanying the visitors are Pierre S. duPont, president of General Motors Corp.; A. P. Sloan, Jr., vice-president of operations; J. J. Raskob, vice-president, and E. R. Stettinius, director. The tour will include a trip to Flint where C. S. Mott, head of the Corporation's advistory staff, will act as host, and to Lansing where A. B. C. Hardy, president of the Olds Motor Works, will do the honors. If time permits, the plants at Saginaw and Pontiac will be inspected.

Firestone Returns to U. S. A.

H. S. Firestone, president of the Firestone Tire & Rubber Co., returned to Akron this week from a several months' trip to Europe. He arrived in New York on the liner *Aquitania* on September 30 and visited his two sons, now attending Princeton university.

Rutherford and Brown Return

W. O. Rutherford, vice-president, and L. D. Brown, treasurer, of the B. F. Goodrich Rubber Co., returned to America this week. They departed for Europe the week of August 20, intending to study the tire and rubber markets and manufacturing abroad.

Chevrolet Promotes Wetherald

C. E. Wetherald, formerly general superintendent of the motor and axle division of the Chevrolet Motor Co. has been promoted to assistant to Charles F. Barth, general manager. William Notman succeeds Wetherald while F. O. Tanner goes from the chief inspectorship of the motor and axle division to be superintendent of the gear plant in Detroit.

E. E. Hoffman a Hendee Chief

E. E. Hoffman has been appointed plant engineer of the Hendee Manufacturing Co. plant at Springfield. Hoffman has gained experience with the Willys-Overland Co., where he served as production engineer, a position he subsequently held with the Willys Corp. at Elizabeth. For the past two years he has been in business for himself in the engineering and construction field.

Laidlaw Sails for Europe

W. R. Laidlaw, head of the company bearing his name, sailed for Europe this week to visit the forthcoming automobile shows in London and Paris and to study the trends of fashion in the automobile fabric line, which is his specialty. Naturally he will also visit foreign connections which are his sources of supply and which are long established and substantial.

ROSS WITH CHEVROLET AS BOWMAN DISSOLVES

Old-Line Boston Retail House Closes Out and Members Scatter

With the retirement from business of the J. W. Bowman Co., Inc., one of the old-time Boston establishments goes out of existence. The concern handled the Daniels of late and before that the Stevens-Duryea. R. R. (Rudy) Ross, president, has become retail sales manager for the Sills-Chevrolet Co. J. W. Bowman, whose identification with the industry goes back to its very early days, retains his touch with it as treasurer of the Boston Automobile Dealers' Assn. and general manager of the Used Car Statistical Bureau.

Ross, who steps from the high-priced to the low-priced field, follows the lead of more than one experienced motor car merchandiser in recent years. His association with the Boston trade goes back to 1901, when he was with Alvin T. Fuller in the Packard establishment. Afterward he was with Peerless and Fiat, succeeding E. Rand Hollander as president and general sales manager of the Fiat Motor Sales Co. of New York.

Falk Promoted by Maxwell

J. H. Falk has been appointed district supervisor of the Maxwell Motor Corp. of Cleveland, succeeding J. L. Justice. Justice was recently transferred to San Francisco.

Ellis Joins Courier Motors

Roy C. Ellis, for the past four years assistant sales manager and field representative of the automotive division of the Standard Steel Car Co., has been appointed factory representative of the Courier Motors Co. Ellis will devote much time to special dealer work.

Harry Anderson Back with Stutz

Harry W. Anderson, having resigned from the Duesenberg Automobile & Motors Co., has returned to his early love, the Stutz. He has a roving commission among dealers in the important territory defined by his new title of eastern sales manager.

INDERRIEDEN SALES HEAD FOR WARNER-PATTERSON

Headquarters to Be in Chicago Where He Has Been Appointed Manager

"Art" (A. J.) Inderrieden, long and popularly known in the instrument and allied fields, has been appointed sales manager of the Warner-Patterson Co., Chicago, it was announced this week. Thus returns to the trade one of the widely known "old-timers," the announcement carrying with it the happy inference that his health, once despaired of, is now fully restored, an accomplishment of good cheer to his many friends.

Inderrieden has had extended and varied sales experience having early become connected with the old Warner Instrument Co., Chicago, in which city he had resided for some time. When the Instrument Company was absorbed by the Stewart-Warner Speedometer Corp., Inderrieden declined a position with the new management and became representative in New York city for the Johns-Manville Co. With this concern he remained but a short time, returning to the West where he became manager of the copper mining interests of A. P. Warner at Fordsburg, N. M. These mines were disposed of by Warner and for a few years Inderrieden concentrated his efforts on regaining his health, shattered by his indefatigable activities. His latest connection is the first since that time.

Brewer-Tichener Makes Changes

W. E. Tichener, formerly production manager of the forging division of the Brewer-Tichenor Corp., is now assigned to St. Louis and vicinity, it is announced this week. He succeeds George M. Innes whose territory has been changed to include Cleveland and eastern Ohio. P. J. Zimplemann, who has been covering Cleveland, is to have that part of Ohio not assigned to Innes and in addition all of Indiana and the southern States.

McMurtry Resigns Connecticut Post

Alden L. McMurtry, consulting engineer to the Motor Vehicle Department of the State of Connecticut, has resigned and will devote himself to consulting practice at his laboratory in Hartford. McMurtry's service during the past three years has been recognized as noteworthy, both in respect to the segregation and analysis of accident causes and also in devising means for the safe regulation of traffic. Both foreign and local traffic is exceedingly heavy throughout the State, and the trained perceptions of an experienced engineer were often taxed in carrying out the effective program laid down by Commissioner R. B. Stoeckel. McMurtry's decision to relinquish his work was taken quickly, it is intimated, and it is by no means a foregone conclusion that his public service is at an end.

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BUICK'S BIG OUTPUT PROVES NO SURPRISE

Trade Had Sensed Rapid Absorption of 1923 Offerings—Success Due to Aggressive and Farsighted Personal Management—Sport Types Aid.

Last week's news that the Buick Motor Co. had set up a new production record occasioned small surprise in the trade, which had been noting the popular reception of the 1923 line since its disclosure August first and drawing its own conclusions. A point less obvious, but no less important, however, is that this again has been the direct result of keen executive foresight and judicious planning.

In other words, the demand that justified the building of 737 cars a day during the last week of September was no accident, but a result long foreseen and carefully prepared. So, too, was the quick response to the maroon-finished, khaki-topped sport types, which might be looked upon as an afterthought, but actually constitute an essential part of the plan for the current season.

Back of the early fall spurt which the line has taken lies the push of intelligent, forceful and entirely personal management. Buick, while it is one of the most remunerative divisions of the General Motors Corp., enjoys the distinction of possessing an organization that has long been regarded as inseparable from it, and which has not only grown up with it, but literally made the business its own. This unity of purpose and execution is largely an outgrowth of its guiding personnel, notably President Harry H. Bassett and General Sales Manager E. T. Strong.

Bassett, a prodigious worker, concerns himself rather less with his other official duties, than with the direction of production and general factory management. A practical manufacturer of many years experience, dating back to the early days of the Remington Arms Co., he is familiar with all the problems that beset the producer of so complicated a product as the modern automobile, and he is also blessed with ability to keep his huge plants thoroughly abreast of the times.

Strong, one of the industry's outstanding champions of the doctrine of fitness, is a wellspring of energy, but a sound and experienced judge of automobile requirements besides. Punctilious to the last degree, it is said that no detail is too small to merit his exact attention, but that no amount of detail can ever weary him or destroy his perspective of the market.

Thus, when the needs of Buick dealers during the coming year were under consideration, many months ago, it was seen that something more than a mere enhancement of Buick values, already accepted without question would be necessary to continue the upward course of the business. The increasing demand for closed cars was exhaustively studied and successful conclusions reached, as the sequel abundantly demonstrates. But over and above that, it was seen that a by no means inconsiderable section of the buying public had grown weary of somber appearance and had begun once more to yearn for colorful appearance and unmistakable novelty and "snap" in a really good car. This demand, practically without expression in the popular-priced lines at the time it was sensed, was met by the sport models, which are now proving an even stronger selling feature than had been anticipated, and which have added a fine touch to the commanding power of the line.

TABLE GROWS IN VALUE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 759-61 of this issue. It is revised to October 3.

Last week's closed-car show in New York was of unusual trade importance this year. Possibly you were unable to be there. Never mind. Consult the closed-car columns of the Table and you have the show in a nutshell.

One of the most valuable features of this Table is the readiness with which it lends itself to making practically any kind of analysis of the automobile market. Witness, in evidence, the study of closed-car costs in relation to open-car prices appearing in this issue. All data were gathered solely from the Table.

C. B. Wilson Resigns from Overland

Charles B. Wilson, vice-president and general manager, Willys-Overland Co., has presented his resignation, which has been accepted with regret, it was learned late this week. While discontinuing active association with the Company, he will continue a factor in its affairs as director in several subsidiaries and president of the Wilson Foundry and Machine Co.

Oakland Output 150 Daily

Oakland Motor Car Co. has increased operations to the point where current output is averaging 150 cars a day. Booked orders indicate that this schedule is likely to be maintained for some time and since the Company's fuel and material requirements are amply provided for, no interruption to operations is anticipated.

Jordan Production Up 100 Per Cent

Jordan Motor Car Co. production figures for the first nine months of 1922 show an increase of considerably more than 100 per cent against the same period of 1921. Edward S. Jordan, president, asserts that 60 per cent of output is now of enclosed types. Orders for broughams and sedans are declared to be coming in faster than the factory can fill them.

500,000 WANT STARS AS OPERATIONS START

Accept 231,000 Orders for Delivery in Next 15 Months—Durant Expects to Build 300,000 of All Lines in That Period—Six Plants at Work.

In a bulletin issued to the 80,000 stockholders of Durant Motors, Inc., and associated companies late this week it was stated that capacity production for the next 15 months is now assured for all Durant plants, the production schedule calling for the manufacture of more than 300,000 automobiles. The bulletin contains an announcement by Carroll Downes, president of Star Motors, Inc., to the effect that orders for approximately half a million Star cars have been received and that orders with deposits for 231,000 Star cars have been accepted, with deliveries spread over a period of 15 months.

These Star cars together with the complete line of Durant four- and six-cylinder models, will be manufactured in the plants operated by divisional companies of Durant Motors, Inc. Approximately 40,000 Durant cars were manufactured during the first year of operations ending October 1. The wholesale value is placed by the Company at $36,500,000. Six Durant plants are now in operation and the seventh, the big plant at Elizabeth, N. J., will be in production by the end of the present month.

The stockholders are advised that "Of the 86 American manufacturers of automobiles, only five produced more cars than Durant in the month of July, 1922." Referring to the financial position of the Company, the bulletin says: "Due to the character of its contracts, both for the manufacture of its materials and the sale and distribution of its products, Durant Motors, Inc., enters its second year of production with a substantial cash surplus, an exceptionally small plant investment for the volume of business contracted, and an unusually good prospect for continued profit-making."

Oldsmobile Wires Driveaway Warning

Distributers of the Oldsmobile within a radius of 1,000 miles of the factory were telegraphed this week by Guy Peaseley, sales manager of the Olds Motor Works, to plan for driveaways if they hoped to get cars within the next 90 days. One hundred and five cars were driven away last week, due to the railway congestion, it was announced.

Reo Stages Big Driveaway

One hundred and seventy-five speed wagons and Reo cars left the factory at Lansing for Ohio points this week by "driveaway." The caravan was driven away by close to 200 men under the leadership of H. C. Adams, Fostoria, O., distributer for the northern part of that State.

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CHAMBER URGES SNOW REMOVAL ON HIGHWAYS

Brings Necessity to Attention of Federal and State Agencies—Freight Congestion Bound to Cause More Driveaways, Is Belief.

As railroad congestion and freight embargoes continue to increase, shipping difficulties, driveaways and motor vehicle transport become natural expedients and will consequently increase. With this in mind, the National Automobile Chamber of Commerce this week states that through its traffic department, in charge of J. S. Marvin, it has brought the necessity of snow removal on an extensive scale to the attention of the Bureau of Public Roads and State Highway departments.

The Chamber has been active during the past several weeks impressing railroad officials with the large volume of automobile production and its shipping requirements. The American Railway Assn. Car Service Division, at Washington, has been kept advised and urged to maintain its general instructions which require that automobile cars be moved promptly, loaded or empty, to the lines of the roads owning the cars or nearest automotive territory. The rules prohibit loading these cars with traffic which takes them out of route, either to the owning road or the territory where this equipment is required, for automotive loading. Special attention is directed to the repair of automobile cars.

With railroads, one after the other, issuing embargoes against accepting freight from connecting lines, the opinion is quite generally entertained that these conditions will continue during the next several months. There may be some abatement, dependent upon volume of traffic and weather conditions, but there are abnormal quantities of coal to move, large crops, and revenue freight car loading approaching record figures. These conditions are likely to exert a restrictive influence on steel and other manufacturing industries dependent on extensive transportation facilities.

Locomobile Sale Soon

Final steps in the adjudication of the affairs of the Locomobile Co. of America, preliminary to its formal sale to W. E. Durant, were begun in Bridgeport, Conn., on October 3 with the filing in the bankruptcy court of schedules of assets and liabilities. The assets are estimated at $3,129,200 and liabilities at $5,908,161. There are approximately 900 creditors.

Gray & Davis Prosper

Gray & Davis operating statement for August shows net profits after all charges of $26,586. For the eight months to August 31 net profits after all charges amounted to $180,710 and for the full year are expected to approximate $275,000. Prospects for new business are bright, it is reported, and October business already in sight shows an improvement over September, which latter month will probably prove to have been slightly "off" from August.

CAR MAKERS DRAW FOR NATIONAL SHOW SPACE

(*Continued from page 717, second column*)

a regular meeting, learned that indications point to a production of 205,950 cars and trucks in September. This is nearly one-third better than September last year, though representing a seasonal decline from August.

Monthly factory sales figures for the three quarters of 1921 and 1922 are:

	1922	1921
January	$90,481	$51,919
February	120,293	65,218
March	171,390	109,758
First quarter	$382,164	$226,895
April	$219,294	$156,892
May	255,167	163,667
June	289,120	177,757
Second quarter	$763,581	$498,316
July	$244,355	$176,067
August	272,094	178,831
September*	*205,957	157,404
Third quarter	$722,406	$512,302

*N. A. C. C. September, 1922, estimated from traffic reports.

Trade reports from the field indicate that October business will be good, though, as usual, it will be considerably under the summer months. The closed car business is helping the fall market.

Two-Months of Swedish Show

Royal Automobile club of Sweden announced this week that it will sponsor an international automobile exhibition to be held at Gothenburg from May to July, 1923. It will form part of the tercentenary exposition which will be the largest of its kind ever held in Sweden.

The Traffic Problem

FOR four months AUTOMOBILE TOPICS has presented in this space discussions of the varied phases of that huge problem, Traffic. The subject could not be fully considered in these eighteen nor in any eighteen hundred articles. It is too broad; the problem is as great as the diversity of the peoples of the Country.

Yet the response to these discussions has not been light. In other columns this is more fully set out. Here it is desired to present in conclusion what is perhaps the latest suggestion and also mayhap—one of the best for increasing the margin of safety on the highways.

Briefly, then. Fire prevention has been revolutionized by the activities of fire insurance companies. The casualty companies have achieved results little short of perfection in the prevention of industrial accidents. Now come the automobile insurance concerns proposing to start one of their highly effective yet subtle campaigns against motor car accidents. David Van Schaack, director of the bureau of inspection and accident prevention of the Aetna Life, is spokesman:

"While this campaign is undertaken for reasons of good business, its conduct will be, at the same time, the fulfillment of a social function which properly attaches to the business of insurance. * * * The rapid and startling increase in the automobile hazard practically demands that insurance become a conservator as well as a fiduciary and distributing agency in the matter of automobile accidents. It is in the interest of insurance that automobile rates be kept within bounds, for a high rate of insurance not only develops a pronounced sales resistance, but it is actually less profitable to insurance companies.

"Furthermore, while it is in the interest of public policy that there should be a means through automobile insurance of distributing the shock of individual losses as well as of making payment for such losses certain, it is equally in the interest of the public policy that there should be no diminution through automobile insurance of the sum total of responsibility for the prevention of loss, which is more important to society than the payment for loss."

The plan is discussed elsewhere. The ramifications of it are stupendous. What is more gratifying, such a drive is bound to get results for it hits hardest where the blow is most felt—in the purse.

Automobile Makers and Dealers Helped Make It—Now, Help Solve It!

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DEFINES STATUS OF FINANCING COMPANY

President Cooper of G. M. A. C. Tells Need of Specialized Service Which Such Companies Can Render—Should Supplement, Not Supplant Banks.

Conditions peculiar to the distribution and marketing of automobiles create a large legitimate field for financing companies. In urging the development of such companies, however, C. C. Cooper, president of the General Motors Acceptance Corp., emphasized during the week of the American Bankers' Assn. convention, that financing companies should be supplementary to banks and not supplant these latter institutions. The function of the finance company, as he expresses it, is to provide the necessary specialized credit and banking service which the average bank is not equipped to render.

The needs for specialized service arise, first, from the necessity of uniform production the year round by manufacturers which entails storing of cars during the season of lower sales, awaiting the season of greater sales, with the burden of storing falling upon distributer and dealer. This is on the wholesale end.

The second need is on the retail end. It follows that merchandising of such a high-priced commodity unit as the automobile should necessarily entail retail credit sales. The bank is not equipped or organized to handle such time-payment sales.

"The situation creates a large legitimate field for the financing company," Cooper continues, "but it should not be actuated by a desire to usurp the functions of the local banks. It should be supplemental in its service. Its activities should not aim to wean the dealer from his bank relationship, but rather to stimulate this relationship by aiding him in utilizing his potential merchandising strength to the benefit of himself, his bank and all concerned.

"The automobile financing company should represent a scientific application of standard credit methods to the peculiar needs of the automobile merchant. As a merchant, the automobile dealer should be worthy of full confidence and by the same token should accept 100 per cent responsibility for his buyer credits.

"The financing company stands in the same relative position as his banker, although in a supplemental capacity. There is no element in the merchandising of automobiles which demands that the worthy merchant be absolved from underwriting his purchaser credits, and certainly there is no element in the situation which precludes the exercise of sound banking practices by the company specializing in automobile purchaser credits.

"The financing company finances itself by discounting its obligations with banks, and secures the bulk of its requirements in three principal ways, namely, by direct sale at discount of obligations purchased arising from wholesale transactions, by hypothecating collateral to secure its own obligations which are sold to banks in the open market, and by borrowing direct against credit lines."

TEACH THE BOY ABOUT MOTORS!

ALLOW me to offer my heartiest congratulations on the campaign of your magazine to interest school children in the internal combustion engine.

A better understanding of the mechanics of the gasoline motor will lead to much lowered expenses in the cost of operation, with consequent wider markets for the industry.

The study of this subject on the part of the children will also bring to light economic possibilities of motor transportation and will help to spread the realization of the statement by President Harding in which he said —"The motor car has become an indispensable instrument in our political, social and industrial life."—*Alfred Reeves, General Manager, The National Automobile Chamber of Commerce.*

Seeking New Color Combinations

Manufacturers of the higher-priced and more costly cars are seeking new color combinations as a means of intriguing the sensitive and often highly-trained eye of the buyer of exclusive products. These may become more pronounced during the coming year as the monotony of the common run of stock car finished affords a good background for more distinctive selections. The marked success of the Buick in popularizing the rich maroon that distinguishes its current sport types, is also recognized as exercising a powerful influence on the trade, since this has been a hue largely reserved by the makers of more expensive cars. Other manufacturers are already beginning to follow the Buick lead in adopting more brilliant finishes, and in consequence the members of the "upper ten" are looking to their laurels.

Stutz Running Full

Despite the seasonal expectation of less business during the Fall than in the earlier months of the year, the Stutz Motor Car Co. is running full blast. Sales Manager Fred Wilson is authority for the statement that September proved the biggest month ever had.

SHOW WILLYS-KNIGHT TO BRITISH ON NOV. 3

Sir William Letts, Managing Director of European Distributers, Tells of Plans —Price Cut to Add to Popularity Abroad, He Believes.

Willys-Knight cars will be placed on the British market at the annual Olympia Exhibition opening November 3, according to Sir William Letts, managing director of Willys-Overland-Crossley, Ltd., £1,000,000 London distributing concern, who is in America visiting the Toledo plant. Sir William anticipates a big demand for both the Knight and the Overland, due in part to the recent price cuts.

"At the Overland factory at Heaton Chapel we have developed a British model DeLuxe," Sir William States. "This is most popular. It conforms to our English and Continental styles and demands. The chassis is built partly from parts purchased from the Toledo factory and from parts which are manufactured in England. The design of the body is entirely British and is manufactured complete at our body works at Stockport where we have a capacity of 100 bodies a day, if necessary.

"The body is a composite, beautifully upholstered in real leather, with a British windscreen, hood and side curtains making it a complete all-weather body. There is no doubt that the coming season will see very big sales on this model.

"The demand for the American car is simply for the cheaper model. I have noticed a statement that there is a demand for the higher priced American cars in England. The manufacturers of high priced and high powered American cars will be sadly disillusionized if they think there is a market for this type of car in England.

"We are planning to assemble and distribute in Great Britain alone, a minimum of 7,000 cars next year, with a few thousand scheduled for our export division which is controlled by the British company, and which includes Belgium, Holland, Scandinavia and other countries.

Ford Breaks a Precedent

Henry Ford went on record this week with an emphatic denial of four rumors, pretty widely circulated and in some quarters credited to some extent as truth. The quartet of questions put to him and to which he replied "No," were: Was he going to take over the Wills Sainte Claire, was C. Harold Wills to become manager of the River Rouge plant, was the Firestone Tire & Rubber Co. to take over the Dearborn factory and remodel it into a tire plant, and were the Highland Park activities to be moved to Spring Wells.

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PRIVATE QUOTATIONS

Quotations of some of the inactive securities of concerns allied with the automobile industry are printed below. These are shares seldom if ever quoted in the more central stock exchanges. The prices in some instances represent "last known sales," and in others are merely nominal as the amount of trading in them is insufficient to constitute a recognized market. Publication of the figures, therefore, merely constitutes a record of the existence and appraisal of the issues.

	Quotations
Acme Motor Truck Co., pfd	$10
Acme Motor Truck Co., com	14
Acme Rubber Mfg	180
Akron Rubber Mold & Machine Co., com.	160
American Bronze Co., pfd	100
American Bronze Co., com	100
American Hardware Corp	175
Anderson Motor Co., pfd	10
Anderson Motor, com	10
O. Armleder Co., com	10.64
O. Armleder Co., pfd	100
Auburn Automobile Co., com	34-45
Auburn Automobile Co., pfd	92-95
Automobile Screw Products, com	115
Avery Co., com	110
Avery Co., pfd	100
Baker, R. & L., Co., pfd	100
Baker, R. & L., Co., com	110
Bessemer Motor Truck Co., pfd	100
Bessemer Motor Truck Co., com	15
C. L. Best Tractor Co., com	350
C. L. Best Tractor Co., pfd	93.50
Becker Brothers, Inc., pfd	100
Bijur Motor Appliance Co., 1st pfd	100
Bijur Motor Appliance Co., 2d pfd	100
Black & Decker Mfg. Co., com	25
Black & Decker, pfd	25
Bock Bearing Co., com	125
Bock Bearing Co., pfd	100
Bower Roller Bearing Co., com	13
Brieze Mfg., com	7.50
Brewster & Co., Inc	100
Champion Motors Corp., pfd	10
Champion Motors Corp., com	5
Clark Equipment, pfd	100
Clark Equipment, com	100
Collier Motor Truck, pfd	10
Collier Motor Truck, com	10
Continental Guaranty, com	90-100
Continental Rubber Works	100
Corbitt Motor Truck, pfd	95
Corcoran-Victor Co., com	15
Corcoran-Victor Co., pfd	90
Corning Glass Works, pfd	100
Covert Gear Co., Inc., com	100
Covert Gear Co., Inc., pfd	100
Corbitt Motor Truck, com	50
Cowles & Co., com	25
Cupples Co., 2d pfd	100
Cupples Co., com	100
Cupples Co., 1st pfd	100
Dissinger, C. H. A., & Bro., com	100
Double Fabric Tire Co., com	75
Double Fabric Tire Co., pfd	100
Duplex Truck Co., com	11
Durston Gear Corp., com	100
Eclat Rubber Co., pfd	100
Eclat Rubber Co., com	15
James Cunningham, Son & Co	125
Electric Storage Battery Co	100
Elkhart Carriage & Motor Car, "A" pfd	100
English & Mersick, com	100
Fageol Motors, pfd	10
Fageol Motors, com	10
Falls Rubber Co., com	200
Frick Co., 20,000 com	76
G. & O. Mfg. Co	179
Gates Rubber Co., pfd	100
Grand Rapids Tire & Rubber Corp., com.	50
Guaranteed Liquid Measure Co	10
Hanson Motor Co., com	100
Hanson Motor Co., pfd	100
Harris Oil Co., com	100
Hayes Motor Truck Wheel Co., com	100
Haynes Automobile, pfd	100
Haynes Automobile, com	100
Hawkeye Tire & Rubber Co., pfd	24
Hawkeye Tire & Rubber Co., com	20
H. C. S. Motor Car Co., pfd	100
H. C. S. Motor Car Co., com	100
Hanes Rubber Co., pfd	98
Hanes Rubber Co., com	8
Hicks-Parrett Tractor Co., com	10
Hicks-Parrett Tractor Co., pfd	10
Holly Carburetor Co	138
Hood Rubber Co., pfd	97-98
Hood Rubber Co., com	50
Jefferson Forge Products, com	10
Kalamazoo Motors Corp., com	10
Kline Car Corp	100
Lexington Motor, 1st pfd	100
Lexington Motor, 2d pfd	100
Lexington Motor, com	5
McFarlan Motors, pfd	10
McFarlan Motors, com	10
McLean Tire & Rubber Co., pfd	100
McLean Tire & Rubber Co., com	100
Majestic Tire & Rubber Co., com	35
Master Primer Co., com	150
Master Trucks, pfd	100
Menominee Motor Truck Co., com	100-110
Milburn Wagon Co., com	100
Milburn Wagon Co., pfd	100
Moreland Motor Truck Co	104
Nebraska Tire & Rubber Co., pfd	50
Nebraska Tire & Rubber Co., com	50
New York Transportation Co., com	19
Norma Co. of America	100
Odell Rubber Co., com., voting	45
Odell Rubber Co., non-voting	45
Parker Axle Products Corp., pfd	10
Parker Axle Products Corp., com	12.50
Parker Tire & Rubber Co., com	10
Parker Tire & Rubber Co., pfd	10
Penberthy Injector Co., com	25
Penberthy Injector Co., pfd	92-95
Philbrin Corp., pfd	175
Philbrin Corp., com	100
Pennsylvania Rubber Co., com	250
Pilot Motor Car Co., pfd	100
Pilot Motor Car Co., com	305
Powertown Tire Corp., pfd	50
Powertown Tire Corp., com	50
R & V Motor, "A," pfd	95
R & V Motor, "B," pfd	100
R & V Motor, com	10
Reynolds Spring, "A," pfd	100
Reynolds Spring, "B," pfd	100
Salisbury Axle, pfd	400
G. A. Schacht Motor Truck Co., pfd	100
G. A. Schacht Motor Truck Co., com	100
Signal Truck Co	10
Sewell Cushion Wheel Co., pfd	100
Sewell Cushion Wheel Co., com	10-20
Sioux City Tire & Mfg. Co., pfd	20
Sioux City Tire & Mfg. Co., com	5
Surety Tire & Rubber Co., com	1.50
Stanley Motor Carriage Co., 1st pfd	100
Stanley Motor Carriage Co., 2d pfd	100
Staybestos Mfg. Co., pfd	50
Staybestos Mfg. Co., com	50
Troy Foundry & Machine Co., pfd	100
Traveler Rubber Co., com	27.50
Union Switch & Signal, pfd	75
Union Switch & Signal, com	75
U. S. Motor Truck, pfd	100
U. S. Motor Truck, com	100
Velie Motors Corp., com	15
Velie Motors Corp., 1st pfd	60
Waltham Watch Co., pfd	43
Waltham Watch Co., com	9½-10

RATIFY MERGER PLAN OF ALLOY STEEL COMPANIES

Electric Alloy and Atlas Crucible Stockholders Agree

Finishing touches to the proposed merger of the Electric Alloy and the Atlas Crucible steel companies were given by stockholders of the former concern when they ratified the combination at Youngstown on October 2. Shareholders of the Atlas company took similar action some time ago. The properties have been taken over by a new corporation chartered under the laws of New York and known as the Atlas Steel Corp.

The capital structure of the new concern is $2,000,000 bonds, $1,000,000 debentures, $2,000,000 bank loans, $500,000 of prior preference stock, $6,000,000 of seven per cent cumulative preferred stock, of which $5,000,000 will be issued, and 100,000 no par value common. Offices of the new concern will be maintained at Dunkirk, N. Y. It will be the second largest maker of fine steels in the Country, ranking after the Crucible Steel Co. of America.

Stewart-Warner Sales High

Stewart-Warner Speedometer Corp. sales this year are 80 per cent in excess of a year ago and one-third more than in all of last year. In the third quarter no let-up no letup was apparent.

SECURITIES QUOTATIONS

Published quotations of the more active automobile securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended October 4. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High.	Low.
Advance Rumely	19	17
Advance Rumely, preferred	56	54
Ajax Rubber	16⅞	13⅝
Allis-Chalmers	58⅜	53⅜
Allis-Chalmers, preferred	102	101½
American Bosch Magneto	42½	40¼
Case (J. I.) Plow	5	5
Chandler Motor	62⅝	59¾
Chicago Pneumatic Tool	82½	78
Continental Motors, common	10⅜	9¾
Daniels Motor	11	10½
Durant Motors	48½	43¾
Durant Motors of Indiana	13¾	12½
Fisher Body	125½	118
Fisher Ohio Body, preferred	94	92½
Fisk Rubber, common	13⅜	12⅜
General Motors, common	14½	14
General Motors, preferred	85	84⅜
General Motors, 6% deb	83⅜	84
General Motors, 7% deb	98¼	98
B. F. Goodrich, common	35½	32⅞
B. F. Goodrich, preferred	83¾	82
Goodyear, common	10¼	9¾
Goodyear, preferred	29	28¾
Grant Motors	42c	42c
Gray & Davis	12½	11⅝
Hayes Wheel, w. i	33⅞	33⅛
Hudson Motor Car	21½	20½
Hupp Motor Car, common	23	21⅛
International Harvester, new	111	105¼
*Kelly-Springfield Tire, common	44¼	39
Kelly-Springfield, pf. (8)	103	102
Kelly-Springfield, pf. (6)	83	83
Kelsey Wheel	100	94½
Keystone Tire	9⅜	7⅜
Lee Rubber	26½	25
Lincoln Motors	2	2
Mack Trucks	59⅝	55
Mack Trucks, 1st pf	92⅞	88½
Martin-Parry	31⅜	28½
Maxwell Motors, Class A	57½	56¾
Maxwell Motors, Class B	18¼	17¾
Mercer Motors	3	2¾
Moon Motors	17½	14¾
Mullins Body	19½	19¼
Parish & Bingham	11½	11
Pierce-Arrow, common	14½	12¾
Pierce-Arrow, preferred	35¾	31¾
Reo Motors	13⅜	12¾
Republic Motor Truck	3	2¼
Saxon Motors	4⅞	4⅛
Stewart-Warner Speedometer	52¾	49¾
Stromberg Carburetor	56	50½
Studebaker, common	129⅜	123¾
U. S. Light & Heat	1⅛	1⅛
U. S. Rubber, common	53½	49½
U. S. Rubber, 1st preferred	100	96
Westinghouse Air Brake	101	100
Westinghouse Electric & Mfg.	62⅜	60¾
White Motors	51½	48
Willys-Overland, common	7⅜	6⅛
Willys-Overland, preferred	44¾	40¼

*Par $25.

Prices for automobile securities quoted in Detroit during the week ended October 4, are as follows:

	High	Low
Auto Body	4	3
Charcoal Iron, common	1¾	¾
Charcoal Iron, preferred	2½	2
Columbia Motors	3¼	2⅛
Commerce Motor	5½	3
Continental Motor	10⅛	9¾
Edmund & Jones, common	26½	24
Federal Truck	20	17
Ford of Canada	415	400
Motor Products	89½	85
Motor Wheel, common	13	12¼
Packard Motor, common	15⅝	14½
Packard Motor, preferred	91	87½
Paige-Detroit Motor Car, common	23	22
Reo Motor (new)	13⅞	12¾
Timken Axle, common	29	27¾
Timken Axle, preferred	90½	88
Truscon Steel, common	20	16½
Truscon Steel, preferred	10¼	9¾

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SAXON REFINANCING PROGRESSES NICELY

Directors Announce Sale of 200,000 New Shares to New York Brokers—Old Stockholders Given Right to Purchase Share for Share at $7.50.

Refinancing of the Saxon Motor Car Corp., sketched in AUTOMOBILE TOPICS under date of September 23, is progressing with gratifying expedition. As recorded in these columns, the newest and third financing of the Corporation is in the nature of an issuance of new stock.

The Board of Directors, it is now revealed, have sold the 200,000 shares of additional common to W. G. Souders & Co., New York city and Chicago, and associates, upon the condition that the Souders company underwrite the sale of the stock subject to the obligation to offer to each present stockholder of the Saxon corporation the privilege of purchasing one share of the newly authorized stock for each share now owned at a price of $7.50. The Corporation is to be paid $750,000 in cash and $1,000,000 par value of its now outstanding preferred stock will be cancelled and retired.

The additional shares were accepted for listing by the New York Stock Exchange on September 13, and in order to take advantage of the privilege of subscription at the price named, it was necessary for the present stockholders to accept the offer and make payment for the stock not later than October 2. The number accepting the offer was not announced this week.

Standard Parts to Make Payment

A. V. Canno, attorney for the receiver of the Standard Parts Co., Cleveland, was given court authority this week to make a further payment to creditors in the form of a dividend. The disbursement will consist of another five per cent, payable on October 15, and will make 30 per cent paid to that date since the bankruptcy.

Set Final Premier Distribution

Notice was issued this week by Indianapolis courts that all creditors having claims against the Premier Motor Corp., bankrupt, must present them at the office of the Fletcher Savings & Trust Co., Indianapolis, receivers, on or before October 25 in order to participate in distribution of assets. The receivers assert the Reorganization Committee "is still working toward a successful conclusion of the reorganization."

Canadian Ford Earns 71 Per Cent

Net earnings of the Ford Motor Co. of Canada for year ended July 31, 1922, were $5,006,521 after charges, equal to $71.52 on the outstanding capital stock of $7,000,000. This showing was made despite sales falling off $8,563,000 to $29,273,254 as compared with the previous year. Production was 45,000 cars and 1,192 tractors, as against 46,000 cars and 3,063 tractors last year. Balance sheet shows profit and loss surplus as of July 31, $12,537,972; cash, $6,147,715; investments, $3,971,184; receivables, $1,017,192; plant $4,560,908; and materials, $9,806,276.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended October 4, are as follows:

	High	Low
Firestone	79	75
Fisher, Ohio	45	45
Fisher Body, Ohio, preferred	97	97
Goodyear	11	9⅝
Grant	½	⅜
Grant, preferred	5⅞	3
Jordan, common	240	210
Jordan, preferred	85	80
Peerless	60	59
Standard Parts	4	3½
Standard Parts, preferred	25	18⅝
F. B. Stearns	23½	21½
Torbensen Axle	26	24½
W-S-M, common	40	34
W-S-M, preferred	73	70
Winton, preferred	35	28

Prices for rubber securities quoted in Akron during the week ended October 3, are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	78	73
Firestone, 6% preferred	88	84½
Firestone, 7% preferred	93	88½
General Tire, common	300	250
General Tire, preferred	97	95
B. F. Goodrich, common	34	33
B. F. Goodrich, 6½% preferred	102	101
B. F. Goodrich, 7% preferred	86	81
Goodyear, common	11	9¼
Goodyear, preferred	30	28
India, common	80	78
Marathon, common	3	2½
Mason, common	10	7
Mason, preferred	55	45
Miller Rubber, common	72⅛	70
Miller Rubber, preferred	101	98
Mohawk Rubber	20	10
Mohawk Rubber, preferred	80	70

DIVIDENDS DECLARED

Continental Motor Corp.—Regular, quarterly dividend of 1¾% on the preferred stock; payable October 15, 1922, to stockholders of record October 7, 1922.

Firestone Tire & Rubber Co.—Regular, quarterly dividend of 1½% on the 6% preferred stock; payable October 15, 1922, to stockholders of record October 1, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.50 on the preferred stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.50 on the 6% debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.75 on the 7% debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8% preferred stock; payable November 15, to stockholders of record November 1, 1922.

Miller Rubber Co.—Regular, quarterly dividend of 2% on the preferred stock; payable December 1, 1922, to stockholders of record November 10, 1922.

Moon Motor Car Co.—Regular, quarterly dividend of 25 cents; payable November 1, 1922, to stockholders of record October 16, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

New England Tire & Rubber Co.—Dividend of 2% on the preferred stock; payable October 15, 1922, to stockholders of record September 15, 1922.

PLAN REORGANIZATION FOR REPUBLIC TRUCK

Receivership Necessary to Further Program, Corporation Declares—Assets Said to Exceed $7,000,000—Sales Division Not Affected by Court Action.

Officials of the Republic Motor Truck Co. this week declared the receivership, reported in AUTOMOBILE TOPICS under date of September 30, was set up with the concurrence of the Company and its largest creditors and is a step necessary in connection with the carrying out of a plan of reorganization. The petition of the Acme White Lead & Color Works, creditor to the extent of $4,000, was the one granted by the courts.

Assets of the Company are said to exceed $7,000,000 and the business will be continued with Colonel Smith in charge of operations. The Company is one of the oldest specializing in trucks and has something over 75,000 in service throughout the Country. The Republic Motor Truck Sales Corp. will not be affected by the Court action.

In November, 1921, the Company made arrangements for the deposit and extension of $2,500,000 seven per cent mortgage notes outstanding and a voting trust committee was created with which preferred and common stockholders were asked to deposit their holdings to insure stability and continuity of management. The plan contemplated a five-year extension of the notes outstanding, $500,000 of which were due. In consideration of the extension of notes, the company was to increase the interest rate to eight per cent and redeem annually $300,000 of notes beginning November 1, 1923.

Continental Motor to Expand

Stockholders of the Continental Motor Corp. at a special meeting in Richmond, Va., on October 18, are to vote on the proposal to authorize 3,000,000 shares of no par value common stock of which 1,460,845 are to be exchanged for the present outstanding. The remainder will be offered for subscription at the discretion of the directors. Outstanding common has a par value of $10 a share.

Traylor Engineering Lists Assets

Total assets of the Traylor Engineering & Manufacturing Co., Allentown, Pa., as of June 30, 1922, are shown on the Company's balance sheet of that date as amounting to $5,452,630, approximately a million dollars below the similar item as reported in 1921 on July 31. Current assets, including cash, $59,542; accounts receivable, $461,767 and inventories, $1,482,169, total $2,016,279, or about $236,000 less than last year at that date. These compare with current liabilities totaling $223,545, which figure is nearly one million dollars less than the sum in July, 1921.

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CLOSED CAR PRICES IN DOWNWARD TREND

(*Continued from page 717, second column*)

the price scale, it is now possible for the purchaser to select a sedan at practically the same price as a touring car of one or more other makes, choosing from a list of several makes, and satisfying his own inclination as to the number of cylinders

To illustrate the present concentration, it may be assumed that a buyer having $2,000 to spend on an automobile might be persuaded to add another $100 in order to secure a car that exactly suited his needs, and certainly would be delighted to find a suitable car costing $100 less than that amount. Such a purchaser now has practically a score of models to choose from—twelve sedans and seven touring cars, to be exact, of which four have four-cylinder engines, 14 six-cylinder engines and one an eight. Here is the list:

Price.	Make and Model.	Cyl.	Type.
$1,945	Grant	6	Sedan
1,950	Franklin	6	Touring
1,950	Willys-Knight	4	Sedan
1,985	Buick	6	Sedan
1,985	Rickenbacker	6	Sedan
1,985	Templar	4	Touring
1,990	Westcott "D-48"	6	Touring
1,995	Anderson "40"	6	Sedan
1,995	Columbia Challenger	6	Sedan
1,995	Elcar	6	Sedan
2,000	Frontenac	4	Touring
2,000	Pilot "6-50"	6	Touring
2,025	Oldsmobile	8	Sedan
2,050	Studebaker Spcl.	6	Sedan
2,095	Crow-Elkhart	6	Sedan
2,095	Liberty	6	Sedan
2,150	Comet "C-53-2"	6	Touring
2,195	Paige "6-66"	6	Touring

By contrast, a similar comparison made in these columns last January showed within the same price range a total of ten cars. Of these, seven were sedans and three touring models.

The immediate conclusion is that the downward price movement has had a strong influence in stimulating direct competition between open and closed types within the same price classes. This is absolutely correct.

The general price tendency on all lines is still downward, although further reductions on touring cars are not seriously anticipated at the moment. With respect to closed cars the downward tendency is more pronounced, however, and will so continue as manufacturers successively attain volume production on such models. In fact, it is naturally to be expected that the more conspicuous price developments of the next twelve months will be in closed cars, and that hitherto unexampled values will result.

Comparison of the figures here presented and those appearing in a somewhat similar analysis presented by AUTOMOBILE TOPICS, January 28, 1922, substantiates the statement previously made as to the general downward trend, and also the tendency in most cases to reduce the ratio of advance of the closed- over the open-car price. More than eighty prices, as of January and October, are found to be comparable. These are the basis for the conclusions stated.

Considering sedans only, ten of the list have been reduced in price $100 or less; 15 have been reduced more than $100 but not

THE CLOSED-CAR MARKET CLEARLY DEFINED—

Car and Model	Sedan† Price	Seats	Added* Equipment	Advance Over Touring Actual	Advance Over Touring Per Cent	Two-Door Type† Price	Seats	Advance Over Touring Actual	Advance Over Touring Per cent
FOUR-CYLINDER CARS									
Ford	$645‡	5	Starter-Dem. Wheels	$202	45	$580	2	$137	31
Star	645‡	5	Starter-Dem. Rims..	202	45	580	2	137	31
Gray	760	5	.....	250	41	760§	4	270	55
Chevrolet "Superior"	860	5	C	335	64	680§	2	155	29
Willys-Overland	875	5	.....	250	48	795	2	270	51
Dort	1,095§	5	B	210	23	1,045§	5	160	18
Dodge Brothers	1,195§	5	C,N,V,P	315	37	980§	2	100	11
Maxwell	1,335	5	C,D,K,P,T	450	51	985	2	100	11
Gardner	1,345	5	C,D,H	450	50	1,095§	2	200	22
Elcar Four	....	..	.....	....	..	1,345	3	250	22
Durant Four	1,365	5	C,P,V	475	53	1,365	4	475	54
Buick Four	1,395	5	B,D,P	510	58	1,175	3	290	33
Essex	....	..	.....	....	..	1,245§	5	200	19
Chevrolet "FB-50"	1,395	5	.....	510	58	1,325	3	440	49
Dixie Flyer	1,395	5	D,G,N,O,V	400	40	1,395	3	400	40
Kelsey	1,450	5	.....	475	48	1,400	3	415	42
Nash Four	1,545	5	.....	610	66	1,275§	5	340	36
Oldsmobile Four	1,595	5	P,V	620	64	1,375§	5	400	41
Hupmobile	1,785	5	C,O,N,P,V	535	55	1,335§	2	185	16
Earl	1,795	5	C,E,H,N,T,V	700	64	1,395§	4	300	27
Saxon	1,795	5	.....	600	50	1,795	4	600	50
Willys-Knight	1,950	5	B	715	58	1,795	4	560	45
Willys-Knight	2,195	7	B	760	53	....	..	....	..
R & V Knight	2,475	5	A,B,G,O	810	49	2,385	4	720	43
Frontenac	2,750	4	.....	750	35	....	..	....	..
Templar	2,785	5	A,C,H,I,N,U,V	800	41	2,650	4	565	28
Handley-Knight	3,450	7	D,G,J,K,O	800	30	3,450	4	800	30
Stearns-Knight	3,450	5	.....	1,200	53	3,150	4	900	40
H. C. S. "IV"	3,475	5	C,2J,L,O,U,V	1,000	40	3,250	4	775	31
Stutz	....	5	.....	....	..	3,490	4	850	32
duPont	4,000	..	.....	800	25	3,800	..	600	18
Roamer "475-E"	4,650	4	.....	1,165	34	....	..	....	..
Mercer	5,250	7	B,G,2L,L	1,300	33	4,850	4	900	23
SIX-CYLINDER CARS									
Columbia Light Six	$1,395	5	H,J,K,V	$410	42	$1,295	3	$310	31
Jewett	1,465	5	B,V	470	47	1,445	4	450	45
Oakland	1,545	5	C,N,O,P,T,V	650	65	1,185§	2	190	19
Studebaker Light Six	1,550	5	B,D,C,G	575	59	1,225	3	250	26
Anderson "41"	....	..	.....	....	..	1,450§	4	255	21
Cleveland	1,585	5	.....	490	45	1,495	4	400	36
Elgin "K-1"	1,695	5	C,H,N	400	31	1,695	4	400	31
Moon "6-40"	1,695	5	B,N,V	400	31	1,595	4	300	23
Davis "71"	1,795	5	E,O	500	39	....	..	....	..
Chalmers	....	..	.....	....	..	1,595	4	410	34
Velie "58"	1,795	5	D,H,N,P,V	520	41	1,795	5	520	41
Barley	1,850	5	D,H,P,Z	455	33	....	..	....	..
Reo	1,885§	5	C,D,K,N,T,V,Z	400	26	1,835§	4	350	23
Grant	1,945	5	C,D,E,H,I,N,O,P,T,V,ab	560	40	1,895	4	510	37
Buick	1,985	5	B,C,D,G,P,T,V	790	66	1,935	5	740	62
Rickenbacker	1,985	5	C,K,V,b	500	34	1,885	4	400	27
Anderson "40"	1,995	5	A,C,G,H,M,O,P	500	33	1,995	4	500	33
Columbia Challenger	1,995	5	.....	800	67	1,995	4	800	40
Elcar	1,995	5	C,D,H,N,O,P	600	43	1,975	3	580	41
Nash	2,040	5	D,R,V	800	64	....	..	....	..
Studebaker Special Six	2,050	5	B,D,G,S	775	60	1,875	4	600	47
Crow-Elkhart "H-6"	2,095	7	B,G,N	750	56	....	..	....	..
Liberty	2,095	5	C,D,H,K,T,V	700	50	1,695§	2	300	22
Courier (Maibohm)	2,165	5	N,P,V,Z	770	55	2,065	3	670	48
Davis "61"	....	..	.....	....	..	2,095	4	500	31
Nash Six	2,190	7	.....	800	57	1,890	4	500	36
Buick	2,195	7	B,C,D,P,G,T,V	760	53	1,895	4	460	32
Paige "6-44"	2,245	5	A,B,C,D	780	53	1,995	4	530	36
Mitchell	2,275	5	A,G,N,U	685	43	2,050	4	460	29
Hudson	2,295	7	B,D,H,U,V	720	46	1,625§	5	50	4
Auburn	2,345	5	D,G,H,O,V,Z	870	58	2,275	4	800	54
Columbia "Elite"	2,350	5	H	875	59	2,295	4	820	55
Chandler	2,375	7	B,D,H	880	59	1,995	4	500	33
Haynes "55"	2,395	5	D,G,H,K1,O,P,U,V .	900	60	2,095§	3	600	40
Durant Six	2,400	5	C,G,P,V	750	45	2,250	4	600	36

COURSE OF SEDAN PRICES TRACED FOR 1922—

FOUR-CYLINDER CARS

Name	1922 Oct. Price	1922 Jan. Price	Change Actual	Change Relative
Ford	$645	$645	Same	Same
Chevrolet "Superior"	860	875	—$15	—3%
Willys-Overland	875	895	—20	—2%
Dort	1,095§	1,645	—550	—46%
Dodge Brothers	1,195§	1,785	—590	—44%
Maxwell	1,335	1,485	—150	—17%
Gardner	1,345	1,595	—250	—28%
Durant Four	1,365	1,365	Same	Same
Buick Four	1,395	1,395	Same	+2%
Chevrolet "FB-50"	1,395	1,575	—180	—4%
Dixie Flyer	1,395	1,995	—600	—8%
Nash Four	1,545	1,835	—290	—10%
Oldsmobile Four	1,595	1,795	—200	+7%
Hupmobile	1,785	1,935	—150	Same
Earl	1,795	1,895	—100	+4%
Saxon	1,795	1,995	—200	—4%
Willys-Knight	1,950	2,395	—445	+1%
Templar	2,785	2,785	Same	Same
Handley-Knight	3,450	3,750	—300	—37%
Stearns-Knight	3,450	3,450	Same	Same
H. C. S. "IV"	3,475	3,650	—175	+8%
duPont	4,000	4,000	Same	Same
Mercer	5,250	5,650	—400	—10%

SIX-CYLINDER CARS

Name	1922 Oct. Price	1922 Jan. Price	Change Actual	Change Relative
Oakland	$1,545	$1,785	—$240	—6%
Studebaker Light Six	1,550	1,750	—200	—8%
Cleveland	1,585	1,595	—10	+12%
Elgin "K-1"	1,695	2,395	—700	—29%
Moon "6-40"	1,695	2,785	—1,090	—5%
Davis "71"	1,795	2,595	—800	—14%
Velie "58"	1,795	2,085	—290	+1%
Reo	1,885§	2,435	—550	—27%
Buick	1,985	2,165	—180	+11%
Rickenbacker	1,985	1,985	Same	Same
Anderson "40"	1,995	2,550	—555	—21%
Columbia Challenger	1,995	1,995	Same	+27%
Nash Six	2,040	2,390	—350	—8%
Studebaker Special Six	2,050	2,350	—300	+1%
Crow-Elkhart "H-6"	2,095	2,095	Same	Same
Liberty	2,095	2,245	—150	—23%
Courier (Maibohm)	2,165	2,165	Same	Same
Paige "6-44"	2,245	2,245	Same	Same
Mitchell	2,275	2,450	—175	—21%
Hudson	2,295	2,650	—355	—6%

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SHARP CONTRAST WITH PRICES OF OPEN CARS

Car and Model	Sedan† Price	Seats	Added* Equipment	Advance Over Touring Actual	Per Cent	Two-Door Type† Price	Seats	Advance Over Touring Actual	Per cent
Studebaker Big Six	$2,475	7	B,C,D,G,O,S	$820	50	$2,275	4	$625	38
American	2,485	7	A,C,D,G,H,N,T,U,Z,b	700	39	....	..	....	..
Moon "6-58"	2,485	7	B,N,U,V	300	17	....	..	....	..
Jordan "MX"	2,485	5	B,D,Z	690	38	2,485	5	790	44
Bay State	2,500	5	C,G,H,V,Z	700	39	2,400	4	600	33
Lexington "23"	2,545	5	U	850	50	2,145§	5	450	27
Stephens	2,550	7	C,D,N	950	58	2,000§	5	375	23
Hanson "60"	2,585	5	G,H,P	990	61	2,475	4	880	55
Paterson	2,595	5		1,045	68	2,595	4	1,045	68
Sayers	2,645	5		1,000	61	....	..	....	..
Case "X"	2,690	5	A,D,H,N,P,V,b	900	50	2,550	4	760	42
Haynes "55" Sport	2,695	5	FH,2I,2JK,RTVXYb	800	42	2,195	3	300	16
Kline Kar	2,790	5	B,C,G,H,N,T,U,V,Z	1,100	65	2,750	4	1,060	63
Franklin "10"	2,850	5	A,B,G,P	900	46	2,750	3	800	41
Westcott "B-44"	2,890	5	E2I2JMNOPTUVX	1,200	71	....	..	....	..
Comet "C-53-2"	2,950	5		800	37	2,800	4	650	30
Jackson	2,985	5	A,G,H,J,K,S,V,Z	500	34	2,985	4	1,500	101
Pilot "6-50"	3,000	5	CDEGHNOTUVZ	1,000	50	2,950	4	950	47
Kissel (de Luxe)	3,075	6	F,G,H,2J,L,O,X	290	29	2,975	4	690	29
R & V Knight	3,105	5	A,G,H,O,U	630	25	3,000	4	525	21
Paige "6-66"	3,155	7	A,B,C,D,G,O,U	960	44	3,100	5	905	41
Case "W"	3,250	7	A,B,H,N,O,P,V,b	1,000	44	2,850	4	600	27
Packard Single Six	3,275	5	C,G,O,M	790	32	3,175	4	695	28
Haynes "75"	3,395	7	ADGHK-OUVXY	1,000	42	3,095	5	700	29
Packard Single Six	3,525	7		845	31	....	..	....	..
Roamer "6-54-E"	3,585	5	A,G,H,J,L,U,Y,Z	1,300	57	3,285	3	1,000	43
Holmes	3,600	6	A,B,C,E,G,H,N,P,V	1,100	44	3,300	4	800	32
Stearns-Knight	3,700	7		1,000	37	3,350	4	650	24
Ferris "70"	3,795	4	ACFGHJKOPTX	1,000	36	....	..	....	..
National	3,825	7	ABCGHNOSUV	1,450	61	3,725	4	1,350	57
Marmon	4,385	7	A,B,C,P,R,U,V	1,200	38	3,985	4	800	25
Winton "40"	4,550	7	A,B,G,N,P	1,150	34	4,000	4	600	28
Sterling-Knight	4,800	7		1,000	26	4,600	4	800	21
Fox	4,900	5	ACDGHJMOTZ	1,000	26	4,900	3	1,000	26
Dorris "6-80"	5,750	7	A,G,H	1,800	45	4,985	4	1,035	26
Ambassador	6,500	5	A,G,H,O	2,000	44	....	..	....	..
Leach	6,825	..		1,225	22	....	..	....	..
Pierce-Arrow	7,000	6	ABCEGMNOPSUV	1,750	29	6,850	3	1,600	30
McFarlan	7,500	7	ABCDEGHJMOZX	1,200	19	7,500	4	1,200	19
Stevens-Duryea	8,900	7		2,100	31	....	..	....	..
Locomobile	11,000	7	A,B,D,E,G,2I,P,Q,U	3,400	45	....	..	....	..
Rolls-Royce	12,900	7		2,000	18	....	..	....	..
EIGHT-CYLINDER CARS									
Oldsmobile "47"	$2,025	5	D,N,O,P,V	$655	48	$1,875	4	$500	36
King	2,550	5	A,B,D,G,H,N,V,Z	755	42	2,400	4	605	34
Oldsmobile "46"	2,635	7	G,N,O,P	900	52	....	..	....	..
Standard	3,200	7	A,D,G	805	34	2,750	4	355	15
Wills Sainte Claire	3,475	7	BCGJKOPTUV	1,000	40	3,275	4	800	32
Cole	3,685	7	A,B,G,M,N,O,X	1,000	37	3,385	4	700	26
Apperson	3,695	7	A,G	1,050	38	3,625	4	980	37
Peerless "23"	3,900	5	ABGOPTUVXYZb	1,010	34	3,400	4	410	14
Cadillac	4,100	5	A,B,C,D,G,P,T,V	950	30	3,875	2	725	23
Lincoln	4,900	7	A,B,C,G,O,T,U,a	1,100	29	4,400	5	600	16
LaFayette	5,500	7	ABCDGHOTUV	1,410	34	5,500	4	1,410	34
Daniels	6,000	..		1,650	38	5,350	..	1,000	23
Cunningham	7,650	6	AEGHJMUVXZ	1,250	20	7,150	4	1,150	18
Duesenberg Str. Eight	7,800	7		1,300	20	7,800	4	1,300	20
TWELVE-CYLINDER CARS									
Packard Twin-Six	$5,400	7	C,G	$1,650	43	$5,240	4	$1,390	36

EQUIPMENT—(*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires. A—power tire pump; B—theft lock; C—windshield wiper; D—cowl lights; E—front bumper; F—bumpers front and rear; G—clock; H—heat indicator; I—spare tire; J—spare wheel; K—disc wheels; K1—disc wheels optional; L—wire wheels; M—wheels optional; N—car heater; O—snubbers or shock absorbers; P—pressure chassis lubricating system; Q—spotlight; R—gasoline gauge (dash); S—glove box; T—mirror; U—vanity and smoking sets; V—sun visor; W—windshield wings; X—trunk rack; Y—trunk; Z—color option or special color; a—tilting steering wheel; b—rear signal; c—permanent top.

†CLOSED MODELS: Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguished by the symbol§. ‡Two door.

DOWNWARD TENDENCY SHARPENS COMPETITION

Name	1922 Oct. Price	1922 Jan. Price	Change Actual	Change Relative
Auburn	$2,345	$2,395	—$50	+6%
Chandler	2,375	2,395	—20	+18%
Haynes "55"	2,395	2,595	—200	+10%
Durant Six	2,400	2,400	Same	Same
Studebaker Big Six	2,475	2,700	—225	—1%
Jordan	2,485	3,200	—715	—26%
Stephens	2,550	2,650	—100	+6%
Hanson "60"	2,585	2,585	Same	Same
Paterson	2,595	3,790	—1,195	+36%
Sayers	2,645	2,795	—150	—4%
Case "X"	2,690	2,790	—100	—3%
Kline Kar	2,790	3,090	—300	+2%
Franklin "10"	2,850	3,350	—500	+3%
Westcott "B-44"	2,890	2,890	Same	+18%
Jackson	2,985	2,985	Same	—49%
Pilot "6-50"	3,000	3,400	—400	+1%
Kissel "de Luxe"	3,075	3,475	—400	—1%
R & V Knight	3,105	4,200	—1,095	Same
Paige "6-66"	3,155	3,155	Same	Same
Packard Single-Six	3,275	3,350	—75	—10%
Haynes "75"	3,395	3,395	Same	Same
Roamer "6-54-E"	3,585	3,950	—365	—2%
Holmes	3,600	4,150	—550	+3%
National	3,825	3,240	—415	+19%
Marmon	4,385	5,150	—765	—1%
Winton "40"	$4,550	$5,950	—$1,400	+14%
Dorris "6-80"	5,750	7,190	—1,440	—5%
Pierce-Arrow	7,000	8,500	—1,500	—24%
McFarlan	7,500	7,500	Same	Same
Stevens-Duryea	8,900	8,900	Same	Same
Locomobile	11,000	11,000	Same	Same
EIGHT-CYLINDER CARS				
Oldsmobile "47"	$2,025	$2,295	—$270	+4%
Standard	3,200	3,600	—400	—10%
Wills Sainte Claire	3,475	3,475	Same	Same
Cole	3,685	3,685	Same	—11%
Apperson	3,695	3,995	—300	—13%
Peerless "23"	3,900	3,790	+110	+2%
Cadillac	4,100	4,100	Same	Same
Lincoln	4,900	5,400	—500	+1%
LaFayette	5,500	5,175	+325	+7%
Daniels	6,000	6,950	—950	+8%
Cunningham	7,650	7,650	Same	—12%
TWELVE-CYLINDER CARS				
Packard Twin-Six	$5,400	$6,800	—$1,400	+3%

§Regular closed models listed except where lower types are included in the line. Latter are distinguishable by the symbol.

more than $250; 33 have been reduced more than $250; 25 sell at the same prices and two—Peerless and LaFayette, are higher.

Changes in the percentage of advance of the sedan over the touring-car price are also illuminating. Under this classification it is found that 20 lines now sell ten points or less nearer the touring-car price than they did nine months ago; 13 between 10 and 30 points nearer the touring-car price; 20 have the same percentage of advance; 21 have risen, relatively, by 10 per cent or less; 8 have advanced, relatively, more than 10 per cent.

It is needless to remark that the lower-priced closed cars, such as has been introduced in parallel with the standard line by Dodge Brothers, Dort and Reo, have made marked changes in the comparison, as it affects these lines. The lower-priced models are here included for the reason that they constitute the apparent basis of maximum inquiry in regard to closed-car price relations.

Price changes are compared in the second of the two tables accompanying this article. In it, the prices as of January, 1922, and October are compared. Also the advance or decline in dollars and the number of "points" change in relative price. The latter is a direct comparison of the percentage advance over the corresponding touring car price.

For example, if a certain sedan, on January first sold for 20 per cent more than the touring car, but now sells for 25 per cent more than the present price of the touring car, the column of "relative change" in the table will indicate "+5," but if the present sedan price is only 15 per cent in advance of the present touring car price, then the indication will be "—5." This comparison in general, is useful principally in measuring the trend of sedan prices toward or away from the corresponding prices for touring cars.

At the present time the bulk of the closed-car business done by the trade as a whole is represented by sales of sedans. Manufacturers and dealers, however, are pinning great faith on the prospects of the coupe, including the practical business man's car, and also on intermediate types. The latter include the two-door designs, such as have already been popularized by Hudson and Essex, Nash and others.

To complete the "chart of the market," therefore, the prices, seating capacities and actual and percentage advance of the two-door types have been included in the major table accompanying this article. Some of these models sell at even prices with the sedans; others at considerably less.

It should be added that data for this comparison is based entirely on AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted), which appears on page 759 of this issue. It is corrected from information received directly from the manufacturers up to the hour of closing this week's forms and has been carefully cross checked to ensure its accuracy.

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ENTRIES COMING IN FOR NEW YORK SALON

Roster to Date Includes 22 Makes of Cars and 10 Special Body Exhibits—Six Foreign Countries Represented—Commodore Again Selected.

Entries so far received for the eighteenth annual Automobile Salon, to be held at the Commodore, New York, December 3-9, include 22 makes of cars and 10 exhibits by body builders. Six foreign countries will be represented, these being England, France, Belgium, Italy, Germany, and Austria. The Chicago salon will be held at the Drake hotel, January 27 to February 3.

For the New York exhibit, the entire second floor of the Hotel Commodore, including the main, east and west ball rooms and the grand foyer, have been reserved. These rooms provide an ideal setting for the world's finest cars. Both the New York and Chicago hostelries housed the two exhibits last year.

The makes of cars already entered for New York are: Benz, Brewster, Cadillac, Cunningham, Daniels, Duesenberg, Hotchkiss, Isotta-Fraschini, LaFayette, Lanchester, Lincoln, Locomobile, Marmon, McFarlan, Minerva, Packard, Peerless, Rolls-Royce, Rubay, Steyr, Sunbeam and Winton. Bodymakers who are slated for special exhibits are: Brewster, Brooks-Ostruk, Demarest, Fleetwood, Healey, Holbrook, J. B. Judkins, LeBaron, Locke and Rubay.

Car Shortage Affects Lumber

Automobile manufacturers were somewhat concerned this week to learn that the shortage of cars for transportation of lumber is growing more acute. Many mills are receiving only 15 per cent of their requirements. All are behind on their orders, accepting few new commitments. Embargoes are aggravating the situation.

New Dort Distributer Named

Christensen-Davis Motor Car Co., of San Francisco, has been named distributer for Dort automobiles. Harold N. Christensen and George A. Davis are associated in the undertaking, both being old timers in the western trade.

Steel Merger Abandoned

Abandonment of the Midvale-Republic-Inland steel merger has been reported to the government. Thus ends, for the time being at least, what was originally an attempt to merge seven companies into a combination second in size only to the United States Steel Corp. The plan early lost four concerns and the remaining three decided to drop the scheme in view of difficulties connected with financing the consolidation in the face of the situation arising when the Federal Trade Commission lodged a formal complaint. The management explained that the merger was considered legal but that the delay resulting from the complaint would render the combination not feasible.

Olds Opens New Detroit Salesroom

As an addition to the Oldsmobile sales facilities in Detroit the Olds Motor Works, has opened a new showroom in the General Motors building. It is under direction of Ross C. Lowrie, who for years has been with the Detroit branch of the Company. The branch showrooms at Woodward avenue and Sproat street will be continued under direction of William J. Clemens, manager.

Cole "890" Increases Sales

Sales during the first month of production of the new Ultra Series "890" have increased 62 per cent over those of the preceding month and 49 per cent over those of the same month of 1921, according to the Cole Motor Car Co. The new models include many minor improvements and refinements and have met with so much approval that the factory has been forced to double its production schedule. The factory is now running full force and a greater business for this Fall is indicated.

NEW YORK TRADE HAS ITS OWN LITTLE MOVING DAY

After New Addresses Are Checked Five Lines Lack Dealers

New York's "Row" had a moving day of its own the first of October. When the vans had put in for the night it was found that five makes of cars were without representation on Manhattan Isle. Stratton-Bliss Co. (Dodge Brothers) moved to the quarters on the northeast corner of Fifty-seventh street and Broadway, formerly occupied by the A. G. Kaufmann Motor Car Co. (Liberty and Premier) which, as far as could be learned has discontinued business. The Columbia salesrooms on Central Park South (59th street) have been vacated, the former dealer going into the tire business. The other two cars that lost representation by the shifts are the Westcott and Handley-Knight, formerly represented by Otto W. Heck and John O. Ekblom.

Dort showrooms were removed from the Fisk building on Fifty-seventh street to 1872 Broadway, where Stevens-Duryea was, the latter going to 17 Central Park West. Daniels moved from Central Park South to the two Fifty-seventh street stores formerly occupied by the Dayton Tire and Dagmar car, the premises being converted into one showroom. Dayton moved upstairs and Dagmar now has the former Westcott salesroom at 1804 Broadway. Peerless had just moved to the southwest corner of Sixty-second and Broadway, the former occupant, Keystone Tire, having transferred activities to its Kingsbridge factory.

PARIS SALON BRINGS OUT RECORD EXHIBIT

Over a Thousand Displays Reported—American and English Cars Prominent—Rolls-Royce Has Smaller Car—Use of Four-Wheel Brakes Grows.

With the record number of nearly 1,100 exhibitors, the seventeenth automobile salon at Paris was opened October 4 in the Grand Palais in the Champs Elysees with an overflow of cycle cars and five-horsepower models shown on the Invalides esplanade. Both American and English makers are well represented, as well as many visitors from the two countries.

Prominent among the American cars exhibited are Cadillac, Buick, Chevrolet, Overland and Oldsmobile. Of particular interest to the trade in this Country is the disclosure of a Rolls-Royce six-cylinder 20-horsepower model. While not actually shown, since the only one of these smaller cars in France is on road tests, the English maker is taking orders to be booked immediately.

Instead of price reductions predicted a year ago there is a tendency to increase prices, especially on the deluxe cars which this year show larger chassis, more powerful engines and roomier bodies. This is true of such cars as Fiat, Lancia, Daimler, DeLage, Schneider and Voisin.

Nevertheless French manufacturers are continuing their efforts to produce smaller and lower-priced cars to meet market demands. Marked improvements in both chassis and bodies of the smaller cars are evident, and despite these prices on the little jobs remain about where they were a year ago.

One of the most noteworthy mechanical developments brought out by the salon exhibits is that practically every larger car shown was equipped with four-wheel brakes. The increased use of these brakes is said to be due to the patenting, within the year, of a device which overcomes the former objection of unequal pressure on front and back with the subsequent danger of skidding. This device is said to automatically assure equal distribution of pressure through the instrumentality of a compensating box.

French Car Successfully Burns Oil

An automobile which has just completed a 1,000-kilometer trip, burning crude oil instead of gasoline, and carrying five passengers at an average speed of 48 kilometers an hour, is told of in a special Parisian cable dispatch. An average of 16 litres of oil per 100 kilometers was consumed, making the cost of fuel for the trip of over 1,000 miles approximately 59 francs. Parisians hail the feat as solving the automobile fuel crisis which has been threatening for some time in the Republic.

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ERSKINES GIVE PARK SITE TO SOUTH BEND

Studebaker President and Wife Donate 120 Acres Valued at $240,000—City Accepts at Dinner at Which High Tributes Are Paid Donors.

A. R. Erskine, president of the Studebaker Corporation of America, and Mrs. Erskine have presented to South Bend a 120-acre tract valued at $240,000 to be perpetually used as a public park. Although the deed to the property was dated September 9, the gift did not become known until September 26, when Mayor Seebirt gave a dinner at the Oliver hotel with Erskine as the guest of honor. Members of the common council, heads of city departments and a few invited guests were presented.

The property, known as the old Shanks farm, is almost opposite the Erskine home on Miami road. Some eight acres of the land are in virgin forest.

The land is of a varied character, some of it rolling, and a part of it will make an excellent golf course. The acreage is sufficient to permit this and in addition a ball park, picnic grounds and a general park.

High tributes were paid the Studebaker president on the occasion of the dinner. Dr. C. A. Lippincott, speaking at the request of the Mayor, referred to the great success Erskine had made in South Bend and attributed to him much credit for the prosperity the city is now enjoying. He pointed out that not only had Erskine been successful himself but had made it possible for others to be successful. He called attention to the inspiration Erskine's associates obtained from him and his work and especially to the interest he had taken in the welfare of Studebaker employes.

The city council then went into session and adopted a resolution attesting the eloquent nature of the testimonial to the civic pride of Mr. and Mrs. Erskine, accepting the gift for the city and resolving that the tract of land forever be known as Erskine Park. A copy of the resolutions was presented to the Erskines.

Erskine, when called upon, said he had hoped to make the presentation without any publicity and expressed surprise at the purpose of the dinner. He told those present that he was actuated by a feeling that he could not repay the city for what it had done for him and the Studebaker corporation.

Any prosperity which he had enjoyed he felt he could well afford to share with the people. He expressly mentioned his desire that the working people should enjoy parks and that they be encouraged in the use of such public recreation places.

Stephens Six Gaining

With the establishment of the Stephens Six line in the East under the Stephens New York Motor Car Co., Inc., as reported in AUTOMOBILE TOPICS under date of August 29, the business has been coming forward rapidly. J. Fred Hunter, Eastern district sales representative, reports sales of an encouraging order with a strong leaning among buyers towards the enclosed offerings. These, as a matter of fact, now account for about 30 per cent of the output.

Westinghouse Sees Good Business

Of the 15 district sales managers canvassed by the Westinghouse Electric and Mfg. Co., 11 expressed the opinion, after careful analysis of their territory, that electrical business will show improvement in the next twelve months. The remaining four testified to their belief that the trade at any rate will hold its own. The survey is of importance since the 15 districts cover practically the entire United States.

CANADA'S MOTOR INDUSTRY IS EXPANDING RAPIDLY

Per Capita Ownership Now One Car to Every Eighteen of Population

Expansion of Canada's automobile industry continues to be rapid. While the number of factories steadily grows, both foreign and domestic capital is flowing into the trade in ever mounting figures. This is revealed in a survey made this week which incidentally shows that per capita ownership of motor vehicles in the Dominion is now one to every 18. This places Canada in second place among the countries of the world. Replacements now require 80,000 cars annually.

Seventeen automobile plants, according to a report of the Canadian Pacific Railway, are in operation with invested capital of $53,966,506 and production valued at $101,465,846. There were also 62 automobile supply plants capitalized at $15,332,887, with annual production valued at $19,361,882. This capital invested in Canadian automobile plants has been almost entirely American, but British capital is becoming interested. Announcement was recently made that a pioneer British concern will establish a branch factory soon.

Oakland, Cal., Plans Durant Day

October 12 has been set by the Oakland (Cal.) Chamber of Commerce as "Durant Day" and a celebration is being planned throughout the San Francisco Bay district. Dealers from four Pacific Coast states will be in attendance to take part in the affair which marks the opening of the new plant of Durant Motors, Inc., at East Oakland. This factory will supply the Coast.

Cuts Gasoline Prices

Standard Oil Co. of New Jersey announced a cut of two cents a gallon in the price of gasoline in North and South Carolina this week. Other cuts are under consideration.

PACKARD RETURNS TO RACING OVAL IN 1923

Factory Team Will Participate in Next Indianapolis Classic—To Enter Six in Competition with European Cars—Plan "One-Man" Jobs for Lightness.

Packard Motor Car Co. will return to automobile racing in 1923, with a factory team, the first of the big factories to engage in the speed sport after once having retired. This was announced by T. E. Myers, secretary and general manager of the Indianapolis Motor Speedway Co., who has been advised by Col. J. G. Vincent that the Packard team would participate in the 11th Annual 500-mile International Sweepstakes, next Memorial Day, on the Hoosier oval. Colonel Vincent is vice-president of the Packard company and chief engineer.

The Packard company gives two reasons for entering the coming race. The 1923 event will be for cars powered with engines not to exceed 122 cubic inches piston displacement, being smaller than any engines manufactured for production automobiles in this Country. European designers have made rapid strides in the perfection of engines of this size and smaller, and the engineering fraternity knows that with a new class the Indianapolis race this year will be won on an engineering basis. The Packard company is confident enough of its ability to pit its product against the best from Europe.

The other reason is the national pride of the Company and Colonel Vincent believes that this year Europe will be much farther advanced in the perfection of its racing creations and that America, to compete successfully, must do so with organized teams financially backed by the factory.

Colonel Vincent has not given out the details of the construction of the cars, but they are being built now by the Packard organization. The six cylinder type has been selected. Also the cars will be "one-man" affairs, with the driver seated in the center, cutting down the weight, increasing speed, and permitting better stream lining of the bodies, also a speed asset. No drivers have been announced.

Interest Grows in Highway Conference

Increasing interest in the forthcoming conference on highway transport and highway engineering education, to be held by the Highway Education Board in Washington, October 26 to 28, is indicated by replies to invitations. It is estimated that 300 regularly invited delegates will be present.

ReVere Motor Sale This Month

Sale at auction of the ReVere Motor Car Corp., Logansport, Ind., will take place on October 21. The property consists of real estate, buildings, machinery, equipment, materials, good-will and patents. The Citizens Loan & Trust Co., Logansport, is receiver.

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TELLS OF LOBBY FOR MOTOR TRUCK MAKERS

Chapin of Selden Sales and Service Announces Establishment of Post at Albany, N. Y.—Reports Political Obstacles at Capital of States.

Frankly stating that the step is believed to be necessary, H. D. Chapin, vice-president and general manager of the Selden Sales and Service Corp., New York city branch of the Selden Truck Corp., a division of the Industrial Motors Corp., announced this week that the motor bus and truck makers are going to maintain a richly endowed lobby at Albany. He declared, in an interview, that corporations making these types of vehicles will actively support the candidates for election who will "be reasonable" to the legitimate uses of the motor bus and the motor truck and will have a representative at Albany to "look out for our interests in the way of adequate legislation."

"Corporations making motor buses and motor trucks in particular and automobiles in general have hitherto taken little or no interest in politics in New York State," Chapin declared. "The traction interests have for years had their lobbies at Albany. But this year we're going to go into politics in full force, and will have a good, big fund back of us, too.

"Corporations manufacturing 35,000 motor buses and trucks a year and having a total capital of $25,000,000 will be represented in our campaign," continued Chapin. "We don't have to bring any argument to bear upon the city administration, as it is favorable to bus transportation development. It is at Albany where we have encountered obstacles."

Mayor Hylan's administration has twice tried in vain to obtain legislation authorizing the Board of Estimate to establish motor bus routes and has committed itself to an expenditure of $25,000,000 for the construction, equipment and housing of 3,500 buses if the legislature will give the desired authority.

Black & Decker Reports Big Sales

Black & Decker Mfg. Co. reports that a large increase in sales due to a considerable extent to reduction in prices, has enabled it to get on a larger production basis. The fourth dividend on preferred stock to be paid this year, amounting to two per cent in each case, has been declared for the third quarter.

Gill Battery Erects New Plant

Capitalized at $1,000,000, a newly formed corporation, to be known as the Gill Battery Co. of California, has been given Pacific Coast distribution and manufacture for the Gill battery. The concern will erect a modern plant at Oakland. The Gill Battery Co., which maintains its plant at San Bernardino, will concentrate its efforts on merchandising in other parts of the Country, it already having built up operations in eighteen States after only two years of business life.

Hayes Opens Another Sales Station

Hayes Wheel Co. has opened another sales and service station at 47 E. Canfield avenue, Detroit, in charge of William A. Gibson. The new station will be an addition to several opened recently. Gibson has represented the Hayes product in Detroit for eight years, heretofore at 856 Penobscot building.

Whyte-Duffield Moves

Offices of the Whyte-Duffield Mfg. Co., makers of instrument devices, have been moved into the new plant at 215 South Leavitt street, Chicago. The concern announces it is now fully equipped for production with several manufacturer's contracts on hand.

TRUCKS ARE WIDELY USED FOR MILK DISTRIBUTION

N. A. C. C. Behind Movement to Get Producers to Increase Their Use

Preliminary conferences to aid a nation-wide movement favoring milk distribution by trucks are now in progress in Philadelphia and Washington. A report on such distribution has been submitted to the National Milk Producers' Federation of Washington, of more than 200,000 membership, by the National Motor Truck Committee of the N. A. C. C., for use in these meetings. Among other things, the report shows that Cincinnati now receives 97 per cent of its daily milk supply by trucks, Atlanta 90 per cent, Kansas City 40 per cent, Milwaukee 65 per cent, Los Angeles 90 per cent.

The report shows graphically that truck distribution through suburban areas within a radius of from 30 to 50 miles is more satisfactory and economical than other methods. With the possible exceptions of New York, Chicago and Philadelphia, the opinion has been expressed that producing areas are not located so distantly from distribution points but that trucks cannot be used. In Milwaukee it was shown that 65 per cent of the 30,000 gallons shipped into the city daily arrives in trucks at an annual saving of $17,812. Milk dealers reported they could handle milk five cents a can cheaper when milk is brought in by trucks.

Fageol Turns Out New Coach

Fageol Motors Co. is in delivery of its new design "pay as you enter" coaches. The coach is produced for interurban transportation and a comfortable number of orders have been booked, the management reports.

TRUCK SURVEY SHOWS BIG GROWTH IN YEAR

General Motors Truck Corp. Figures Reveal 139,169 in Country—New York Leads States in Number Owned—About One Truck to a Farm.

Tremendous growth in motor truck sales is evidenced in figures announced this week by Vance Day, sales manager of the General Motors Truck Co., Pontiac. Day finds that there are now 139,169 trucks on 131,551 farms in the United States, an increase of 1921's figures of nearly 40 per cent.

"Farmers of New York State lead the Country," Day says. "They own 9,259 while Pennsylvania runs a close second with 9,072. Iowa is third with 8,910 and Ohio ranks fourth with 7,319."

Other states and the number of trucks owned in that territory follow:

Maine 1,120, New Hampshire 717, Vermont 616, Massachusetts 3,535, Rhode Island 536, Connecticut 1,595, New Jersey 3,380, Indiana 3,671, Illinois 6,154, Michigan 4,886, Wisconsin 4,044, Minnesota 3,803, Missouri 5,059, North Dakota 774, South Dakota 4,353, Nebraska 6,548, Kansas 3,928, Delaware 304, Maryland 2,805, District of Columbia 29, Virginia 2,544, West Virginia 936, North Carolina 2,671, South Carolina 1,736, Georgia 3,145, Florida 1,617.

Kentucky 1,538, Tennessee 1,430, Alabama 1,180, Mississippi 1,005, Arkansas 1,027, Louisiana 874, Oklahoma 2,155, Texas 5,399, Montana 1,225, Idaho 837, Wyoming 591, Colorado 3,016, New Mexico 593, Arizona 581, Utah 572, Nevada 174, Washington 3,371, Oregon 1,819, California 6,416.

Yellow Cab Buys Chicago Buses

President Hertz and his associates of the Yellow Cab Co. are revealed as the purchasers of the Chicago Motor Bus Co. this week. As reported in these columns under date of September 30, the bus company will continue to be operated under an expanded program by the purchasers. The Fifth Avenue Coach Co., New York city, will direct construction of more buses by the American Motor Bus Co., Chicago, for the Windy City transportation concern, the Gotham company's type of vehicle being thought best by the new owner. The Chicago company will be reorganized with $3,000,000 capital and the present concern's bonded debt will be retired.

Trucks Aid Steel Industry

With railroad car shortage assuming serious proportions, the steel industry is casting about for other methods of transporting its products. Increasing use is being made of motor trucks by buyers in the Youngstown district, it is reported, and the practice is spreading. It is pointed out that should this means of hauling prove satisfactory, it may persist when the car shortage is a thing of the past.

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CAR MAKERS TO URGE TARIFF EQUALIZATION

Delegation from N. A. C. C. to Present Request for Greater Uniformity—To Go Before Tariff Commission—Immediate Action Thought Desirable.

Immediate action under the elastic powers accorded the President will be asked in furtherance of exports by representatives of the automobile industry, who are arranging for a conference with the Tariff Commission in Washington, the National Automobile Chamber of Commerce announced this week. The manufacturers believe, once they are assured equality of treatment, such as is possible of attainment under the export features of the tariff, that they will be enabled to retain their predominating share of the world's trade in motor vehicles.

The automobile duty, having been reduced to 25 per cent, affords a definite basis for uniformity in this regard in all countries that manufacture motor vehicles. France, seeing that our duty has been reduced on her cars, will undoubtedly cut her duty to that level. The present French rate amounts to 45 per cent on American cars.

Italy has been collecting 35 per cent plus a duty based on weight ranging from 60 to 120 lires per 100 kilos. Indications have already been given that a lowering of the Italian duty may be expected once Americans take the initial step. The duty in Belgium, being 20 per cent but based on landed cost at destination rather than value at place of origin, already approximates the United States' duty. In the United Kingdom, only a slight reduction is needed to bring the duty of 33⅓ per cent now charged down to the rate provided in the United States tariff.

In our trade with colonies of other nations, the export features of the tariff should prove helpful, it is pointed out. American exporters have been at considerable handicap in colonies of the United Kingdom, France and Italy because of preference accorded to the mother countries. This condition existed despite the fact that the United States has been a better market for the products of these foreign colonies than the mother country in many instances. The British West Indies are typical illustrations.

With this condition in view, the President has been accorded powers to increase the duties by one-half on products from any country, or sub-division thereof, that fails to accord fair treatment to American commerce. Under this provision, the trade of the United States would be stimulated with countries favoring our exports rather than with these placing undue obstacles in their way. Jamaica, as an illustration, finds the United States an excellent market for its products. Nevertheless, duty on an American car is 20 per cent, whereas only 15 per cent is collected on one of British origin. Under the circumstances, if they were to continue, the President could increase duties on Jamaican products by one-half of present rates. This action would have the tendency of diminishing our imports of these products from Jamaica, but on the other hand increasing them from countries more favorable.

"Discriminations, other than those resulting from colonial policies, also exist at the present time," the N. A. C. C. states. "Finland is allowing the French automotive exporter to pay a duty representing but one-fourth of what the American shipper is charged. A similar advantage has also been given to France by the Polish government, which is in addition considering an arrangement along the same line with Switzerland. Even in our neighboring country to the north, the French and Belgians pay only 30 per cent, whereas the American exporter is assessed 35 per cent on his automotive product. Negotiations once carried on by the President under the powers now accorded him, will probably result in a more favorable treatment for American commerce with these countries.

"Various kinds of regulations have proved adverse to our trade. Restrictions on radius of automobiles, although having no significant bearing on traffic safety, has been used to bar American vehicles. Fortunately the export features of the United States tariff are sufficiently comprehensive to make necessary negotiations possible and bring about satisfactory adjustments."

The delegation, representing the National Automobile Chamber of Commerce, to present request to Tariff Commission, will comprise among others, J. Walter Drake, Chairman, and G. F. Bauer, Secretary of the Foreign Trade Committee.

POLAND REBUILDS WRECKED HOMES WITH MOTOR TRUCKS

War Devastation Leaves Huge Task to Machines Purchased from U. S.

Tremendous as the task of rebuilding Poland's wrecked homes and cities will be, the government of that country feels confident that it will be accomplished satisfactorily and expeditiously with the aid of motor trucks "Made in the U. S. A." Enormous amounts of gravel, iron, steel, concrete, stone and wood will be carried to the devastated areas in trucks purchased recently by the Poles from the A. E. F. surplus in Europe.

Among the greatest items of expense the Polish government faced immediately after purchase of the trucks was adequate tire supplies. The need resulted in an order for 23 carloads from America, said to have been the largest single shipment to one consignee in the history of our foreign trade. Poland is inaugurating a postal service by truck, following American plans and with our products.

ASK CANDIDATES HOW THEY STAND ON TAXES

N. A. C. C. Wants to Know Position of Politicians in Race for Congress—Reaffirms Its Opposition to Discriminatory "War Excise" Levies.

Reaffirming the continued opposition of the automotive industry to the "discriminatory war excise taxes," C. C. Hanch, chairman of the Taxation Committee of the National Automobile Chamber of Commerce has addressed a letter to each nominee for Congress, asking him whether he favors repeal of this legislation. The communication which was unanimously approved by the Board of Directors, points out that Congress itself emphatically indicated its desire to repeal these taxes in the passage of the 1921 law when the taxes were removed from some articles and at the same time reduced on others.

"In no case," Hanch points out, "did Congress increase such taxes or add new ones. Apparently Congress believed it of greater importance to relieve musical instruments, sporting goods, chewing gum, thermos bottles, fur articles, picture frames, perfumes, toilet waters and hair dyes, than individual transportation. In this belief we do not concur and we feel that the only equitable thing in the interests of fair play and the welfare of all industry as a whole is to repeal all discriminatory war excise taxes."

The letter is accompanied by a memorandum which shows in graphic form the repeals and reductions made in the tax law of 1921 as against the schedules embodied in the law of 1918.

In addition to the signature of Hanch, who is vice-president of the Lexington Motor Co., the letter bears the names of the other members of the committee, including H. H. Rice, J. Walter Drake, George M. Graham, and F. J. Haynes.

Jersey Roads Candidates Successful

Advocates of the New Jersey good roads bond issue expressed pleasure this week with the results of the primary election which returned among others Arthur N. Pierson, father of the bill, as a senatorial candidate. Pierson received three times as many votes as his opponent who was unfriendly to the bill.

Winton Changes at Philadelphia

Having disposed of its Philadelphia branch to the Rickenbacker-Philadelphia Co., the Winton Co. announces that the combined sales and service rooms will be at 1520 N. Broad street, the old home of the branch. The move is in line with the Winton scheme of substituting dealerships for factory branches, a plan outlined in these columns heretofore.

Closed cars are the thing now. Keep the market before you by consulting the Table (pages 759-61).

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NEW YORK SHOW WAS BUILDER OF BUSINESS

Over $1,000,000 Worth of Closed Cars Reported Sold—Dealers Are Highly Enthusiastic Over Results—Sales of Week Ranged from 1 to 40 Cars.

New York's closed-car show last week was by far the most successful local exhibit ever held in that Metropolis. This has developed now that the dealers have had an opportunity to check results. A canvass of representative dealers made this week indicates that all dealers actually made sales at the Grand Central Palace. Business at the local salesrooms during the week in many cases increased besides. On top of it all excellent prospects were obtained that give every promise of developing into real sales.

Some dealers already are beginning to get returns from show prospects. A million dollars' worth of business was done at the show, according to Show Manager Tom Moore, secretary of the Automobile Merchants' Assn., which staged the exhibit. Consequently it is termed a great success and will probably be a permanent feature.

Sales as reported directly to AUTOMOBILE TOPICS this week by dealers ranged anywhere from 1 to 40 cars. Taken at random some of the actual figures given are: 5, 40, 25, 4, 16, 16, 23, 22, 10, 19, 9, 14, 6, and so on.

Immediately following the show, Moore sent out questionnaires to the dealers. With 9 yet to be heard from, including two of the largest selling lines, Moore says that sales at the show ran over $1,000,000. The consensus of opinion as summarized by Moore, is that the dealers are "wildly enthusiastic over the results." There was only one exception to this feeling, and even though this one dealer did $40,000 business he still does not enthuse much because he does not favor shows in general.

In addition to the satisfaction with business done, the concert of opinion expressed by salesmen gives Moore a sense of pride. It is generally felt that at this show more cooperation was given the men actually on the floor than at any other.

Financially the show was a success for the Association made money despite paying over six times the rental paid last year for the Armory where the first exhibit was held, and despite an advertising appropriation three and one-half times greater than last year's. Because of the marked success, the Association is going to appeal to the National Automobile Chamber of Commerce to make the local exhibit an annual affair as a forerunner to the national show.

Reports gathered directly from the dealers bear out the enthusiasm expressed by Moore. Not only was there business at the show but it served to arouse a great amount of public interest—and that is the aim of shows. The class of people attending this year was easily the best representation of buyers, people who could buy, in fact the most refined attendance ever encountered at any local show.

A brief summary of what the dealers told AUTOMOBILE TOPICS best portrays the results. The Studebaker branch through Manager Jones reports the best week in the last six, that interest was greatly stimulated and in general the show "very successful." Dodge Brothers distributer, Stratton-Bliss Co., piled up a goodly number of sales and business at the Manhattan salesroom increased during the week.

Van Alstyne Motor Corp. (Hupmobile) took actual orders and in addition sold the five special jobs exhibited, obtained good prospects and is "absolutely satisfied." Buick branch did more business at the salesroom but turned in show orders, too; Sales Manager Newton terms show success and says it created a great deal of interest. Colt-Stewart Co. (Maxwell-Chalmers) did a good business, got a tremendous amount of interest and hundreds of good prospects.

Warren-Nash Co., while getting orders and lots of prospects at the Palace, had a particularly good week at the salesrooms, due to letters extending an invitation to inspect an exhibit there, duplicating the one at the Palace. Hudson Motor Car Co., according to Manager Cole, did a splendid business in Hudson and Essex and piled up good inquiries. Sales Manager Barley of the Sherwood Automobile Co. says that Jordan did "very well," getting business at the show and what is more is now getting business as a result.

Poertner Motor Car Co. (Durant) is well pleased with results; getting quite some business this week from prospects picked up at the show and expects still more to follow. Cutting-Larson Co. is satisfied with the showing made by Oldsmobile; recorded sales and good prospects. Oakland Motor Car Co., according to Retail Sales Manager Disbrow, regards results as satisfactory; believes it attracted lots of people who otherwise would not have seen the new models displayed.

Dealers in the higher-priced cars are especially pleased. Detroit-Cadillac Motor Car Corp. had an "unusually good week." Sales Manager Lewis says that his company closed probably a greater percentage of absolutely new prospects not previously followed up, than at any other show; that attendance was made of greater percentage of buyers, and believes show as an institution will grow in importance to even surpass the national exhibit as far as local dealers are concerned.

Sam Toback puts the Marmon New York Co. on record as "100 per cent satisfied." He reports good show business and an increase at the showrooms. J. A. Clark, Van Cortlandt Vehicle Corp., says that Peerless did three times the business than the week before and that many orders were booked for future delivery. He thinks it the best closed-car show he was ever in; that the clientele was remarkable.

SALES IN SEPTEMBER SHOW SLIGHT SLUMP

Dealers Report Last Part of Month Not as Good as August—Prospects For Fall and Winter Trade Encouraging —Stocks of New and Used Cars Low.

Retail sales in the East during the latter part of September proved to be somewhat lower than at the beginning of the month and consequently less than in August. A broad tendency towards better and better markets was obvious to those dealers whose reports reached AUTOMOBILE TOPICS this week, however.

Thus the Vandar Motors Sales Corp., Hupmobile distributer for Brooklyn, N. Y., and Long Island, found September sales dropped to about two-thirds the August total. During the 30 days, however, sales aggregated more than three times those of September, 1921. Demand for used cars was weak but it is believed the stock of this type of merchandise will be reduced during the next few weeks. Prospects for future business look good, V. C. Scriven president, declares.

The Johnston-Tongue Motor Corp., Nash dealers at Schenectady, N. Y., also admits business was not as good as during the corresponding period in August although considerably better than September a year ago.

"The trend of the automobile business in our locality is improving rapidly," Robert B. Johnston, president, finds. "Everyone looks forward to a very prosperous season next year. Although this year has been our banner month so far and the best since we began business."

The Bonnell Motor Car Co., Dodge Brothers dealer at Newark, N. J., reports conditions better than ever before and sales correspondingly in excess of any similar period in the Company's history. R. M. Hillas, vice-president and sales manager, points out that continued prosperity depends on "going after business in a businesslike way."

Past four months have been particularly good for the Harper Motor Co., Inc., Durant distributer at Washington, D. C. A very much improved Fall and Winter business is expected, however, and stocks of new cars have accordingly been increased.

Sales of the United Auto Sales Co., Studebaker dealer at Baltimore, find themselves particularly fortunate in having every hope for doubling 1921 business this year. At present booked orders are so numerous as to require two months to fill them, according to the management.

Bates Motor Co., Hupmobile dealer at Scranton, Pa., states sales are running from 50 to 66⅔ per cent over any corresponding period heretofore. Total sales to date total more than double all of 1921's business. Stocks of unsold used cars are particularly low, since only salable "trade-ins" are accepted by the Company.

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A. A. A. STARTS DRIVE ON TOWN SPEED TRAPS

Dai H. Lewis Fires Broadside Against Village "Constabule"—Urges State Legislation to Curb Abuse—Would Remove Incentive to Graft.

Ubiquitous, but none the less a menace to the automobile industry, the "speed trap" has again come to the surface as an object of righteous wrath, this time on the part of the American Automobile Association. Dai H. Lewis, active executive chairman, this week issued a broadside against the small-town trap, which acts as a spider's web to catch the unwary and mostly law-abiding automobile tourist and fattens the small-town official in the way of "costs in the case."

"One of the most aggravating nuisances faced by the automobile tourist today is the so-called 'speed trap'," Lewis declares. "If there is one question of interest to motorists that deserves the immediate attention of State Legislatures throughout the Country, it is these outrages, operated for most part by officials who depend on the 'costs in the case' for their living, and who figure that every motorist brought before them is guilty.

"If these speed traps really accomplished what they are intended to accomplish, the breaking up of dangerous speeding, they would be all right, but the principal victimes of this iniquitous system are the law-abiding, careful-driving motorists, who may exceed the limit unconsciously by a mile or two per hour, or who are simply held up, regardless, and charged with speeding, whether they are in excess of the speed limit or not. Automobile clubs affiliated with the A. A. A. keep careful watch on such traps in their own communities and warn their members to look out for them, with the result that tourists deliberately drive miles out of their way to avoid these towns. This hurts the communities harboring the speed-trap artists more than is gained by the small amount of fines collected.

"The remedy, as I see it, is for the State Legislatures to pass laws abolishing the collection of the 'costs' in such cases by the examining magistrate and his able henchman, the constable or other arresting officer, and to make all motorists' fines payable directly to the municipal, county or State funds, such fine to include all costs. Take the incentive of making money away from these officials and they will devote themselves to handling cases of real law-breaking and crime in order to hold their jobs."

N. M. A. Adds More Members

More than 6,000 new members were added to the roster of the National Motorists' Assn. during the past week, according to a bulletin of that organization. A new State body has been formed in Michigan. The new radiator emblem of the Association has been selected and the members are proceeding with its work on the bases laid down in its organization program last Spring.

Jersey Pushes Road Bill

Local committees have been appointed by the Good Roads Association throughout New Jersey to call on every motor vehicle owner, point out the necessity for the Highway Bond Bill, and urge campaigning for the issue. It is asserted that unless the Bond Bill is passed work on State highways will cease.

Mechanical Engineers to Meet

National Exposition of Power and Mechanical Engineers will open at the Grand Central Palace, New York city, on December 7, and will extend through to December 13. It immediately follows the annual meeting of the American Society of Mechanical Engineers and the American Society of Refrigerating Engineers.

Showing the Railroad Men

At the annual convention of the American Electric Railway Assn. to be held at the Chicago Municipal Pier October 2 to 6, exhibits featuring the part truck manufacturers have played in developing buses suitable for passenger transportation will be studied by the delegates. Among these the Republic Truck Sales Corp. will show four types.

No-Leak-O Gets Injunction

After following proceedings instituted against the Bowman-Gould Co., by the No-Leak-O Piston Ring Co., the District Court of Delaware has enjoined the former concern permanently from making or selling, directly or indirectly, any one-piece piston rings so similar to the rings manufactured by the plaintiff "as to be liable to deceive purchasers." The No-Leak-O company asserted that patents on its product, especially the "oilSEALing" groove, had been infringed.

Indiana Silo Receivership

Indiana Silo & Tractor Co., Anderson, Ind., has been placed in the hands of the Indiana Trust Co., as receiver. The petition asserts the Company is not insolvent but cannot meet its current obligations.

L-M Axle Buys Plant

L-M Axle Co., Cleveland, has completed negotiations for the purchase of a large plant and equipment formerly used by the Jones Gear Co., at Wayside road, N. E., and the Nickle Plate railroad. The plant is 100 x 300, stands on a ten-acre tract with four smaller buildings. The land is leased for 99 years. The purchase price of the plant is said to have been $500,000. The Company produces double reduction axles for trucks.

1922 SAFETY PROGRAM ANNOUNCED BY BOARD

Highway Education Body Announces More Essay Contests—Offers Many Suggestions for Conducting Campaigns—Hopes to Beat Records.

Further information concerning the 1922 safety program of the Highway Education Board, Washington, was released this week by that body. The program offered follows largely that laid down and carried out so successfully last year. Briefly, aside from the by now well-advertised "Safety Season," of September 10 to December 16, it is as follows: A national safety essay contest for elementary school pupils; a national safety lesson contest among elementary school teachers; observance of "Seven Days of Safety" from October 8 to 14; and pledges of carefulness.

As outlined in AUTOMOBILE TOPICS under date of September 30, several national organizations are again taking part in promulgating the ideas of the Highway body, notably the American Automobile Assn. Already all the members of this association have taken the pledge to make for better and safer traffic conditions.

As was the case last year, the school children's essay contest carries with it trips to Washington and medals. The prize for the best course of lessons in highway safety submitted by a school teacher is $500, first; $300, second and $200, third. The Board suggests fifteen plans for observing the October "seven days of safety," among which campaigning under the slogan "Don't Get Hurt" is prominent.

The Board last year received more than 400,000 essays from the children. Fifty thousand school teachers tried for the lesson prizes. It is acknowledged that much of the credit for the success of the school teachers' contest was due to the generosity of the National Automobile Chamber of Commerce, which provided the prizes. Stephens James, of the Board, points out that of even greater importance than the number participating is the fact that as a direct result of the campaign last year a great many schools are introducing the subject of safety in their systems as a part of regular studies.

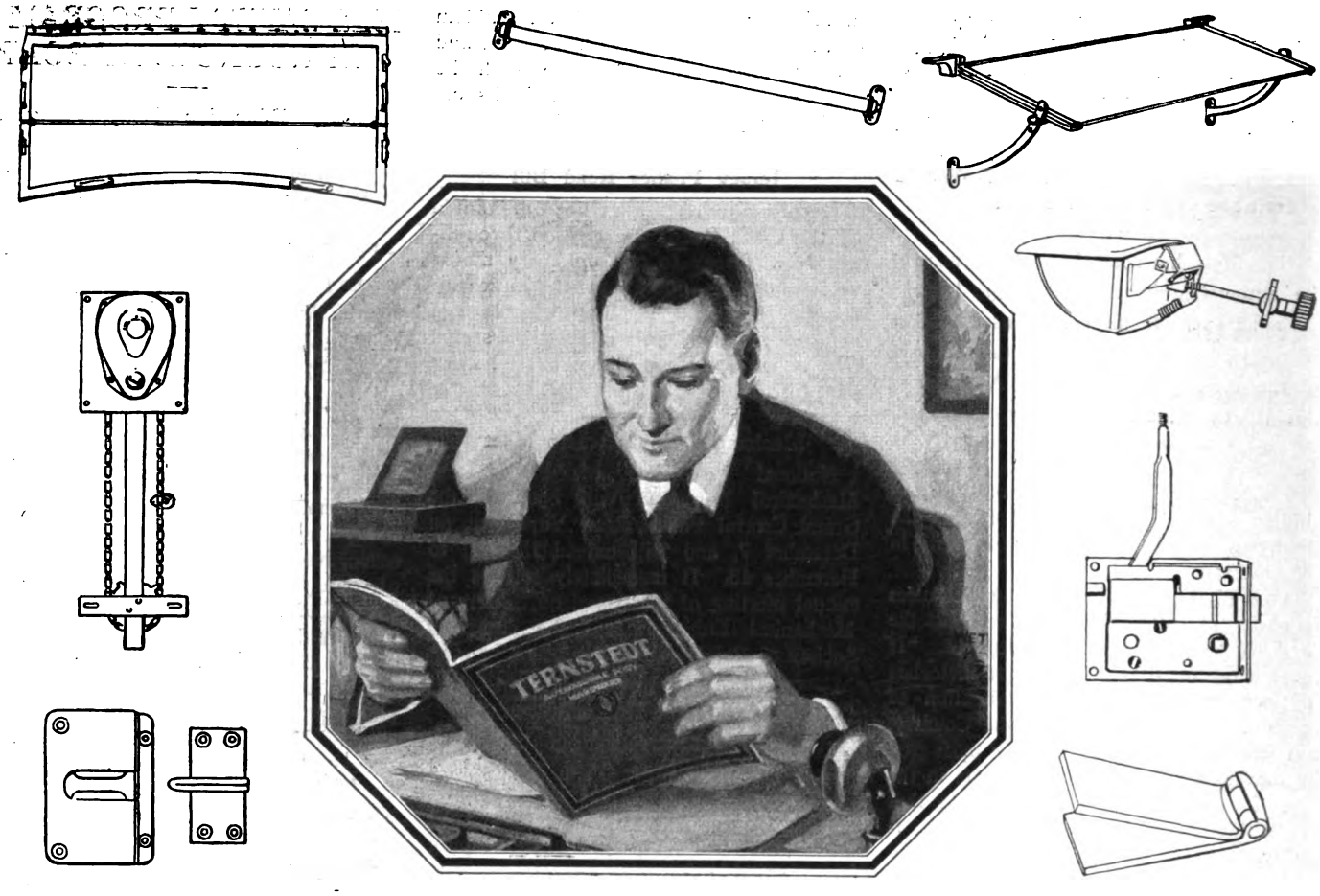
Muskegon Adds Pistons to Output

Muskegon Motor Specialties Co., Muskegon, Mich., has added light weight cast iron pistons to its output of cam shafts. It is the Company's plan to do both the casting and machining. Production is scheduled for October 1.

Rossel Joins White & Co.

Ralph M. Rossel has been appointed manager of the crude rubber and raw material division of the White and Co., rubber material, of Akron. Rossel has had several years' experience both in buying and selling rubber.

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Concentrating in Ternstedt Has Many Decided Advantages

The purchasing of automobile body hardware *complete* from a single reliable source is, without doubt, the practical and *economical* way to buy.

Uniformity of product is consistently maintained. A well-balanced stock of hardware is permanently assured. Deliveries are certain and on time. Production is simplified and accelerated. Capital is conserved. Responsibility is centered. Negotiations are narrowed to a single point of contact.

The large number of the world's leading motor cars that today carry Ternstedt body hardware as *exclusive* equipment definitely substantiates the sound business logic of concentrating purchases in one organization. The dependence placed in Ternstedt proved-in-service products is likewise clearly expressed.

Automotive executives, unaware of the possibilities of *centered* buying, will assuredly find investigation worth while before new body designs go into actual production.

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

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Concerning Closed Cars

There's a good deal to say for closed cars, and most of it has been said over and over again. The New York Closed Car Show presented to the people every sort of enclosed motor vehicle from boxed-in midgets to luxurious leviathans of the highway. But the real news as far as the public was concerned lay in the various announcements that the prices were down: that is to say, that the differential between the closed and the open types is in process of being reduced.

For years the difference in price had to be large because the manufacturer could not get into big production. Latterly the prices of many of the necessary "ingredients" were high, notably plate glass. But now the demand has solved the difficulty and has become steady and large enough to permit quantity manufacture.

This exhibition—in fact, every show held—shows very clearly the sound basis for American world preeminence in motor car making. Every show reveals new ideas. Every show makes it plain that the industry is striving to build a car at once more economical, more comfortable, and more beautiful. The *New York Post* sums it up in the sentence "Ingenuity and courage—these are the pillars of American preeminence in motor car production."

Bankers Optimistic

Conservative business optimism is the keynote of the opinions expressed by bankers in attendance at the 48th annual convention of the American Bankers' Association in New York this week. When bankers talk in this spirit, other business men have cause for much hope. For bankers not only have a sensitive finger on the commercial pulse of the world but are blessed with a canny sense of balance. When they don't think much of things they at least fail to paint rosy pictures. Therefore their optimism added to the automobile industry's own reports should lend color to great expectations, always with the stipulation that the chickens are not counted before they are hatched.

Gasoline Ox-Carts

"We farmers goes miles where our forefathers went rods."

So speaks the "dirt farmer" of Lakeland, Minn., adding that the automobile today is virtually a "pure-bred ox-cart." By that he explains much in little concerning the agriculturists' viewpoint. Men have spent time and money for years trying to improve locomotion for the farmer. The slow-moving ox-cart gave way to the grain box, the hay wagon, the spring wagon and the top buggy. The automobile, considered in succession to these, measures a part of the industry that perhaps is too seldom considered. For no industry can prosper that does not seek more than dollars ir offering its products.

Cheating the Public

Makers of automobiles should be interested in the campaign against short measure in gasoline sales being conducted by the National Motorists' Assn. Just completing a survey of the Country, the Association finds that $90,000,000 a year is the price the public pays for the privilege of getting less fuel than it pays for.

Many of the costs of upkeep loom large to the prospective purchaser of a motor car or truck. It is still not uncommon to hear "It is not the price but the upkeep that counts." Whatever may be said of the Association's drive on short measuring—which it claims amounts to one quart for every five gallons sold—here is $90,000,000 that should not be added to the cost of operating a car.

The Association intends to go before Congress and the legislatures of the several States to bring about periodical inspection to maintain full measure. The car makers can add even more weight to the proposals.

As to Opinions

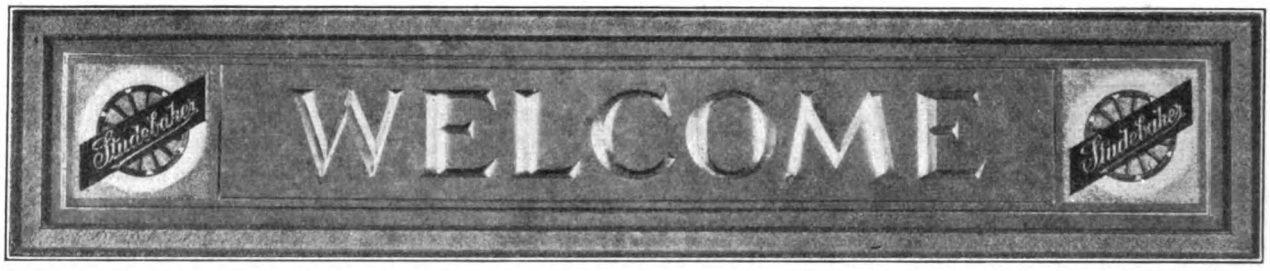
"For a number of years I have made it a rule never to ask a man for advice," a shrewd observer of human nature observed the other day. "When you ask advice, the average man hesitates about giving it, because he feels that if you accept it, and your choice prove unwise, he may be more or less responsible. But if you ask a man for his opinion, he will give it to you."

Some men are too ready to ask advice, anyway; and to blame the other fellow if his counsels prove ill-judged. Come to think of it, if you get enough advice you can always find someone to blame when things go wrong. It takes real courage to form your own opinions, sometimes, but, making allowance for a reasonable percentage of error, it is the sort of courage that pays in the end. The man who has it is an individual and not a straw vote.

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Industry Works to Make Them Stop and Stare

Old-Fashioned Ideas Resurrected and Put Into Practical Use

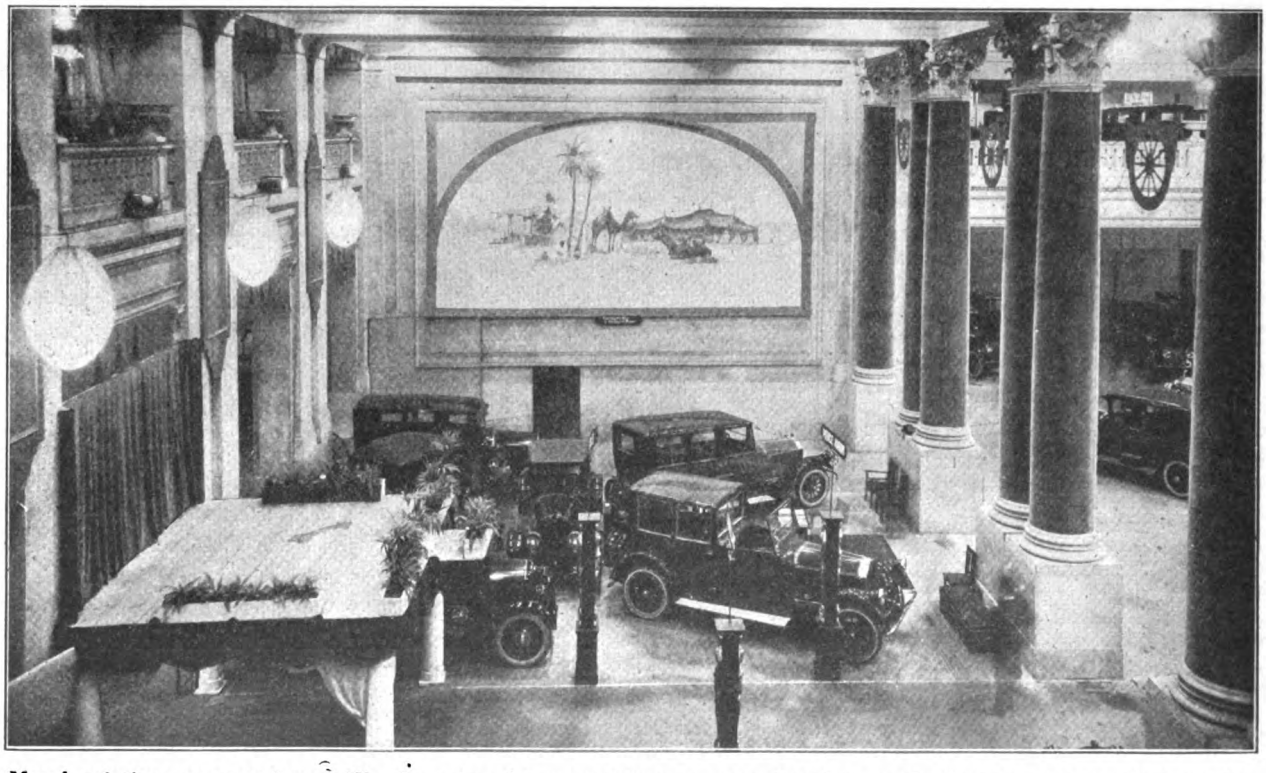


"Welcome," has been placed in a frame of gold and green and suspended from the ceilings of Studebaker showrooms

A TWO-CYLINDER Buick, a product of the age when people still gasped at the sight of an automobile, led the Prosperity Parade in Atlanta, Ga., giving those same people sufficient cause to stare at the styles of nearly two decades ago



FOLLOWING this car was a Buick Model 10—produced over twelve years ago. This preceded a six-cylinder model on which the present-day lines are based, while terminating the Buick procession was the latest production in the sport car



Mural paintings representing vividly the epics of transportation were employed to good effect as a means of decoration for the dealers' second annual closed car exhibit staged in the Grand Central Palace, New York, recently

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"You Made It—Help Solve It"

Traffic Problem Offers, in Its Solution, an Opportunity to Build Huge Markets—Must Come Soon

THERE is no substitute for the automobile. Man may perfect a better means of transportation some day—that is, better in principle—even as he will bring the automobile closer to perfection some day. This cannot reflect on present-day manufacture of motor cars since man always has found a perfected product no longer worthy of his attention and has turned to substitutes on which he may expend his creative energies. No sooner had the horse-drawn vehicle become standard than the automotive vehicle superseded it.

But laying aside speculation on the future's store of inventions for better automotion, the problem of making the automobile of greater usefulness to the peoples of the earth must be solved. No commodity has survived the depredations of time unless it has been of constantly growing value to humanity. And the automobile cannot be expected to be the one exception in history. It must progress or something as yet not dreamed of will relegate it to the discard.

This being true, how, aside from mere mechanical improvement, can the automobile be made of greater service? The answer is plainly discernible. By solving the problems that face the user of the automobile and the motor truck in the operation of his property. These problems are many but one of the greatest of them is the traffic problem.

The man who drives an automotive vehicle daily solves his few or scores of traffic problems. Hedged in by numerous laws, many of them hindrances rather than helps, surrounded by millions of others who are seeking to proceed about their myriad tasks and pleasures, unguided many times save by experience and anxious to attain his several immediate objectives, the driver of the motor car and the truck today faces a traffic problem the like of which never before has been seen on earth. And every day, every hour sees the situation more troublesome.

The unspoken question probably arising in the minds of the manufacturers, the distributers, the dealers, is what have I to do with the traffic problem? Why should I be called upon to help solve this problem that rightly belongs to civil authorities? What difference does it make to me as a producer that there is a traffic problem? Then the confutation: "It cannot hurt me because the automobile has no substitute and the people will buy my products as fast as they can afford to do so since the sheer utility of the motor car and the truck far, far outweighs any trouble experienced in operating it on the highways the Nation has provided."

In the attitude finding expression in such ideation is marked the dividing line between the type of mind and man represented by the Rockefellers, the Morgans, the Cecil Rhodes, the Hills, the Stephensons, the Bells, in short, the captains of industry and the builders of nations, and the mere men of big business. The significant attribute of the great commercial minds has been the ability to create markets for not the immediate future but the future of fifty years from now, a century hence.

The railroads have become huge because educational and developing work costing millions has been done by men who had only their vision to add to their personal persuasive powers. Little men always fight them because present percentages loom larger than future showers of gold.

The automobile became great through a combination of wonderful utility and progressive market building at the inception of the industry. In this year and age motor cars, and to a lesser extent trucks, cannot be made in sufficient quantities to meet the demand.

But the time is not far distant when lack of a place to operate the automobile and the truck side by side efficiently will result in curtailment in the business of selling these vehicles. That this is true is certain. People operate

THE TRAFFIC PROBLEM

EVERY person who uses the streets and roads of the Nation—and that means nearly every resident of the Country—knows that there is a traffic problem. The pedestrian, however, looks at the traffic tangles through other glasses and with a more jaundiced eye than does the automobile driver. The pedestrian is exasperated and angry and likewise blind. The motorist is exasperated and angry. He knows what should be done but he cannot do it. This, of course, concerning the sane of both species.

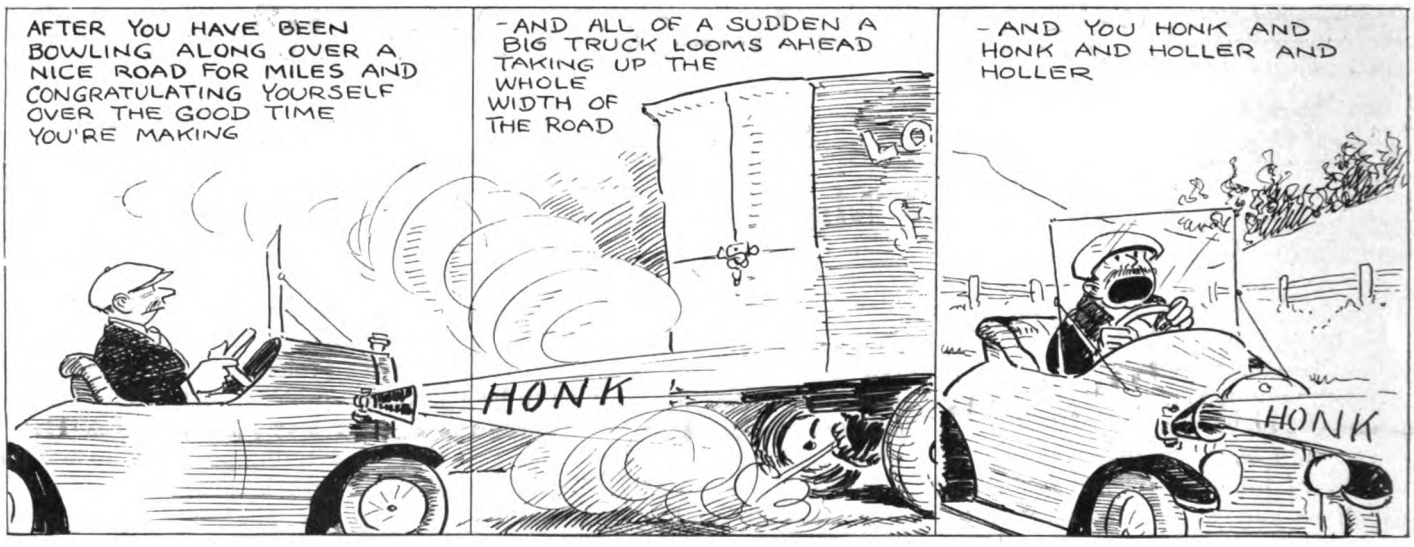
Every life lost in an automobile accident means one or more sales lost manufacturers—not in the loss of a customer through death, but the loss through example. Every person who rides in an automobile and is not the owner thereof, has time to think upon the wonderful happenstance of escaping with his life, provided, naturally, he rode through any appreciable "jam." The experience makes him think at least once on the futility of things and again on the disadvantages of motor travel, whereas he should be led to think once and then only on the advantages of owning an automobile.

Denser and denser grows the traffic in large cities. Dirtier, more hazardous and increasingly tangled grow the travel on country highways. The manufacturers turn out thousands upon thousands of cars every year to add to the snarl. It is like feeding a baby too much milk, the intentions are good, but the results bothersome.

As the infant's parents must solve its problems for it, so must the manufacturers help solve the problems facing his potential markets. It is not advanced that the manufacturer must do it all or even the bulk of the work. But it is offered that the manufacturer must not only give advice, but lend his influence to see that his or a better plan is carried out.

The accompanying article sums up, in a way, some of the ideas AUTOMOBILE TOPICS has presented in the past four months on the Traffic Problem and its solution or amelioration. It is clear that something must and will be done. It is also clear that the manufacturer, the automobile industry, must take the helm or at least stand on the bridge and guide the bark of the ship of business

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A good cartoon drives a lesson home as no amount of talk can; witness this

passenger cars primarily to get about expeditiously in the pursuit of business or pleasure. They operate trucks to carry goods from place to place swiftly, safely and economically. There is an absolute limit to the accomplishment of any of these desires within every city. The city may grow but traffic grows immeasurably faster, even aside from the obvious fact that the bulk of activities requiring automotive transportation are carried on within an even more restricted area.

Future Holds Menace

When this point is reached, commerce will bar the passenger car from the streets that must be served by trucks. That condition has already been reached in some large cities, not always through recourse to law but because the heavier, potentially more dangerous commercial vehicles make timid the driver of a passenger car and he will not chance himself and his machine. This is noticeable about docks, in wholesale districts, in freight-choked streets and in other places about our larger towns. No one who does not have to do so will drive his passenger car "down there."

This leaves the outlying districts of the cities and the countryside for the passenger car. In these parts of American communal life the roads are not usually so good. Driving for recreation is out of the question when the roadway is dangerous to automobiles. The more "solid" citizens, those who make up the bulk of the sales market for higher priced vehicles, refuse to endanger their lives or their property in driving over perilous highways.

Aside from the road conditions, which are being constantly remedied, are the highways crowded due to popularity. Even now hundreds of motorists, thousands of them throughout the nation, will only "take a drive" on Saturdays, Sundays and holidays when necessity demands or ennui is to be dispelled.

These things must be told, for the manufacturer, the distributer, and to a lesser extent, the dealers are too far removed from contact with the persons who buy their automobiles to fully appreciate the attitude of the great populace. But some day the industry will find sales appreciably decreased because of aggravation of these fundamental conditions.

Theorists on economics point to the constant state of flux in any market for any commodity. They declare that curtailed production due to lack of demand in any one year will provide for overproduction in other years. That is true in theory, it is granted, but even in the worst year imaginable, thousands of automobiles are made and added to the already staggering total in the United States. Even in the poorest year more "miles" of automobiles join the national caravans than miles of road are added—figuring, of course, that the automobile "miles" are not the lengths of the machines but the radius of their probable activity. Arguments in support of the theory that unless the traffic problem is solved the automotive industry is bound to reach a low condition of almost static annual production may be advanced by scores.

AUTOMOBILE TOPICS is concluding this week a series of eighteen short traffic articles wherein as many ideas were advanced. These columns have also seen, in past months and years, constant striving to impress on the trade the exceedingly close relationship between the growth of the automobile industry and traffic conditions. Happily, yet unhappily, at this date, traffic has become so universally tangled, so great a percentage of the people daily come in contact with traffic jams that the Nation's periodicals and officials are beginning to hammer away on the idea of righting traffic wrongs. Something is going to be done—just what nobody now knows, for the solvents offered are as numerous as are the communities affected.

Still Much to Be Done

AUTOMOBILE TOPICS has carried on its discussions of the traffic problem in these past few months with the adjuration "You Made It—Help Solve It." Truly the manufacturer and his sources of outlet have made the traffic problem, though naturally nothing but commendation attaches to the phrase. That they should help solve it is generally conceded and many have helped to a great extent. But there still remains the fact that manufacturers and their business constituents can and should take a far more active part in solving this plaguing problem of traffic. They form a body of citizens of tremendous social significance. Their combined wealth and brains make a significant part in the whole of American commercial life.

Who, then, is better fitted to undertake the task of helping—actually helping and not just advising—the Nation in its struggle with transportation? Not only will the grateful thanks of the Country be theirs but their markets will be assured as long as the automobile remains without a substitute or a peer.

In discussions appearing in these columns, many of the

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knottier problems of traffic have been considered. Which are outstanding among these? The great divisions are three:

The highways, their upkeep, extension and perfection.
Those who use the highways—the pedestrian and the automobile driver.
The regulation of traffic.

The subdivisions are many but the following are prominently before the people of the United States today:

The best types of pavement and road making.
Where the roads shall be placed and how many shall be built in a given area.
How best to provide funds to care for the roads and what laws to pass to protect the investment.
Formulation of traffic laws—shall they be national, shall they be provincial, shall they include pedestrian as well as motorist.
Who shall enforce the laws and how.

Here again the "sub-heads" that might be appended below each major problem grow more and more numerous. For instance, shall Federal, State, county, municipal or special officers enforce the law?

Now, as has been said before, these problems are going to be solved some day. The abuses of feudalism were of long standing and to the minds of the men that day seemingly doomed to constancy as are the heavens themselves. Yet the wrongs were righted and who suffered? Those who could not see the dawn of a new era.

What Lies in the Future

The manufacturer of automobiles faces an analogous proposition. Some day the traffic problem will be solved. If the manufacturer refuses to direct the huge task that seems unconquerable save to the "high heart," others will do so who have no interest in the automobile makers as such and will enact ruthless regulations which may be of serious consequence to the industry. To say they may is not to say they will, but the danger is inherent in such problems of public weal and for seven thousand years such problems have pretty generally been settled drastically with injustice to many who were only able to escape trade disaster by long, arduous and post facto campaigning.

Equally numerous are the suggestions of the nation's thinkers for the relief of the condition of traffic. All may be classed beneath one or the other of these broad titles:

Regulation by education.
Regulation by mandatory power of the Government.

As to education of the people in traffic, opponents are as strong as proponents. It is the experience of life, however, that the individual, the composite of humanity, cannot be made to do a thing or even persuaded to do it by telling him it is good for his soul, his future or his health. He must be made to do it either by an appeal to his instinct or self-preservation by demonstration of the need or by law. And the law is not always a specific, for those who enforce the law are not always just.

Seeking to relieve the traffic congestion by law likewise has many and sometimes rabid opponents. The more or less just cry of "too many laws now" goes up throughout the land, morning, noon and night. It is also declared that the law need not be invoked.

Combination Is Better

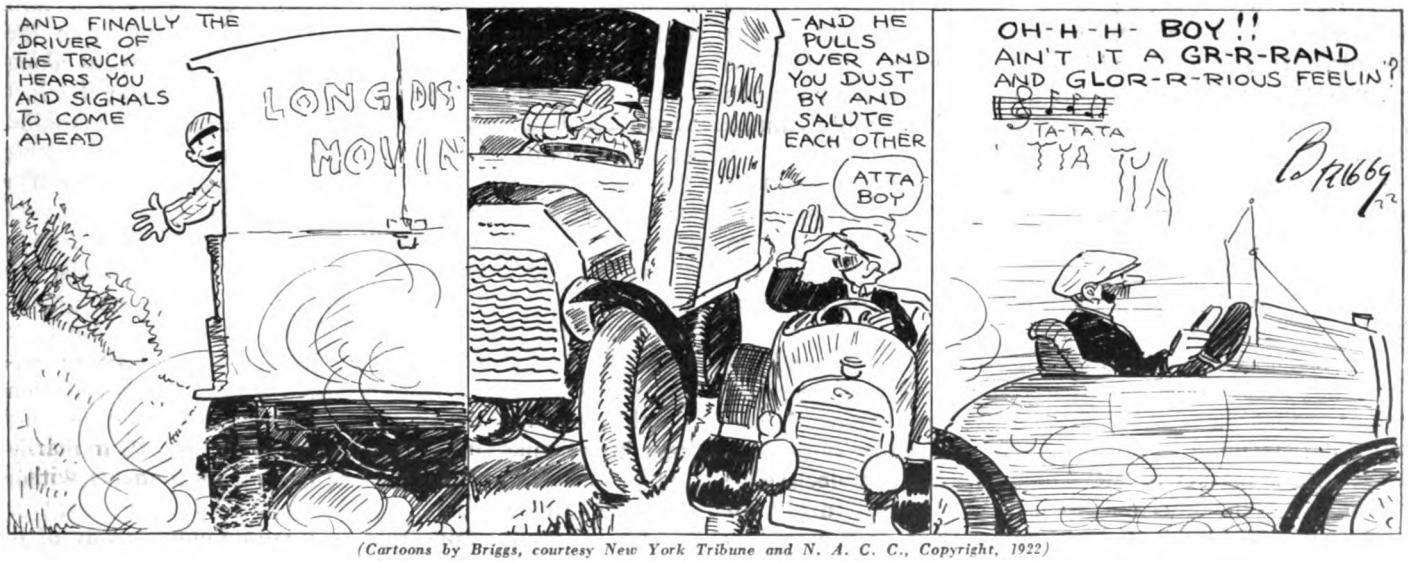
It would seem that a combination of the two would be of greatest benefit. Educate the present and especially the coming generation in the principles of safety and proper conduct of traffic. Make certain and few laws to care for mass movement and conditions and to ward off inroads into morale by the reckless fool. Last and by no means least, provide for just application of the law.

That is a sane proposition. But, too, it is one of those tasks which are seemingly simple but in reality of the gravest difficulty.

First as to education. "Safety First" proved a fairly effective slogan. Had it not been practically the first attempt at national campaigning, the results might have been more pronounced. Elbert H. Gary recently came forward with the watch-words "Don't Get Hurt." That is an improvement, for it is "homely" and immediately brings to the mind the painful nature of traffic accidents. It has been made the slogan of the Highway Education Board's 1922 safety drive. There have been many other slogans devised—"Cross Crossings Carefully," "The Engineer Can't Dodge You" and similar phrases and sentences.

But are slogans effective? Many believe they have outlived their usefulness as directed at the public or, for that matter, as business assets. The question is largely one of personal application. Does "Don't Get Hurt" make you more careful? Does "Cross Crossings Carefully" have any deterrent effect on you when you drive through the country? If these have no effect on you do you think they will prove of value to the man of less intelligence?

Those who foster the use of slogans point to any one year's record as indication of the effectiveness of their



(Cartoons by Briggs, courtesy New York Tribune and N. A. C. C., Copyright, 1922)

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hobby. Such an argument may be accepted as incapable of proof. It is a fact, however, that more and more of the most intelligent and philosophical of minds accept with reservations the assertion that slogans work wonders. There was a time when slogans, being new in national propaganda, were powerful. "Give 'Till It Hurts," for instance, was a ready phrase, more akin to slang in its graphic expression of patriotism than to high-minded resolve, however.

And so might be reviewed the hosts of cant-phrases that have arisen in the past. The nubbin of the matter seems to be that a slogan does very well as a catch phrase but hardly will save lives. The man of judgment may murmur "Don't Get Hurt" as he takes care not to, but the naturally reckless person subconsciously alters the sentence to "I Won't Get Hurt," or else he merely "takes a chance."

The Highway Education Board again embarks on an essay contest, the subject of which has to do with how traffic might be improved in the community in which resides the aspirant for the prize. Such ideas are useful. It is doubtful whether the writing of the essay or the study of the proposition will accomplish anything as far as the child is concerned. But the child carries the message into the home. The father and mother, seeking to aid the youthful contestant, discover ideas of their own about traffic regulation in the home town. Father may write to the local newspaper with his suggestions. Both parents take thought on a problem hitherto considered only objectively.

The Highway Board's further campaign concerns the devising of lesson series on safety to be taught in the schools. Here again the ultimate good lies in indirect lines.

Such an educational campaign, carried to further lengths when the first "lesson" is driven home, is worthy of much commendation. But it needs an adjunct, something in the way of laws which, fundamentally, mean "If you won't be good, you must be." In other words, the educational program shall teach the Nation why it should do thus and so and the law will protect the wary from the unwary, the man of sense and judgment from the man of no sense and less judgment.

Now arises the question of what laws shall be made, it being understood of course that many of the present regulations are excellent and therefore worthy of a place in any revised codification of traffic rules. And while the manufacturer of automobiles can be of great assistance in spreading the educational propaganda, he can be of greatest assistance in devising wise laws, for the automobile and its use in his special province and his interests are at stake.

The propositions to be considered are numerous. First it must be decided whether there shall be a Federal code covering matters of universal application, such as headlights, speeds outside corporate limits of communities, licensing, and certain general rules which may be discovered to be just throughout the Nation. One of these latter might be that all main arteries of traffic outside the "business district" of cities, be considered as boulevards and compulsion be invoked to the end that motorists bring their vehicles to a full stop before entering into or crossing such highways.

Regulations concerning such practices as parking must remain under local jurisdiction. This is certain since the width of streets and the density of local traffic impose restrictions a Federal law would be unable to cope with successfully. Uniformity cannot be maintained.

ASSOCIATION
OVERWORKED-UNDERPAID-DISHWASHING-HOUSEWIVES
HEADQUARTERS
BY THE COOK-STOVE AND THE CRADLE
WITH THE WASH-TUB NEARBY.

In Re—Killings by Automobiles.

Sir:— It is submitted:

(A) That the self-propelled vehicle is *not* a vehicle of a character that has an inherent right to the use of the highway.

(B) That the self-propelled vehicle is *not* a vehicle of a character for which the highway was primarily designed.

(C) That the pedestrian has the right of way on the highway at all times.

MATILDA BROWN, Secretary. SARA SMITH, President.

An example of one effective method of wasting money—sent out on post cards

be made national in application are those covering the pedestrian and his relation to the streets and to the motorists. Without caring for the man who walks, no traffic regulations will succeed to a gratifying degree. even if lanes of travel are established and adhered to by all automobiles the pedestrian being allowed to take his unguarded way across and through the traffic, places his life in jeopardy and the motorists' peace of mind at naught and so accidents will continue to mount. That pedestrians cross the streets at designated places and then only at right angles seems to be the most successful plan.

In Germany it was once compulsory and may be now that pedestrians cross all streets at right angles to the curb line although they might do this at any point along the street. The advantage of this scheme lies in the fact that the people do not resent it since the restriction is light, and the motorist knows the pedestrians' course across his path. Thus is avoided the night-mare of drivers, the man or woman who dashes into the traffic and then loses all sense of will, "backs and fills," is undecided which way to turn and either is run down or causes several accidents.

Having devised an adequate traffic code, the renaissance of enforcement and the means thereof must be brought about. Laws, once made, must be strictly enforced. Once an arrest has been made, the supposition should always obtain that the misdemeanor or crime must have been committed. This means that thinking, judicially minded men must be placed in control of traffic. Signals must be considered merely the expression of the will of

(*Continued on page 746*)

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SELLING GOODS AT RETAIL

A MAN whose success in selling automobiles stretches over a period of many years raises an objection to use of the word "dealer."

"It is not dignified enough," he states—"not a fair term to use in describing the work of the up-to-date automotive merchandiser — the man actively engaged in the world's second greatest industry."

So he makes this suggestion. "Why not eliminate this word altogether," he urges, "and use in its stead 'automobile merchant'?"

Here is something that is worthy serious consideration by the trade at large. Should there not be more "merchandising" of automobiles and less "dealing?"

AUTOMOBILE TOPICS answers in the affirmative. But it wants others to voice an opinion, so that through open discussion this matter may receive the attention it unquestionably merits.

* * *

WHAT kind of men have you working for you—in your salesroom —in your service station and shop? Have you every confidence that they are looking out for your interests? If so, are you looking out for theirs?

When it was first suggested to W. V. Faunce, president of the W. V. Faunce Motors Corp., Chicago, that he was introducing the chain-store idea into his plan of merchandising he declared that if this were true it was due to his employes.

"I believe in paying real money to men who are responsible," he said. "I've found that by paying good salaries and not thinking above everything else of piling money up for myself, profits have just naturally increased."

* * *

STRANGE it is what small things can spoil a sale! Nor does the salesman always stop to realize that it is his attitude toward the prospective buyer which is sometimes responsible —his inability to meet the visitor on his own ground—his lack of ingenuity in phrasing the sales argument in such manner as to appeal to that particular individual.

An effective way of bringing the prospective buyer into proper focus is to place yourself in the other fellow's shoes.

If by nature you happen to be somewhat conservative—slow in making large investments, and extremely cautious in every business transaction, what is your attitude toward the salesman who slaps you on the back, assures you you're making no mistake and concludes with "Take my word for it, it's the best buy in town?"

A careful study of human nature will quickly reveal what kind of man you have to deal with. The greater the ease with which you meet him on his own ground, the greater the chances of arousing his interest.

* * *

LAST week first intimation was given in these columns of a slogan that the automobile merchandiser is destined to hear more of during the next few weeks. It's the "Ask 'em to Buy for Christmas" campaign.

The trade, as a whole, has been astonishingly slow in awakening to the fact that the holiday season brings with it unlimited opportunity for presenting its sales messages in new and effective guise.

It was last year that "Say It with a Motor Car" first came into common use. This year it promises to become universal.

Right now is none too early to begin saying it over slowly—"Ask 'em to Buy for Christmas."

AS "SID" SNYDER SAYS

IF you've got somethin' that's worth talkin' about, and you know how to talk about it you needn't worry. Someone'll listen. But start tryin' to buy your way and there's trouble.

* * *

Old Lem Whittaker who keeps the general store c'n read salesmen like a book. Other day one comes in all dressed up. "Good mornin'" he says. "Here, have a cigar." Then he starts to talk business. "And all you'll ever get from a feller like that," says Lem, "is the cigar"

Features 'Parts' in Window Display



This window of A C spark plugs proved a sales booster for the large accessory department of the Darling Automobile Co., Reo distributer, in Auburn, Maine

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Faunce Welds Chain of Merchandising Links

"Get Right Men and Let Them Go to It," His Slogan—Holds Rousing Rallies to Keep Them Stirred Up

A POWERFUL link has been forged in the chain store idea as applied to automobile merchandising. In fact, there are in all, four such links welded into a chain whose strength has successfully withstood the test of time.

Each of these links is a complete unit in itself. Together they make the strength of the W. V. Faunce Motors Corp., Chicago, Ill., forming a tribute to the skill and keen vision of W. V. Faunce who is revealed as master artisan.

To those who make a point of following the doings of the trade it will come as no surprise to learn that Faunce guides the destinies of four large distributing organizations. In addition to the W. V. Faunce Motor Co. which is the center of Oldsmobile activities in Chicago, there are the Oldsmobile Pittsburgh Co. in Pittsburgh, Pa., the Oldsmobile Distributing Co. in Memphis, Tenn., and the Cincinnati Oakland Motor Co. in Cincinnati, Ohio.

When a friend of Faunce, and an automobile man, first suggested that he was employing the chain store idea in his method of operation, Faunce just dismissed the idea with a laugh.



Faunce interests in Pittsburgh are centered in this thoroughly modern building located on North Craig street. There are four floors measuring 60x120 feet

"But it's true," persisted his friend, "and what is more will you kindly tell me how you do it? I've tried and failed.

"When I'm in Pittsburgh, I find I'm needed in Cleveland. When I'm in Cleveland, surest thing you know something's happened in Pittsburgh. I can't be everywhere at the same time, and consequently I haven't been able to work out this chain store idea with any amount of success."

Faunce's reply is significant in revealing the attitude of the born executive.

"You don't know how to run your business" he declared. "If you didn't try so hard to run it yourself you might be more successful.

"I've taken up a position in the background of the business arena. I pay real money to men who are responsible—men I can trust and on whom I can depend to carry on the every-day battles.

"So you see it makes little difference whether I'm in Pittsburgh or enjoying a rest somewhere along the Pacific Coast.

"The work goes on just the same and I'm confident it will continue to go on for the simple reason that it's in capable hands.

A QUESTION AND ITS ANSWER

IF you didn't try so hard to run your business yourself, you might be more successful." That was the answer of W. V. Faunce, president of the W. V. Faunce Motors Corp., Chicago, Ill., well known Oldsmobile distributer, to a friend who confessed envy of the success Faunce has experienced in conducting his four branches.

"Will you kindly tell me how you do it?" was the question asked.

Faunce's reply is significant. "You don't know how to run your business," he declared. "I pay real money to men who are responsible—men I can trust and on whom I can depend. So you see it makes little difference whether I'm in Pittsburgh or enjoying a rest along the Pacific Coast. The work goes on just the same and I'm confident it will continue to go on because it's in capable hands.

"My experience has taught me this. By paying out real money for real men and not thinking above everything else of piling it up for yourself, profits just naturally increase"

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"My experience has taught me this. By paying out real money for real men and not thinking above everything else of piling it up for yourself, profits just naturally increase."

In view of this attitude it is not surprising that the "go-getter" spirit should prevail throughout the Faunce organization. It is not surprising also that steps should be taken to see that such a spirit is maintained at all times.

It would have been well worth the while of those who entertain the slightest doubts as to the benefits to be gained from an occasional rally or get-together meeting of all members of the merchandising organization to have stepped into the salesroom of the Oldsmobile Pittsburgh Co., a few weeks ago. They would have discovered upwards of 150 men gathered in the big showroom on this particular evening, listening to a talk given for their special benefit by A. R. Kroh, of the Goodyear Tire & Rubber Co., who, as the deliverer of good, honest, heart-to-heart messages to dealer organizations needs no introduction to the trade at large.

It was one of several such gatherings that have been the cause of investing those members of the various Faunce companies with renewed interest and enthusiasm. "And there will be others," Faunce emphatically declares.

Every member of the Pittsburgh branch was present. There was also included in the audience many of the Company's dealers.

As Kroh warmed up to his subject it was evident he carried his hearers with him. This was due both to his magnetic qualities as a speaker and the logic of his arguments.

Service to owners was the general theme of his talk, during the course of which he also laid emphasis on the opportunities always lying in wait for those who are conscientious in everything they do. Particularly strong did he make this point as affecting men in the shop organization from "grease-hound" up.

"A doctor, a lawyer, or a musician," he said, "spends year after year perfecting himself for his calling, during which period he is making nothing. You men in the shop, whether you happen to be grease-hounds or skilled mechanics, are being given the opportunity to learn the ins-and-outs of one of the world's greatest industries. And think of it—you're being paid for the opportunity of learning!

"It's just as though someone came along and said he'd pay you so much to take a four years' college course. Have you ever stopped to look at it that way?

"With such a foundation of the essentials of the automobile industry there is no end to the opportunities awaiting you. Right here in the Faunce organization are any number of positions that are open to men who have had the very same experience you are getting now and for which you are being paid.

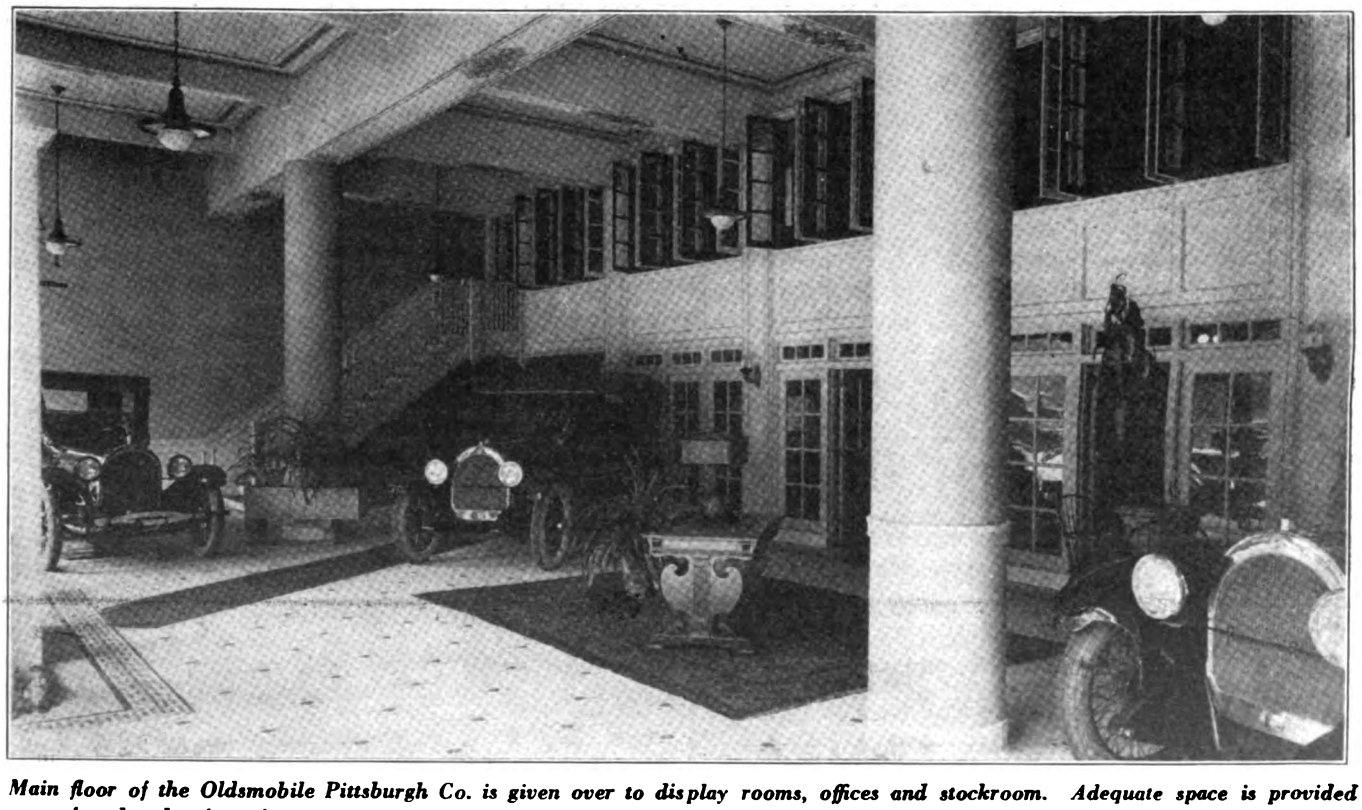
"How are you going to make the most of this opportunity of learning a trade that offers you so many advantages? How are you right now at this very minute equipping yourselves to meet the future?

"Supposing that an Oldsmobile owner were to drive into the shop tomorrow just before the time for the noon whistle to blow. What would you do?

"Would you proceed to wash up, take up your lunch and saunter out into the street, or would you step up to the customer and say something like this: 'Are you in a hurry for this job, Sir, or can you wait until after the lunch hour? If you're in a rush I'll gladly stick on the job and see what I can do to get you fixed up.'

"And, supposing the same thing were to happen just as you were getting ready to call it a day and start for home. Would you immediately let the customer go hang until a more convenient time, or would you come forward with the offer to do a little overtime and help him out?

"It's the way you rise to such emergencies that determines whether or not you're fitting yourselves to fill the posts that await you when the proper time arrives. The better grease-hound



Main floor of the Oldsmobile Pittsburgh Co. is given over to display rooms, offices and stockroom. Adequate space is provided for the showing of passenger cars and trucks amidst harmonious surroundings that reveal them to the best advantage

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you make yourself, the better will you be able to fill some other more important post."

This part of his message to the shop men he summed up as follows: "And you shop men—from grease-hound to foreman—remember that the Oldsmobile owner is a good friend of your establishment, even though he does have an occasional grouch.

"It is up to you to cure the grouch and send him away in good humor. Greet him with a smile. The smile always wins. If the salesman has mistakenly told him an untruth about the car, don't intimate that the salesman is a liar, nor 'knock' him and his ability. Play the man's part. Have it out with Mr. Salesman in private. But never give the car owner an impression that there is discord in the organization."

But the shop organization was not the only division singled out for attention. Kroh also had much to say to those members of the Company who are more closely identified with sales.



In addition to the main building, Faunce is also operating in Pittsburgh a branch sales and showroom at Baum boulevard and Euclid avenue

One of the points he brought out forcibly was the importance of the "opening shot." "Most sales are made or lost on that 'opening shot'," he declared.

Forgetting about business hours was another bit of advice he advised everyone to carry home and think over. In this connection he drew attention to the fact that the most fruitful selling hours are those when the prospect's mind is free of the cares which have been troubling him all day. Even though it mean that the salesman be on the job during the evening, he made it plain that such sacrifice would show in the results obtained.

"I have never been able to make a comfortable living between certain hours," he said. "The fact that the office opens at 8.30 a. m. and closes at 5.30 p. m. should mean nothing to you so far as making sales is concerned.

"You should consider yourself a business partner of your employer—and, in fact, there is no reason why you should not become his partner in actuality—in time. His success is your success and vice-versa.

"And just because you are on a commission basis you should not think that your time is your own. If you sell four or five cars this week, it is no excuse for you to loaf next week. Loafing detracts from closest attention to the business and gives the buying public a bad impression of your concern's affairs."

From such bits taken here and there from Kroh's talk it will be seen that much food for thought was offered every man present. And it is just such thoughts presented in effective manner that Faunce keeps serving the personnel of his organizations.

Just what effect they had upon certain members of the audience was reflected in an incident that occurred after the meeting was over.

One shop man stepped up to Faunce, shook hands with him, as well as Kroh, and expressed himself full of gratitude for the help he had received. "But there's just one thing I want to ask you," he added, "the next time you have a meeting like this, invite the women folks. It'll do them a lot of good.

"I can't make my wife understand why I want to get to the shop a little earlier in the morning. And if I'm a little later than usual getting home at night she don't like it because dinner's kept waiting.

"She can't seem to understand that the reason I'm doing it is so's she can have as good a fur coat as my neighbor's wife's got. I can talk till I'm red in the face, but it don't do any good. But if she was to come down here and hear what I've heard tonight, I'm sure she'd understand."

What more proof is needed that the urge for greater efficiency on the part of every individual member of the organization reached home? It is of interest, too, to note Faunce's reaction to this suggestion.

"I'm not sure but what it would be a good thing," was his comment, "if the women folks were included. There's such a thing, after all, as selling the job to the wife as well as the husband."

Such responsiveness to any suggestion that seems practicable accounts in no small part for the success of this merchant who has introduced the chain store idea into automobile selling. For the cornerstone upon which the Faunce organization rests is one of paying well for ideas and providing every opportunity for their development. Small wonder, therefore, that a powerful merchandising chain has thus been welded!

MR. SHOPMAN—WHAT WOULD YOU DO?

SUPPOSING that an Oldsmobile owner were to drive into the shop tomorrow just before the time for the noon whistle to blow. What would you do?

Would you proceed to wash up, take up your lunch and saunter out into the street, or would you step up to the customer and say something like this: "Are you in a hurry for this job, Sir, or can you wait until after the lunch hour? If you're in a rush I'll gladly stick on the job and see what I can do to get you fixed up."

And, supposing the same thing were to happen just as you were getting ready to call it a day and start for home. Would you immediately let the customer go hang until a more convenient time, or would you come forward with the offer to do a little overtime and help him out?—*A. R. Kroh*

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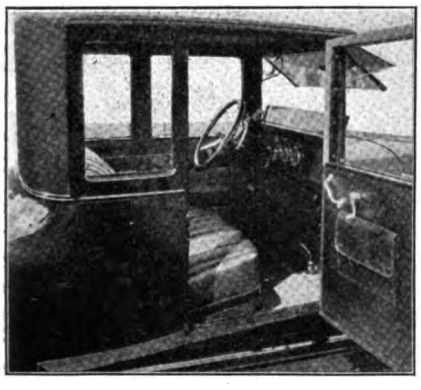
NEW CLOSED MODELS IN POPULAR LINES

Maxwell Club Coupe Destined for Popularity

New Two-Passenger Model Has Much to Commend It—Has Adjustable Rear Quarter Windows—New Windshield Another Feature

WHAT promises to be one of the most popular models in the Maxwell line is the new two-passenger $985 club coupe, seen for the first time at the New York closed-car show and told of briefly in these columns a week ago in connection with that exhibit. In beauty, finish and appointments, not to overlook conveniences, the new single-seat job has much to commend it. In all it is a car equally suited to the business man's needs and yet at the same time good-looking enough for social use.

Quarter windows which drop full length are incorporated in the design. These, together with the large rear light, give unobstructed vision in all directions.



Details of new Maxwell club coupe

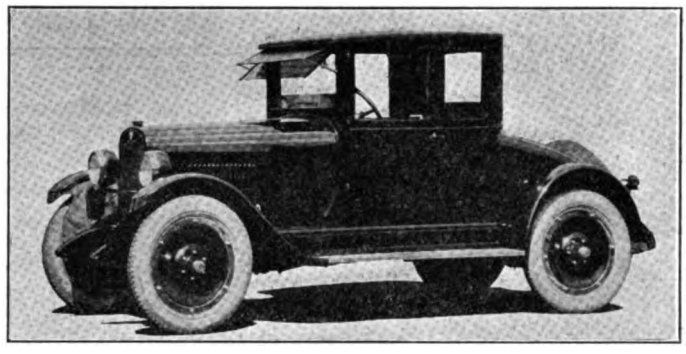
The rear window, incidentally, is provided with a heavy roller curtain.

Lines of other Maxwell types and body finish are retained in this coupe. The only difference in appearance, save for the size of the body, is that the rear panel above the belt line is covered with a weather-proof fabric. The seating space, as in the roadster, is positioned to give almost even distribution of weight to the four wheels.

Seat and back rest are upholstered in genuine leather. Upper section, however, is covered with broadcloth, giving the interior conventional closed-car cheerfulness. Hardware is of the new satin-finish nickel. Standard Yale door lock is provided. Immediately back of the seat is a deep compartment for small parcels, this having two lids instead of one running entirely across the top of the compartment. The large compartment in the rear deck also has a Yale lock.

Provision for ventilation is another feature. The adjustable rear quarter windows have already been mentioned. There is also the newly adopted standard closed-car windshield. Both sections swing outward, the upper-half being hinged from the top and the lower from the bottom. Another commendatory point of this shield is that the lower section is a very narrow strip, this lowering the "line," where the two sections meet, out of the driver's vision. The entire assembly is firmly set all-around in a rabbet, this construction being water-tight and also virtually rattle-proof.

ALL the beauty of other Maxwell models is retained in the new two-passenger coupe, listing at $985. Among other worthy details, the rear quarter windows lower

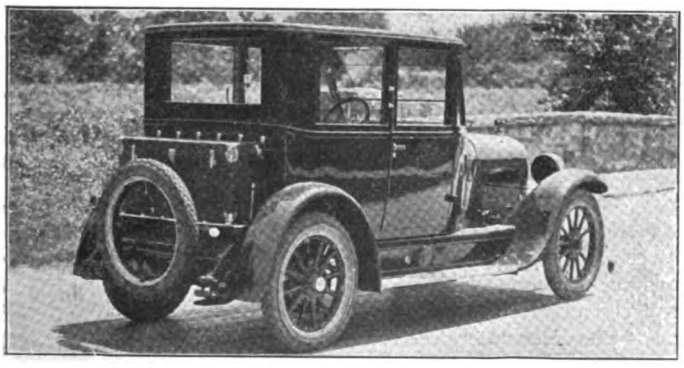


Equipment includes rear vision mirror, windshield wiper, fixed windshield visor of an attractive new design, standard dash and instrument board, walnut steering wheel with aluminum spider, floor carpet and heater. The heater is a ventilating type, unobtrusively placed on the right side of the toe board.

Jordan Reduces and Improves Closed Models

Brougham and Sedan Now Listing at $2,485 Have Slightly Changed Lines and Added Equipment—Brougham Carries Trunk

WHILE reducing both its five-passenger brougham and five-passenger sedan from $2,785 to $2,485, the Jordan Motor Car Co., Cleveland, has at the same time made some changes in equipment and design. Principal body changes include substitution of a broomstick radius for the former sharp corner lines, roof lines lowered two inches and seats lowered a corresponding amount. Rear seats have been made wider and the pitch slightly altered to give greater comfort.



BROUGHAM of the Jordan line, just reduced to $2,485, now carries a trunk as standard equipment. This trunk contains two suit cases and a small compartment

Both closed cars are now trimmed in windsor weave cloth in colors to harmonize with body finishes. In the brougham this cloth is worked in plain trim, but in the sedan plaits are used over the Marshall cushion and back springs.

Worm type regulator is now used in the doors in place of chains. Removable panels make it easy to get at the regulators if necessary, or to replace glass without tearing out trimming. Platinum finish hardware in dome lights, door pulls and regulator handles has been adopted. New steering wheel similar to that used on the Blue Boy is now standard, this having a walnut spider and rim with small polished aluminum control levers mounted in the center.

Added to the brougham equipment is a

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trunk of black Fabrikoid with nickeled-brass corner plates and trimmings. This trunk, mounted at the rear, includes two large suitcases and an extra compartment for golf shoes or packages. The sedan body has been lengthened to allow more room in the front compartment and a little more in the tonneau. The improved models are now coming through.

New Reo Closed Cars Designed to Boost Sales

Steel-Paneled Model "C" Sedan and Coupe Offered to Meet Dealer Demand for Popular-Priced Jobs—Have Attractive Features

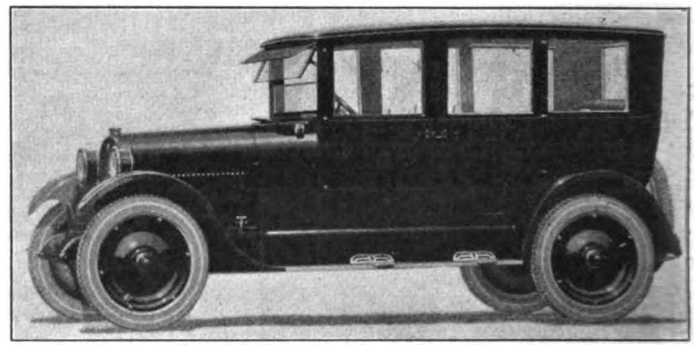
"YOUR biggest closed-car year begins right now," the Reo Motor Car Co., Lansing, tells its dealers in presenting the new model "C" steel-paneled five-passenger sedan and four-passenger coupe, priced respectively at $1,885 and $1,835. The former is offered as Reo's compliance with dealer demand for a popular-priced sedan and the latter as the Company's answer to "What are you going to do about the coach competition?"

The "C" models are entirely new bodies with new lines. Their steel-paneled construction over a sturdy hardwood framework contrasts with the aluminum bodies of the "B" closed types which sell for a little over $500 more. The standard "T-6" chassis is used, except that 32 x 4-inch tires are fitted to steel disc wheels.

Reo standards for closed cars are adhered to in the construction. Joints are accurately fitted, glued and screwed or bolted. Outer covering is of steel, the panels having open joints, to prevent cracking or breaking of the finish. Top is of the same frame-work construction as used on other Reo closed models. The slatted construction, covered with sound-absorbing fabric, is said not to vibrate or reflect mechanical noises.

Each door is hung on three hinges. Doors are fitted with adjustable rubber bumpers, double catches, door locks controlled by lever from inside and "T" handle from outside and pull-to handle. Windshield gives a full-width vision. Upper-half is adjustable while lower section is stationary. Windshield cleaner is provided.

NEW Reo model "C" closed cars, with their attractive steel-paneled bodies and substantially lowered prices, are offered to meet the demand for popular-priced types



Upholstery is in woolen body cloth finished in a semi-broadcloth surface. This material is of a brown shade with light blue stripe. Curtains to match the upholstery are hung at side and rear windows. Hardware and trimmings are in gray satin finish.

Chassis and fenders are finished in black enamel with option of two finishes for the body. The body and hood are finished in flat Crane-Simplex surface, light gray below the belt and slightly darker gray above, or regular high-gloss varnish in Brewster green under-body and black above belt.

Fittings include cowl ventilator adjustable by screw on instrument board; mirror; adjustable metal windshield visor covered with morocoline; step mat of flexible moulded rubber with aluminum frame, front side shaped to provide shoe scraper, rear raised and rounded to serve as shield against marking car, drum-type head and cowl lights and dome light controlled by pull switch. Tonneau heater is provided in the sedan.

The coupe is of the same general design as the sedan. It has a roomy interior and wide doors and windows. Driver's seat is slightly ahead of the rear seat. Auxiliary seat has a left arm rest, the right one being omitted.

Blackmore Shock Preventer Offered for Light Cars

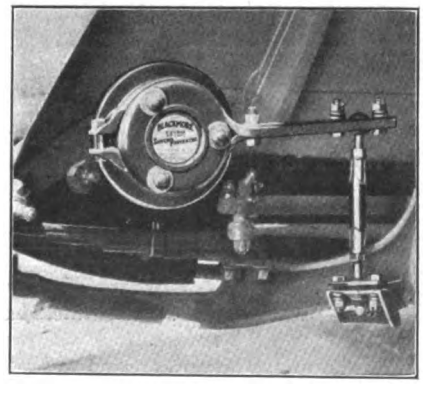
Houdaille Distributing New Friction Device with Compensating Resistance

COMPENSATED resistance to shock is one of the distinctive qualities set forth for the new Blackmore double-acting shock preventer, about to be put on the market for light cars, such as Dodge Brothers, Chevrolet and Ford. It is being distributed by the Houdaille Co., Buffalo, N. Y., manufacturer of the Hoo-Dye hydraulic shock absorber. A set of four attached will retail under $30.

The Blackmore device is claimed to embody the first application of the friction principle in a shock absorber, whereby the friction is increased or decreased in exact proportion to the size of the bump on the spring compression as well as on the recoil. With this preventer, the friction is said to be practically negligible when the body is at or near its normal position with respect to the axle.

As the distance between the frame and axle is increased or decreased, the friction element in the Blackmore is greatly increased by means of a group of springs. These springs, however, have nothing to do with the support of the car.

It is pointed out that where a friction device is interposed between the frame and axle, acting with constant friction—in other words, constant resistance to movement of axle or body—the delicacy of the springs, where little movement is required, must be impaired in proportion to the resistance. With this new device, however, the reverse is the case. The delicacy of spring action at or near normal position is maintained, which makes it possible to furnish a device providing a tremendous resistance to body movement when the jolt is encountered.



Blackmore on Dodge Brothers (front)

Tests All Nickel-Plated Parts

To test nickel-plated products for quality of the plating, Olds Motor Works, Lansing, Mich., puts all such parts in an airtight container into which a salt fog or spray is introduced through the medium of a current of air blowing through a salt solution. Every nickel-plated part must stand this test for 24 hours without showing signs of rust.

Anderson Sees More Prosperity Ahead

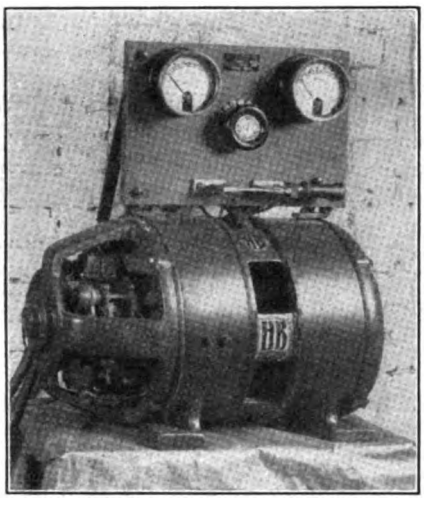
Continued prosperity in the automobile industry is the forecast of J. W. Anderson, president of the Anderson Motor Co. Production schedules of the Company have been increased to 10,000 for the year of the new aluminum six model.

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PRODUCTS THAT AID IN QUICK REPAIRS

NEW HB CHARGING OUTFIT IS SMALLER IN SIZE

Chief interest in the new HB constant potential charging outfit which the Hobart Brothers Co., Troy, Ohio, has brought out lies in the fact that it is smaller in size, than other of the Company's products, having been designed for the average shop. This 200-ampere outfit is reasonable in price and is offered



HB constant potential charging outfit

on a time payment plan which should prove attractive to the shop owner.

The new HB outfit consists of a ball bearing 5 h.p. motor built in single unit construction, into a 7½ volt, 200 ampere, constant potential generator. It has been designed to charge six-volt batteries. Complete equipment is furnished with every HB outfit, including bus bars, terminal for leads and bus bars, accurate reading instruments, switchboard, and 12 feet No. 0000 connecting cable.

Price of the charger complete is $365.75. It may be secured, however, for $85 cash and ten monthly payments of $30 each.

Champion Tool Offers Utility Clipper

One-quarter inch bolts, or thicker material if softer, can be cut with a double-acting cutter which is being manufactured by the Champion Tool Co., Meadville, Pa. This tool consists of two jaws, two handles and four bolts. Angle of the jaws throws the handles above a level plane so that the work is made accessible. Length of the tool is 15¾ inches and the weight, 2¼ pounds. The jaws may be renewed.

Offers Apex Piston Ring Compressor

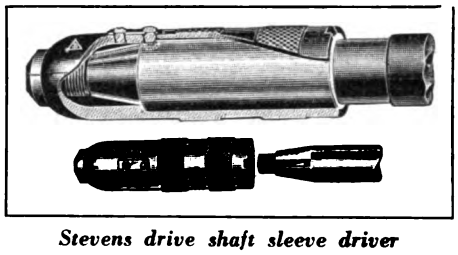
Convenience in operation is a point that will appeal to all those who investigate the merits of the Apex piston ring compressor which has been placed on the market by the Thomson-Friedlob Mfg. Co., Peoria, Ill. A corrugated band encircles the piston rings and turning the controlling shafts winds a spool which tightens the band. It can be operated from the top of the block or from underneath. The shaft has a universal joint which makes it possible to operate it at an angle around the crankshaft.

STEVENS PULLER AND DRIVER ARE FORD TOOLS

A puller and driver designed for the Ford drive shaft sleeve are being offered by Stevens & Co., 375 Broadway, New York city, as an addition to the Company's line of Speed-Up tools. These are sold separately or may be had at a special combination price.

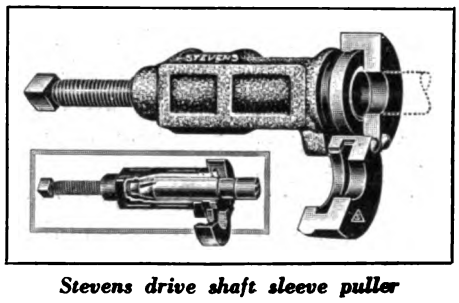
Steel jaws that completely surround the sleeve are a feature of the Stevens puller. Thus, any required pressure can be applied through a large steel screw without danger of injury to either sleeve or shaft. Inside of the puller is machined to a close fit on the sleeve to prevent the tool from springing out of line or jumping off under pressure. Square bosses are provided on the sides for securing the tool in a vise.

A novel feature of the Stevens driver



Stevens drive shaft sleeve driver

is provided in the form of a "sight" consisting of a special notch and pin. This insures the proper alignment of the keyway slots as the sleeve is driven into



Stevens drive shaft sleeve puller

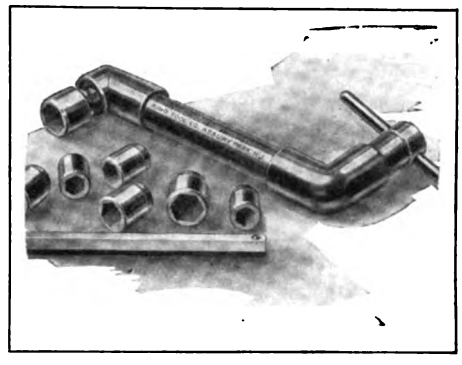
place. Emphasis is laid upon the fact that it drives the sleeve with absolute safety. The tool is turned from steel rod.

Stevens T-122 which is the drive shaft sleeve puller only, sells for $6.50. T-121, the drive shaft sleeve driver, is priced at $2. The two tools together may be had for $8.

ONLI-1 SOCKET WRENCH USES TWO BEVEL GEARS

Turning the handle turns the nut in the Onli-1 socket wrench. If there is room for the nut or bolt there is room to operate this tool which has been produced by the King Tool Co., Asbury Park, N. J.

Two bevel gears are employed, one on the handle shaft turning the main shaft in the tube, and this in turn operating



Onli-1 socket wrench

the socket shaft. If the nut is too tight to respond to the turn of the handle, the whole wrench can be made rigid from handle to socket by a simple adjustment of a socket pin, the leverage of the entire wrench being utilized.

Six sockets and extension bar are furnished with each wrench. Extension shaft is made from ½ inch hexagon, cold rolled steel and on each end a ball and spring is inserted to insure a firm grip on the inside of the socket.

Socket sizes are ¼ inch U. S. S. to ⅝ S. A. E., fitting 16 different sizes of bolts and nuts. Square sockets are furnished on request.

Complete with extension bar and sockets the Onli-1 wrench comes in a black Japanned, metal box. Price of this compact kit is $7.50.

Rose Bushing Remover Is Strong Tool

A steel drift split gives tension to the bushing remover which is being produced by the Frank Rose Manufacturing Co., Hastings, Neb. On the end are two small pilots which serve to keep the remover in correct alignment on the bushing when the remover is used for drifting bushings where the casting itself does not serve as guide. This bushing remover is made in two sizes, for Ford cars and Dodge Brothers.

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"YOU MADE IT— HELP SOLVE IT"

(*Continued from page 738*)

these traffic officers. Because a motorist slips past the stop signal is not evidence of wilful law-breaking. Neither does it mean innocence. The traffic officer must judge—and he must judge spontaneously, since otherwise traffic is blockaded and the purpose of control frustrated.

Penalties for breaking the law must be severe, perhaps entailing greater punishment than the offense warrants. In this the "safe and sane" driver must suffer for the lack of adequate mental balance on the part of others.

Naturally the question of who shall be allowed to use the highways follows. To state it another way, is it necessary to have rigid, extensive and comprehensive examination, mental and physical, of the applicant for the right to drive an automobile on the highways of the United States? Many believe it is, and it must be admitted these have the preponderance of evidence on their side. The opponents to expanding examination for a motorist's license call attention to the great amount of clerical and official work entailed. But is it not true that a greater force of examiners means a lesser outlay for enforcement officers?

One Argument Futile

It is also urged that making a driver's license more difficult to obtain would discourage rapid public consumption of motor vehicles. The negative to that is that one outrageous accident deters more prospective customers than the lengthening of many examinations.

Undoubtedly some better means of testing an applicant's mental and physical fitness to drive must be devised. In our greater cities the time is already at hand when the menace of the "fool driver" is very real.

One of the mistakes made by some dealers is insufficient instruction given buyers of both new and used cars. The dealer who allows a purchaser to drive a car away while still ignorant of the first principles of driving or of local regulations, is just as open to censure as the bootlegger whose poisonous concoction causes the drinker's death or blindness, or the quack whose prescription or medicine is dangerous. And the dealer who allows a customer to embark on his first ride unprepared is not only to be condemned but is foolish as well. For would it not mean added sales if it were generally known that so-and-so provides adequate, free instruction to new drivers?

This affects the manufacturer as well. A wrecked car is no advertisement. Despite arguments pro and con, the average citizen sees in the wrecked automobile only the result of what he thinks is slipshod manufacture. Something was wrong, he thinks, it may have been the brakes, the steering mechanism, the chassis—some vital part of the car broke down, he believes, for he thinks the driver had just as large a "bump of caution" as he.

Having taken steps to insure safety for the average motorist, what shall be done to force the wilfully reckless to be careful or at least observe the rights of others? The fool will not obey the law unless he has to. Appeals to his humane instinct must fail since he gives no evidence of having any. Where then to "bring it home to him?" "Lock him up," says the zealot; but in olden times it was proved that even hanging is no cure for robbery. The best way may be through his pocketbook.

It has been proposed by certain insurance companies that all policies in force, save theft, be cancelled on the first or perhaps second or third arrest for violation of any traffic ruling made to prevent accidents which might increase the "hazard of the risk." This is an excellent idea. A man, no matter how reckless, is bound to think twice before making himself liable to arrest and consequent cancelling of perhaps several hundred dollars' worth of insurance.

Without delving further into that phase of the matter, it is evident that methods exist whereby the undesirable motorist may be whipped into decency. And when so many thousands constantly complain that driving an automobile would be ideal were it not for the many "half-wits" breaking all rules and endangering other motorists, it is time that manufacturers and dealers thought upon the matter and gave it their painstaking attention.

Finally, much thought must be expended on the character of traffic on certain highways. Not to depreciate by an iota the admirable work being done by the various highway bodies throughout the Country, it must be conceded that some abuses still exist. Many roads are far too narrow—as the road from Detroit to Pontiac whereon traffic is delayed exasperatingly by horse-drawn vehicles.

Again, many roads are built without adequate study of the needs of the community—as in Herkimer county, in central New York State, where the farmers justly charge that repair money is deflected to scenic routes rather than to roads over which trucks must be sent to markets.

Evidently, if the farmer is hindered in getting his products to market he will have no money to buy automobiles. This is an instance of excellent opportunities ready to the hand for the manufacturers and dealers to be of real service and at the same time build up tremendous good will.

If John Jones, maker of the Blank car, spent a little time and money on championing the cause of neglected agricultural communities or small cities, when the inhabitants became prosperous through his efforts John Jones would sell every car purchased in that locality.

The Great Endeavor

Such is the field. Down every vista looms opportunity for the sort of empire building the automobile industry must accomplish if it is to persevere on its way to unexampled heights in commerce. If the eyes of the industry remain closed to these avenues of greater and greater service, and greater and greater commercial prosperity, the automobile world will eventually dwindle to a second-rate power in business.

The emergency will come some day. It nearly came this year in the shape of the railroad strike. Imagination refuses to visualize the traffic snarls, the road deterioration, the general demoralization of the automobile-operating public had the railroad lines been forced to cease operation of passenger service. In cities, traffic would have crept along at five miles an hour through streets in which parking could not be allowed. As in Chicago during the recent street-car strike, many would have lost their lives, insurance rates would have advanced, many would have been bankrupt by accident costs, machines would have been irreparably damaged.

It is high time something was done. Are the manufacturers and their channels of sales and purchases to seize the golden opportunity to build a massive structure of public good-will and a consequent great market for the future as well as the present, or are they to allow politicians, lime-light seekers and even crooks to dictate arbitrarily to the public what it shall do and shall not do in driving cars and thus kill thousands and thousands of sales and eventually allow the market to become saturated?

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

SOUTH

NORTH CAROLINA— ASHEVILLE.—J. H. Anderson has purchased the Asheville branch of the Byrd Motor Co., dealer in Reo cars and trucks. He will conduct the business as the Anderson Motor Co.

MIDDLE WEST

OHIO—CLEVELAND.—Distribution of the Gray car for this territory has been taken over by the Mall Motor Co.

INDIANA—UNION CITY.—J. M. Horney has taken on the agency for the distribution of the Elgin in this territory.

WISCONSIN—FOND DU LAC.—Dunham & McCumber, proprietors of the Nash Garage on East Third street, have purchased of E. J. Sauerbreit a plot directly opposite the building now occupied by them, on which they will soon erect a new garage. The property has a 125-foot frontage and extends back nearly 100 feet.

LaCROSSE.—Frint Motor Car Co., Milwaukee, has appointed Hazey & Robbins as dealers for this city for the Oldsmobile. The new firm will open a salesroom and service department and has secured the services of Al. Miller as manager. Miller was formerly with the Paige and Jewett agency.

NEW LONDON.—William and Irving Wilke and Henry Moritz, operating as the Wilke Auto Electric Co., have dissolved the partnership, Henry Moritz having purchased the interests of his partners.

IOWA—CARROLL.—J. W. Willenburg and Fred. M. Trecker, owners of a garage at Anthon, have purchased the business of the Farnam Tire & Rubber Co.

CEDAR RAPIDS.—A garage will soon be erected for Krause & Houser.

DAVENPORT.—Don's Garage, of which Don E. Barth is proprietor, has taken over the agency for the distribution of the Earl in this territory.

DUBUQUE.—A. B. Hayes and C. H. Rockford have formed a partnership to conduct the Kelly Tire Sales Co.

GREENFIELD.—Harry Bevington has purchased the Dodge Brothers agency from the Greenfield Auto & Truck Co.

MISSOURI—CARROLLTON.—Walk and Victor Dickinson, of Tina, have purchased the Carrollton Battery Station of which they have already taken charge.

CENTER.—Otha Couch has sold his interest in the Couch Brothers' Garage to his brother, Crawford.

CROCKER.—Mert Skaggs, of Bloodland, has leased the building formerly occupied by the Crocker Wholesale Grocery Co. and has installed a complete line of equipment for a garage which he has opened for business.

JEFFERSON CITY.—Kocehr and Diercka, of the Capital City Wagon Co., have secured the agency for the distribution of the Durant and Star lines throughout this territory.

KANSAS CITY.—Garnier-Powers Motor Co., which has spent the last seven of its twelve years at 1714 Grand avenue, has moved to 3344-3346 Main street, for which a five-year lease has been obtained on a two-story and basement building. The structure has a 50-foot frontage and affords 24,500 square feet of space. The concern handles the Dixie Flyer, Metz and Seneca cars and Corliss truck.

MARSHALL.—Walter Pinkepank has sold the Pinkepank Garage on West Main street to Grover Stephens and Lester Turner.

OSBORN.—W. H. Thompson has disposed of his fixtures and stock in his garage to L. C. Lamberd who is now in full charge.

PARIS.—William Heathman, of Paris, and Stribling Tipton have purchased the Harris Garage in the old Dooley Hotel building, each taking a half interest in the business.

RICHMOND.—John Higdon has taken possession of the Richmond Garage, operated for the past year by Marshall Joiner.

ST. LOUIS.—Weber Implement & Automobile Co. will establish a branch at Gravois avenue and Morgan Ford road for the sale and service of the Hupmobile.—W. L. Bowcott and Robert W. Sergel have formed a partnership to conduct the Square Tire Sales Co.

UNIONVILLE.—J. H. Tineley has obtained an exclusive franchise for the operation of a Stephens Associated Tire Store in this territory.

KANSAS—ATCHISON.—C. H. Mayhew and Flavel Miller have started the erection of a garage at 801 Main street.

BARNES.—John Wright has sold his garage to Fred. Doerr.

BURLINGTON.—J. W. Drury has traded his North End Garage and the Willard Battery Station here for a general store and town property in Hemewood.

GREEN.—A service station has been established here by the Caley Brothers.

(Continued on page 748, first column)

ACTIVITIES OF THE WHOLESALERS

W. W. Griffin Motor Co., located at 20 West street, Portland, has been appointed distributer in the State of Maine for the Anderson cars.

Hustis & Hagar, having obtained the Hupmobile agency in New Rochelle, Pelham, Mamaroneck and Rye, have opened salesrooms and service station at 345 North avenue, New Rochelle, N. Y. Edward H. Gertz, at one time manager of the Hudson branch in New Rochelle and more recently associated with the Hupmobile Company of New York, has been made manager of the new salesrooms.

Dowling Motor Co., Charlotte, has contracted for the distribution of the Star in western North Carolina.

Staples Auto Co., Chevrolet distributer in the Northwest, has completed plans for the enlargement of its present building and the erection of a new structure. Organized a little more than one year ago, the business of the company has grown until its quarters at 181 West Sixth street are inadequate.

Chandler-Cleveland Motor Car Co. has been appointed Chandler-Cleveland distributer in the Boston territory. The new firm has secured headquarters at 708-716 Beacon street.

Christenson-Davis Motor Car Co., 1125 Van Ness avenue, has taken on the agency for the distribution of the Dort in the San Francisco, Cal., territory.

Miller-Toher Auto Co., with quarters at 510 Main street, has secured the Cleveland agency for Davenport, Ia., and surrounding territory.

Lifsey Smith Hill Co. has contracted for the distribution of the Peerless car in the Atlanta, Ga., territory.

Smith Brothers Motor Sales Co., Inc., has become distributer of the Anderson with headquarters at 1084 Westminster avenue, Providence. The new concern will handle the car throughout the State of Rhode Island.

Charleston Rickenbacker Co. has taken on the distribution of the Dort for the Charleston, W. Va., territory.

Miller Motor Car Co., with headquarters at Dallas, Texas, will distribute the Peerless in that territory.

Crossley Harper Co. has been appointed distributer of the Cleveland for Orlando, Fla., and territory surrounding that city.

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IN THE TRADE

(*Continued from page 747, second column*)

HERINGTON.—Falk & Heilman, of the Economy Garage, have moved their shop to the Ahl Garage building.

HUTCHINSON.—Shideler, manager of the local Franklin agency, has moved the business from the former location on North Main street to the building on Sherman street, East, formerly occupied by the Overland Reno Motor Co. He has also increased the business of the firm considerably by taking on the agencies for the Durant and Star cars.—Graber Tire Co., of which Felix Graber is manager, has leased the room formerly occupied by the Smith & Brown Tire & Supply Co., at 27 West First street.

KANSAS CITY.—Osgood-Robinson Tire Co., of which R. E. Robinson is manager, has taken possession of its $25,000 building at 1012-1016 North Fourth street.

LEAVENWORTH.—Leavenworth Motor Co., has taken over the agency for the Durant and Star lines. John Barnes is president of the concern.

MOUND CITY.—Benj. R. Workman has opened a battery station in the Kentner Garage.

OSAGE CITY.—French Motor Co., which recently suffered a fire loss of approximately $15,000, has reopened for business. The firm is daily replacing those cars, parts and accessories damaged by fire.

PARSONS.—Paul McConnell has purchased the K. T. Garage on Belmont avenue.

PRATT.—Henry Shafer and Lloyd Lambert have contracted for the distribution of the Nash line for 1923.

SALINA.—J. W. Southmayd, who recently sold his interest in the Heckaday Auto Supply Co., has purchased the Kelly Tire Sales Co., on North Santa Fe avenue, from G. Meyn.

SOLOMON.—Bert Lester, of Herington, has rented the building now occupied by C. S. Lang and will open a vulcanizing shop and garage in the near future.

WEIR.—Work is rapidly progressing on the remodeling of the front of the Weir Supply Garage.

WICHITA.—Charles Motor Co. has opened for business in quarters at 325-327 South Lawrence avenue, handling the Earl.—Addition of a second story to 228-230 South Lawrence avenue, to cost approximately $25,000, is planned by Walter Brinkler, owner of the building, for the Smith-McKay Motor Car Co., occupant. Expansion of the business necessitated larger quarters, according to McKay.

NEBRASKA — ALLIANCE.—Walter L. Sutton, proprietor of the Hemingford Tire & Battery Shop at Hemingford, has purchased the building recently vacated by Earl Anderson. He is going to install a repair shop.

BEATRICE.—Spiegel Auto Co. has moved the service department of the business to new quarters at North Fourth street.

CLARKSON.—Anton Prazak has disposed of his one-third interest in the Prazak Motor Co. to Joseph Vacin, of Brainard.

FREMONT.—L. E. Farmlof, of the Nebraska Rubber & Tire Co., has added an automobile agency to his accessory business.

GRAND ISLAND.—J. D. and F. R. Corl have leased the Menck building and have opened an automobile accessory and repair shop.

HOWELLS.—George T. Fiala and Emil Matejka have purchased the interest of their partner, Jerry Vacha, in the Auto Hospital.

McCOOK.—H. H. Clemons Motor Co. has taken the agency for the Barney Oldfield tires and tubes.

MULLEN.—A Ford repair shop has been established by Mercure & Elliott.

RANDOLPH.—Ambrose & Ashburn Motor Co. has opened for business, locating in the Boughen Garage.

SCHUYLER.—Charles V. Eckblade, of Stromsburg, has acquired the Putnam Tire Shop.

NORTHWEST

MINNESOTA—HIBBING.—A garage has been erected here for Ryan Brothers.

RED WING.—A fireproof garage building will be constructed on Plum street on the lot adjoining the Central Hotel property.

SOUTHWEST

ARKANSAS — ELDORADO.—Studebaker-McWilliams Co. has opened a new sales room and service station on West Main street.—Chevrolet distribution for this territory has been taken over by V. H. Dobson.

EUREKA SPRINGS. — Crescent Garage has been established on Hillside avenue.

FORT SMITH.—Gould Storage Battery Service Station has moved from its former location at 102 to new quarters at 117 North Tenth street.

LITTLE ROCK.—A new tire store has been opened at 1006 Main street under the management of Arthur Bott and Dwight Wing. The new concern will handle Federal tires exclusively.

MALVERN.—D. Y. McDowell, of this city, and E. L. Riley, of Little Rock, have purchased the City Garage from J. T. Anderson.

TEXARKANA.—Braswell & White have moved their repair shop from 709 East Broad street to 220 East Elm street.

OKLAHOMA — BUFFALO. — Bert Durham has taken over the management of the City Garage.

CHICKASHA.—L. & D. Tire Service Co. has opened for business in the Hollingsworth building at the corner of Fourth and Kansas.

DURANT.—A. A. Stabb, owner of the Durant Motor Car Co., has purchased the accessories and other stock of the Downs Motor Co. and the two concerns will be consolidated in the Durant Motor Car Co.'s store at Fourth and Main. Downs is no longer interested in the Durant end of the business, but retains a half-interest with Stabb in the Studebaker agency. He will devote his full time to the sale of these cars.

GUYMON.—Jordan Motor Co. has installed equipment in order to handle automobile and tractor work.

TEXAS—ABILENE.—Western Top & Paint Shop has opened for business in the rear of the new Fulwiler building on Chestnut street.—Paul Kirk and Jack Sammons have opened the Hupp Service Station.

AMARILLO.—John Davison, formerly in the employ of the Overland-Texas Co., has opened a repair shop in the rear of Smith & Jettson's Auto Supply House, 513 East Fourth street. He will specialize in Overland and Willys-Knight cars.

BALLINGER.—W. A. Tally having purchased the interest of his partner, M. G. Justice, the firm of M. G. Justice Motor Co. has been dissolved.

BEAUMONT.—Gasow-Howard Motor Co. has taken possession of its new home at Calder avenue and Willow street.

BIG SPRING.—Bernard A. Rueckart has opened a garage and automobile repair shop at 311 Pecan street.

BRECKENRIDGE.—A contract has been awarded for the erection of a large brick building in West Williams street which will be occupied by the Bennett Motor Co. The structure will be built at a cost of $35,000.

CARLTON.—Basham Garage has been established in the renovated building formerly occupied by the *Citizen*.

CHILDRESS.—A Cooper battery service station will be conducted by the Childress Motor Co.

HALLETTSVILLE. — Lawrence Meinert has purchased the Ford Garage from Strauss & Herder.

HENDERSON. — Dowell Brothers have opened a new garage in the Ash building.

HOUSTON.—S. G. Tutwiler Co., 1116 Preston avenue, has purchased the Ravens Garage and Machine Shop which is located at 414 San Jacinto street.—Southern Tire & Repair Co. has secured new quarters at Main and Lamar.—A new location on Main street has been obtained by Patterson & Crawford, handling Diamond and Goodrich tires and tubes.

ORANGE.—Perry-Goodman Motor Co., located opposite the City Hall, has opened a Dodge Brothers parts and service department.—Charles W. Harvey.

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IT'S natural enough that the U. S. Tire Dealer has a somewhat *different* view of trade conditions.

What appears to many dealers to be a wabbly retail market he recognizes as a *definite swing toward U. S. Tires.*

His confidence in his ability to sell is a measure of the public's confidence in what he's selling.

United States Tires are good tires.

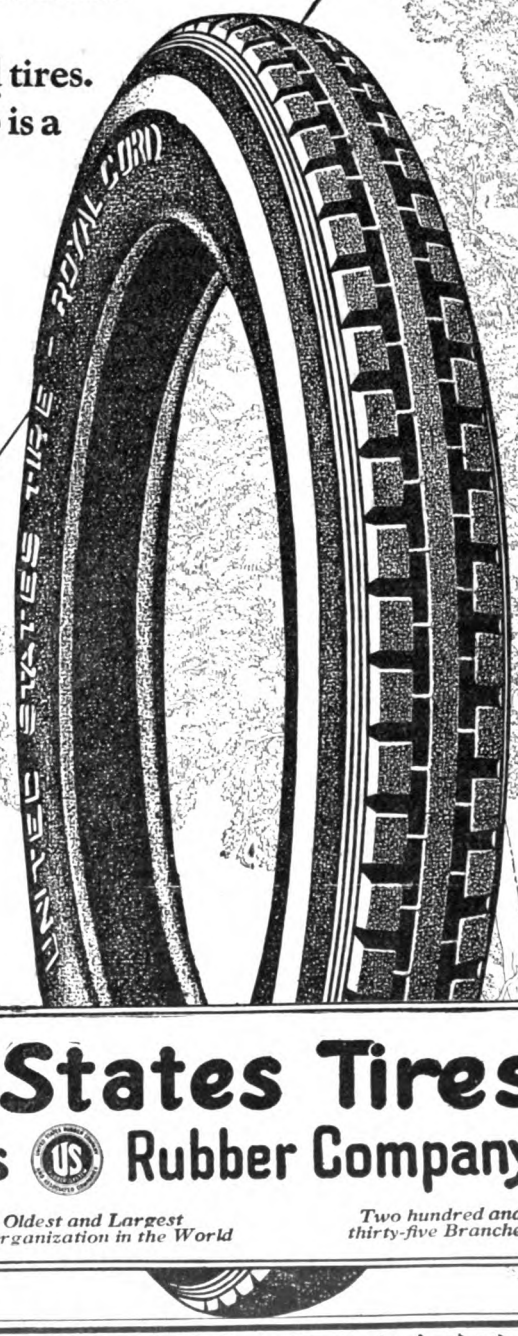
The U. S. Sales Relationship is a good relationship.

The U. S. Sales Relationship brings to the dealer's store the most loyal tire audience anywhere.

It supports the dealer with the most constructive and courageous publicly expressed policies today.

It carries the prestige of the U. S. Royal Cord Tire and the USCO Tread.

Isn't this the kind of Franchise the tire dealer needs?



No Tax

Current prices on United States Passenger Car Tires and Tubes are not subject to the Federal Excise Tax, the tax having been included.

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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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and E. R. Harrison have purchased the Louis Sword Garage on Second street.

PITTSBURG.—Robinson Motor Co. has moved its automobile and accessory business to the old W. W. Franklin stand.

SHERMAN.—A voluntary petition in bankruptcy has been filed by the Stone Motor Co., which is composed of C. J. Stone and W. E. Edson.

SNYDER.—Snyder Garage has contracted for the distribution of the Studebaker in this territory.

PACIFIC COAST

CALIFORNIA — LOS GATOS.—W. H. Main has sold the Automotive Machine Shop on East Main street to E. A. Gowan and O. W. Keller.

MARTINEZ.—F. J. Mathes, J. E. Searles and A. DeSilva have established the Martinez Garage & Machine Shop.

MARYSVILLE. — Jack Tucker has sold the Tucker Garage to Lee Osborne. The concern is located at Seventh and B streets.

MILWOOD.—Ray M. Neikirk has taken possession of his new building on Main and Spring streets, occupying it as a garage and supply station.

MOORPARK.—Parr Brothers have occupied the new Simi Garage.

OXNARD.—Benjamin Kimball has sold his interest in the tire business of Kimball & Jones to his partner, Millard F. Jones, who will conduct it under the name of Millard F. Jones, Inc., Tire Distributer.

PASADENA.—J. E. Richardson and Fred. Krug have sold the Pasadena Motor Supply Store at 55 West Colorado street to Charles M. Sayres.—H. R. Young and J. Neil Patterson have established the Young & Patterson Co. at 20 South Pasadena avenue. — Jackson & Lucas have opened an automobile repair shop at 85 West Colorado street.—Fountain and Graff have sold the F & G Garage at 75 West Union street to Sam. Gilbert.

PASO ROBLES.—A new location has been secured by Hibbard & Hibbard, automotive electricians, at Fourteenth and Spring streets, handling Philadelphia batteries.

PITTSBURG.—D. A. McVay, former owner of the Central Garage, has repurchased R. G. Harvey's interest in the business. He will operate the newly acquired garage under the name of the McMullen & McVay Garage.

POMONA.—Chevrolet Garage, Inc., composed of Horne, Slagle & Wilkin, has organized the White Garage at 225 East Second street.

PUENTE.—S. A. Peet has opened the Puente Battery & Ignition Service Station in the Didier building on Main street.—Harry C. Apgar has purchased the Ford agency operated by Everett, Halneritch & Clark.

REDLANDS.—George Hayes has established the George Hayes Motor Supply Co. in the Lombard Block.

REDONDO BEACH.—M. A. Anderson has sold his Chevrolet agency at 122 North Catalina avenue to D. M. MacKenzie.

RICHMOND. — Hudson and Essex agencies for western Contra Costa county has been taken over by J. P. Strom who has located at MacDonald avenue and 13th street.—Frank A. Scholes has repurchased the Nash, Overland and Willys-Knight agencies recently conducted by the Freese Motor Car Co., comprised of Charles F. and Louis Freese.—V. H. Schof and L. E. Hale have opened the West Side Garage.

SACRAMENTO.—A salesroom at 122 K street has been opened by the Flint Motor Co., Maxwell and Chalmers agent.

SALINAS.—Michelin tire distribution for this section has been taken over by the Thrift Garage Co., Inc., located at 14-18 North Main street. The company is headed by I. Takata, K. Nagano and B. Y. Kobayshi.

SAN BERNARDINO.—M. L. Cash, employed as salesman of the Keystone Garage for several years, has purchased the business which is the Chandler and Cleveland agency for this territory. The concern is situated at 541 Court street.

SAN DIEGO.—Walter Folcke and Roy Campbell have opened a White truck and Stevens-Duryea agency, locating at 1230 State street. They will also act as an official Nash service station.

SAN JACINTO.—Record Garage, headed by W. L. Record, has taken over the Ford and Fordson agency for this locality.

SAN JOSE.—Kissel distribution for Santa Clara county has been granted the A. E. F. Garage, of which F. E. Granger is manager.

SAN LUIS OBISPO.—Gibson Bros., Nash dealer, have taken possession of their new garage at 1035-39 Monterey street. The building is two stories and basement, containing 21,000 square feet of storage space.

SAN PEDRO.—J. C. Monahan has obtained the agency for Mac-Dry batteries, locating at Sixth and Pacific streets.—William Lever has opened a garage at 464 Eleventh street.—A repair shop has been established at Fourth and Pacific streets by W. L. Williams & Co. —A branch of the Parnell Motors Co., Long Beach, Durant and Packard agency, has been opened at Second street and Pacific avenue.

SAN ROSA.—W. Raymond Todd has sold his interest in the Todd Garage, 110 Davis street, to H. M. Anderson who will conduct it as the Davis Garage.

SANTA ANA.—May Motor Co., Nash and LaFayette agent, has occupied its new $30,000 home at Second and Sycamore streets.—W. L. and S. E. Richards have reopened the Hardin & Collins Garage, 421 West Fourth street, and will conduct a garage, operating as Richardson Brothers.

SANTA CRUZ.—Adjoining stores have been obtained by the Santa Cruz Auto Sales Co., Chalmers and Maxwell dealer. The new acquisition, which will be used by the concern as a salesroom, doubles the floor space of the company's location at 12 Soquel avenue.

SANTA MARIA.—Victor A. Bello, Jr., has purchased the Lloyd & Lloyd Garage from F. C. Lloyd and his wife.—A. R. Horn and E. Jackson have opened the H. & J. Tire Shop at 200 South Broadway.

SANTA ROSA.—A. L. Tisserand, former operator of the Fourth Street Garage, has opened his new garage at 881 Fourth street.—Hicks & Webb Paint Shop, located at 416 Wilson street, has been sold to Shower Brothers.—Violetti Brothers, Hudson and Essex agents, have opened their own service and repair business on these cars.

SEBASTOPOL. — Sebastopol Battery Shop has leased the building, 54 x 80, to be erected on Santa Rosa avenue.

SONOMA.—E. L. LaMont has opened LaMont's Auto Repair Shop on the state highway.

TORRANCE.—F. M. Tourtelotte has sold the Day & Night Garage to James Jenkins.

UKIAH.—W. J. Allard has purchased the tire shop owned by I. W. Fish and will operate it as the Allard Tire Sales & Repair Co.

VACAVILLE.—Oscar N. Madson and A. Klotz have taken over the business of the Nay Garage and will handle accessories in addition to conducting a repair shop.

VALLEJO.—H. A. Boelhauf has purchased the local branch of the automobile top business of Breish & Dabner, Jesse Dabner rejoining his partner at the Petaluma branch.

VAN NUYS.—A branch of the Packer Auto Co., Glendale, has been established at this place.—Richardson Johnson, Oldsmobile agency, has opened in the R. R. Edwards Block on Sherman Way.

VENTURA.—C. S. Cassell and R. L. Lunsford will soon open the C. & L. Tire Shop at Main street and The Avenue.—Ned Strong has sold his interests in the Strong Brothers Garage to his brothers, George and Cortland Strong.

WATTS.—Coast tire distribution for this city has been taken over by Foster & Foster.

WOODLAND.—Hiatt & Miller, of the Main Street Garage, will erect an addition to provide for business expansion. The new structure will contain 11,000 feet of floor space.—An addition to the Electric Garage will be erected to increase its floor space 33 per cent.

YUBA CITY.—C. E. Rimmer opened the Rimmer Welding & Radiator Shop in Red Dowell's Garage.

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"They do not force Orders but are a Progressive Crowd"

By C. A. Earl

QUALITY, value and reasonable price in the motor car he handles are not the only essentials of a sound and profitable business for distributor or dealer. The factory sales policies are also important. Strong-arm methods of forcing orders in slack times may prove embarrassing to him.

It is a keen pleasure, therefore, to have Mr. J. H. Ham, Earl distributor at Charlotte, N. C., recognize the Earl attitude toward dealers as always fair. He makes a point of this attitude in a letter sent to a prospective Earl distributor recently:

"First, as to my opinion of the car: For looks, power, general finish, economy and strength, it seems to me that the Earl is away above the average car selling anywhere near its price. I have not found any weak points in the Earl, although I have had cars in users' hands since last November.

"Practically every Earl owner has been an extra salesman for me. When the car has once proved its good qualities to the public, it is bound to be a great seller.

"Regarding my treatment by the Earl organization, I beg to state that I have found them very satisfactory to deal with—not only in the Sales Department but also in the Service Department. They are ready and willing to make any adjustments possible.

"They do not force orders on you; but they are a progressive and hustling crowd."

What Mr. Ham says about the Earl's appearance, performance and durability is doubly interesting for the reason that he is also Packard distributor in the Charlotte district.

If there is no Earl representative in your city let me send you the facts about our liberal contract and the quality Earl line. Earl closed cars alone offer an immediate business opportunity.

President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK. — Belvidere Garage, Manhattan, N. Y. Capital $5,000. Incorporators: F. Evans, S. Swartzman, A. Corey.—Dragon Tire and Rubber Corp., Manhattan, N. Y. Capital $25,000. Incorporators: A. Steiner, M. Myers, I. Bregoff.—Eagle Motor Haulage Co., Manhattan, N. Y., has increased its capital from $5,000 to $25,000.

Fay Taxicabs, Manhattan, N. Y., has increased its capital from $10,000 to $1,510,000.—Gold Medal Garage, Manhattan, N. Y. Capital $10,000. Incorporators: M. Markowitz, C. Pfister, W. Ludwig.—Harclif Garage Co., Manhattan, N. Y. Capital $5,000. Incorporators: C. S. Brinkerhoff, H. M. McCauley, E. A. Dunford.

Signal Operators, Manhattan, N. Y. To deal in automobiles and trucks. Capital $5,000. Incorporators: H. H. Lawson, H. M. McCauley, E. A. Dunford.—Specialty Auto Parts Co., Manhattan, N. Y., has increased its capital from $5,000 to $50,000.—Standard Garage & Supply Co., Manhattan, N. Y. Capital $5,000. Incorporators: D. H. Quinn, N. S. Koven, S. Porosoff.

West 42nd Street Garage, Manhattan, N. Y. Capital $5,000. Incorporators: L. Taub, S. Zimmerman, R. Epstein.

Automobile Club of the Bronx, Bronx, N. Y. Capital $5,000. Incorporators: G. E. Rockwell, D. T. McEnery, C. A. Soteldo.—Bronx Chevrolet Sales Co., Bronx, N. Y. Capital $54,020. Incorporators: S. and S. Glantz, C. R. Volk.

Paka Circle Garage Corp., Brooklyn, N. Y. Capital $12,000. Incorporators: J. Palatnik, L. Kanter, R. Palatnik.

Curran Manufacturing Co., Inc., Albany, N. Y. To deal in automobile accessories. Capital $500,000. Incorporator: E. T. Curran.

Central Garage and Repair Co., Lawrence, N. Y. Capital $5,000. Incorporators: M. and H. and G. Lefkowitz.

Newburgh Auto Light Co., Inc., Newburgh, N. Y. To deal in automobiles, motorcycles, etc. Capital $100,000. Incorporator: H. Grenis.

Fitzgerald Auto Supply Co., Syracuse, N. Y. Capital $10,000. Incorporators: F. R. Fitzgerald, J. J. Schlosser, C. S. Waterhouse.—G. F. Gilmour Co., Syracuse, N. Y. To deal in automobiles. Capital $100,000. Incorporators: C. F. Gilmour, C. E. Hancock, H. N. Gilmour.

Lyknu Auto Service Corp., Yonkers, N. Y. Capital $10,000. Incorporators: J. L. Gill, A. D. F. Simmons, J. B. Scott.

NEW JERSEY. — American Motor Truck Finance Corp., Newark, N. J. Capital $1,000,000. Incorporators: Emil W. Snuder, Gerald M. McLaughlin, Thomas Yenser.

Palisades Garage, Palisades, N. J. To conduct a general automobile and garage business. Capital $125,000.

Witlaw Plan, Inc., Town of Union, N. J. To deal in automobile accessories and to engage in a general garage business. Capital $125,000.

PENNSYLVANIA. — Evans Motors, Philadelphia, Pa. To deal in automobiles. Capital $35,000.—Peters Auto Car Co., Philadelphia, Pa., has changed its name to Peters Motor Car Co.

DELAWARE. — Chambers Manufacturing Co., Dover, Del. To conduct a garage and machine shop. Capital $50,000. Incorporators: J. A. Chambers, M. L. Nulph, C. L. Hutchison.—Everyday Piston Ring, Dover, Del., has increased its capital from $250,000 to $1,000,000.—Toulon Motor Sales Co., Capital $50,000. Incorporators: James B. Gilles, Homer V. Toulon, Philip Blum.

West Newton Finance Corp., Dover, Del. To conduct an automobile finance business. Capital $50,000. Incorporators: W. B. Britton, Thos. J. Harker.

Brown Cabs of New Orleans, Wilmington, Del. Capital $100,000.—Double Seal Piston & Ring Co., Wilmington, Del. To manufacture rings. Capital $400,000.—Motor Co. of Wilmington, Wilmington, Del. To deal in automobiles. Capital $50,000. Incorporators: Frank W. Driver, George W. Lilly, Thomas C. Marshall.

National Auto Body Corp., Wilmington, Del. To manufacture automobile bodies. Capital $350,000.—National Gasoline Refining Co., Wilmington, Del. Capital $1,000,000.

MASSACHUSETTS. — Willey-Noyes Manufacturing Co., Boston, Mass. To deal in motor vehicle appliances. Capital $125,000.

KENTUCKY. — R. D. Heman, Co., Louisville, Ky. To deal in automobile accessories. Capital $5,000. Incorporators: George Yenner, R. D. Heman, Gerald Baker.

OHIO.—Rempes Motor Service Co., Cleveland, O. Capital $500. Incorporators: George H. Rempes, William M. Bresler.

Paige Jewett Sales Co., Lorain, O. Capital $15,000. Incorporators: D. H. Aiken, E. L. Morrison.

H. E. Martin Motor Co., Oakland City, O. To deal in motor vehicles. Capital $12,000. Incorporators: Herbert E. Martin, Humphrey C. Heldt, Cleon A. Simon.

INDIANA. — Barclay-Owens Motor Sales Co., Bedford, Ind. To deal in motor cars and accessories. Capital $10,000. Incorporators: J. H. Barclay, Harry Owens, John Owens.

Automobile Finance Corp., Muncie, Ind. Capital $10,000. Incorporators: M. T. Hanley, Frank A. Hanley, Bennett Heath.

ILLINOIS. — Automotive Utilities Corp., Chicago, Ill. To manufacture and deal in automobiles, accessories, vehicles, etc. Capital $3,000. Incorporators: Benjamin Horwich, Lester J. Jelinek, Perry J. Schram.—Cottage Grove Tire & Battery Service Corp., Chicago, Ill. To deal in automobile tires, tubes, accessories, etc. Capital $5,000. Incorporators: Anthony Wados, Edgar E. Miller, Avon M. Keasey.—Universal Investment Corp., Chicago, Ill. To deal in automobiles, motor trucks, taxicabs, etc. Capital $150,000. Incorporators: O. N. Overton, F. L. David, T. E. Snyder.

Modern Automotive Manufacturing Co., North Chicago, Ill. To manufacture and deal in automobile specialties, machinery, etc. Capital $15,000. Incorporators: Alford E. Budde, Rosella B. Ivandick, Mathew G. Ivandick.

Motors Service Co., Wilmette, Ill. Capital $10,000. Incorporators: A. S. Van Deusen, J. C. Slown, and others.

WISCONSIN. — Motor Grinding Co., Milwaukee, Wis. To engage in general mechanical practice and repair work on engines. Capital 500 shares no par value. Incorporators: Gustave R. Hoffman, L. E. Fichaux, M. E. Engle.

Modern Auto Parts Co., Sheboygan, Wis. Capital $18,000. Incorporators: J. J. McNutty, Rance R. Loop, H. J. Sievers.

MISSOURI.—Clayton Motor Co., Clayton, Mo. Capital $10,000. Incorporator: J. P. Wellman.

Owners Co-operative Automobile Club of Kansas City, Kansas City, Mo. Capital $15,000.

KANSAS.—Whitaker Whalen Motor Co., Wichita, Kans. To deal in automobiles. Capital $50,000. Incorporators: H. C. Whalen, R. D. Whitaker, W. T. Braunegel, B. A. Whalen, Inis Whitaker.

SOUTH DAKOTA.—Springs Auto Accessory Co., Wessington Springs, S. D. Capital $25,000. Incorporators: E. C. Brower, J. Hanson, A. Hackett.

OKLAHOMA.—Frederickson Tire Co., Oklahoma City, Okla. Capital $5,000. Incorporators: R. T. Swanson, G. R. Frederickson, L. A. Swanson.

TEXAS.—Aero Meter Co., of Chicago, Dallas, Tex. Capital $300,000.

Cassell Motor Co., El Paso, Tex. Capital $15,000. Incorporators: D. U. Rakestraw, C. M. Wilchar, and others.

Southwestern Wheel & Rim Co., Houston, Tex. Capital $12,000. Incorporators: J. J. Pickrel, M. L. Freear, Fred. Prier.

Mexia Motor Car Co., Mexia, Tex. Capital $20,000. Incorporators: T. B. Benson, E. M. Wilson, W. M. Andrews.

WASHINGTON.—Faultless Pneumatic Tire Co., Seattle, Wash. Capital $2,000,000.

OREGON.—John K. Leandar Co., Portland, Ore. To conduct a general automobile sales, repair and equipment business. Capital $100,000.

CALIFORNIA.—Big Bear Tire Co., Los Angeles, Cal. Capital $200,000.—Glendale Engineering Co., Los Angeles, Cal. To deal in mower attachments, engines, etc. Capital $300,000.

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General Motors Trucks

The success of any motor truck dealership depends as much upon the facilities for maintaining the trucks in service, as it does upon their quality.

GMC trucks are distributed in every section of the country either by direct factory branches or by authorized distributors. In either case their continued and successful performance is safeguarded by large and inclusive supplies of replacements, located at the distributing points.

No GMC dealer, under ordinary conditions, need wait longer than 24 hours for service supplies. Consider what this means in building up a lasting business.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 ***2 Ton $2375*** ***3½ Ton $3600*** ***5 Ton $3950***

Chassis Only—At the Factory—Tax to be Added

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CALENDAR

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

Paris, France, Oct. 4-15.—Annual Automobile Show, Grand Palais.

Dallas, Tex., Oct. 6-16.—State Fair.

New York, N. Y., Oct. 7-14.—Annual Electric Progress Show, Grand Central Palace.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention of the National Farm Equipment Manufacturers.

Akron, O., Oct. 18-21.—Open Air Automobile Exhibit, auspices Akron Motor Vehicle Assn., East Market Street.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Los Angeles, Cal., November.—Tent Show, auspices of the Motor Car Dealers' Assn. of Los Angeles.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn., E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; Jos. Thompson, manager.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12.—Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn.; Frank R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19.—Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the Saginaw Auto Dealers' Assn.; Guy S. Garber, manager.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Muskegon, Mich., Feb. 28.—Automobile Show, auspices of the Automobile Business Assn.; John C. Fowler, manager.

Bay City, Mich., Mar. 5.—Automobile Show, auspices of the Bay City Auto Dealers' Assn.; George L. Weiler, manager.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Assn.; C. E. Holgate, manager.

Boston, Mass., Mar. 10-17.—Passenger Car, Truck and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

Port Huron, Mich., Mar. 12.—Automobile Show, auspices of the Port Huron Auto Dealers' Assn.; E. G. Brown, manager.

Battle Creek, Mich., Mar. 19.—Automobile Show, auspices of the Battle Creek Auto Dealers' Assn.; H. E. Loomis, manager.

*Tentative.

NEW LITERATURE

Metal Stamping Co.—A 28-page catalog covering the company's full line of Lyon resilient bumpers and parts, and containing 46 illustrations of cars, before, during and after collision; agents' portable stand; distributers' display rack, envelope inserts, etc.—Metal Stamping Co., Long Island City, N. Y.

Successfully Supplying the Demand.—A folder explaining how, in anticipation of the demand, Remy designed and built complete electrical systems for commercial car service. Trucks now using Remy systems are illustrated together with the units that are used in connection.—Remy Electric Co., Anderson, Ind.

Better Tires.—A catalog containing illustrations and plainly marked consumers' and dealers' net prices on a complete range of all standard sized tires, both cord and fabric, in a wide variety of tread designs. Thousands of accessories, Ford parts and bodies are also listed, illustrated and priced.—Better Tires, Chicago, Ill.

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More and more the successful tire merchant finds it most profitable to center his efforts on Racine Tires

Conditions under which these super-service black tread tires are made—the fine big factories—the highly skilled workmen—inspectors who check and re-check—are bringing them into first favor with the car owner.

Write for details of the Racine profit opportunity.

RACINE RUBBER COMPANY
RACINE, WISC.
Distributors in Principal Cities

RACINE
Absorbing
ShockStrip

It Welds the Tread and the Carcass–Inseparably

RACINE
MULTI-MILE
CORD TIRES



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PUBLISHER'S OBSERVATIONS

THE TRAFFIC BLOCK

TWENTY years' experience in the solution of rapid transit problems has taught civic authorities in all the larger cities the wisdom of planning ahead. It is the accepted idea that cities grow, that their industrial and business centers, jostle each other about as they expand, and finally, that residential development is of two kinds, that which consolidates population and that which diffuses it.

Civic authorities are used to having transit facilities become crowded from the moment of their completion; everyone expects to see "standees" in the cars during rush hours. It is only when the crowding becomes unbearable that measures of relief are taken.

The growth of city traffic is so familiar, as far as its influence on the common carriers is concerned, that it occasions no surprise. The public knows enough about conditions so that it is generally able to place the blame for over-crowding and poor service just about where it belongs. Even in the heat of controversy between politicians and corporations the public understands that it is up to the authorities to ensure adequate transportation facilities.

¶ But mark the difference in attitude toward the congestion of the carriers and congestion of the streets. In the one case the City Fathers, the Railroads or the Transit Commission are blamed for crowding, confusion and delays. In the other case, the automobile is charged with the offense of gumming up traffic.

Nobody is surprised because the active and productive element of the population flocks to work in factories, offices and stores at certain hours of the morning, or redistributes itself at night. The ebb and flow of humanity in and about the cities is a thoroughly normal and tangible proposition. It is only when the flood begins to choke up the streets with automobiles that a new problem is born.

¶ It took thirty years of railroading to demonstrate in ways the public could understand that terminal congestion is the great barrier to successful handling of freight and passenger. Perhaps it will take thirty years' experience with automobiles to show that the street and highway traffic problems are all very largely functions of congestion at certain crowded points.

It should not be long before a more general understanding is reached of the real root of the automobile traffic problem, but unless more interest is taken in it confusion will continue for many years to come. Civic authorities need arousing, but still more, education.

Automobile traffic in cities and elsewhere is capable of being analyzed in exactly the same terms that are used in analyzing the rapid transit problem. If the police are incapable of doing the job well, if motor vehicle administrators cannot meet the situation, then other and more competent authorities must be created.

¶ Automobiles are a convenience and an economy for an ever increasing percentage of the population, yet in many centers the market for them is practically saturated, because owners find the annoyance and danger of running in close formation almost intolerable. More important still, traffic delays are so far cutting down speed that the advantage of making better time by motor than by trolley is gradually being lost.

There are parts of many cities where the local advantage of owning and operating an automobile has already been offset by traffic congestion. Yet congestion grows, instead of remaining stationary, because the traffic is constantly being replenished with cars from outside territories, where the traffic limit has not been reached.

These accretions are very largely buyers, people who come from distant points because they can get better goods at more favorable prices in the cities than in their own adjacent towns. Even if civic authority were so obtuse as to discourage that flow, it could not check it save only by letting traffic continue to become more congested and confused.

¶ Parking of cars in city streets is often discussed as a serious cause of congestion. It is.

But cars are parked in order that people living at a distance may buy goods, or in order that local business men may more rapidly go about their business. Shall civic authority stand between its constituency and the customer's dollar?

¶ Remedies are simple, if sometimes costly. Traffic should be constantly observed and measured until its present and probable courses can be read from charts. Every city needs its traffic despatcher today, just as much as the railroad has use for its despatching force. He would know that the average rate of vehicular movement must be maintained above a certain minimum, and that traffic should be diverted around congested points. He would keep the main arteries open at all times, provide and control parking spaces, and finally gather all the evidence necessary to show where streets need widening and avenues lengthening.

All the time he would be paving the way for more automobiles, literally making a market for them. The traffic chief ought to be the automobile makers' best friend.

But is it not strange, the situations being so obvious, that the automobile industry, which is vitally interested, should be doing nothing toward the development of city planning on a plane of broader intelligence, having special reference to traffic flow? Is it not stupid to make and sell cars enough not only to block the streets, but actually to block the business of selling cars, yet do nothing toward loosening up the traffic jam which is all that stands in the way of further growth?

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The power of the new Peerless Eight is a mighty force.

Yet it is not the sheer sweep and rush of it that is so impressive, as its perfect subjection to the driver's will.

One moment it purrs along as smoothly and silently as a deep-running stream.

The next, it is released to top speed—not alone for a sudden short spurt, but steadily on and on for sustained periods and far distances.

Our belief that eight cylinders have never meant so much in the way of magnificent power, is being overwhelmingly confirmed all over America.

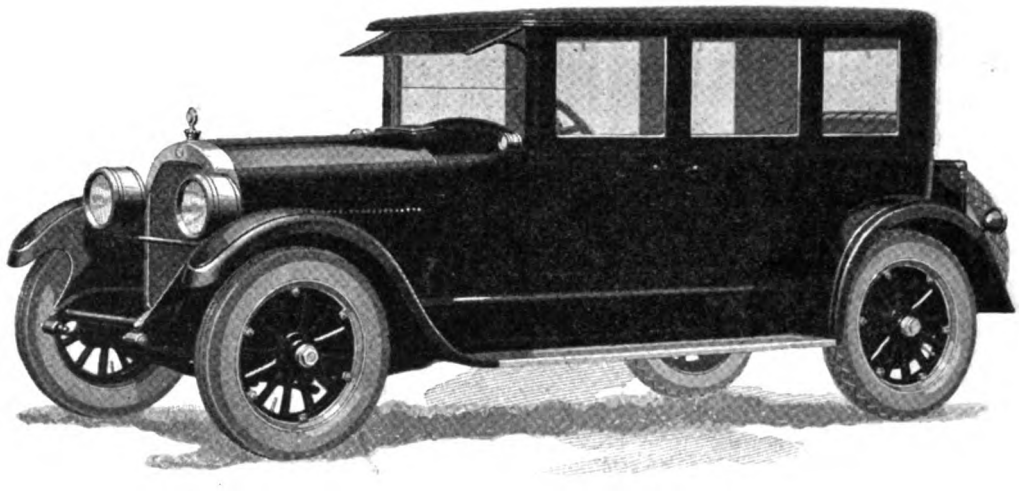
Motorists whose wide experience has made them not only critical but cynical, are frankly amazed at the behavior of the new Peerless Eight.

They are finding in this latest production of a seasoned eight-cylinder organization, a thrill and a delight not heretofore discoverable among cars of the highest class.

THE NEW PEERLESS EIGHT IS BUILT IN THE FOLLOWING TYPES:

Four Passenger Touring Phaeton
Seven Passenger Touring Phaeton
Two Passenger Roadster Coupe
Four Passenger Suburban Coupe
Five Passenger Town Sedan
Seven Passenger Suburban Sedan
Five Passenger Berline Limousine
Four Passenger Opera Brougham

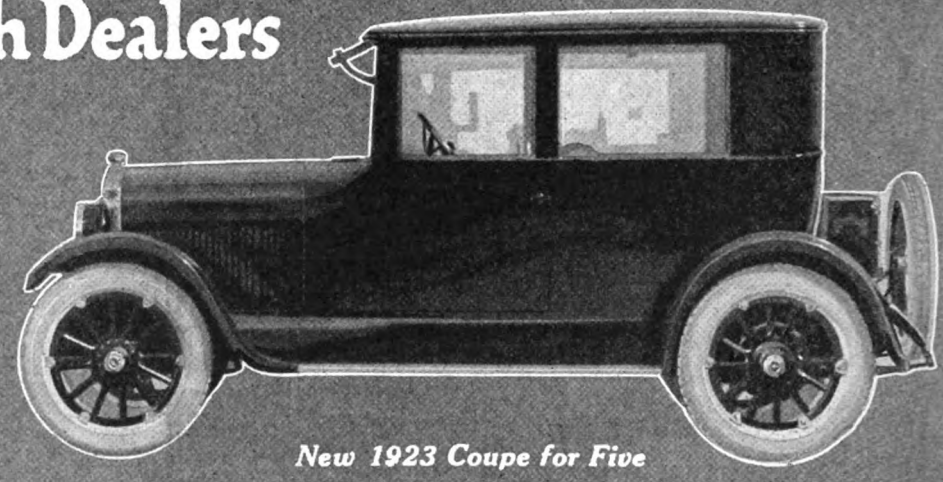
THE PEERLESS MOTOR CAR COMPANY, CLEVELAND, OHIO



PEERLESS

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Two More Reasons why Oakland is popular with Dealers



New 1923 Coupe for Five

Oakland's five-passenger Coupe and five-passenger Sedan for 1923 are distinctively new. The bodies are among the latest creations of Fisher—famous maker of fine coach work.

At the low prices of $1445 for the Coupe and $1545 for the Sedan, Oakland provides not only fine bodies but that guaranteed, six-cylinder performance—power, flexibility, quiet—so essential to complete closed car satisfaction.

The remarkable sales record established this year by Oakland, combined with the ever increasing demand for a quality light-six such as Oakland builds, is conclusive proof of the opportunity offered to progressive dealers by the Oakland Franchise. Write for full information.

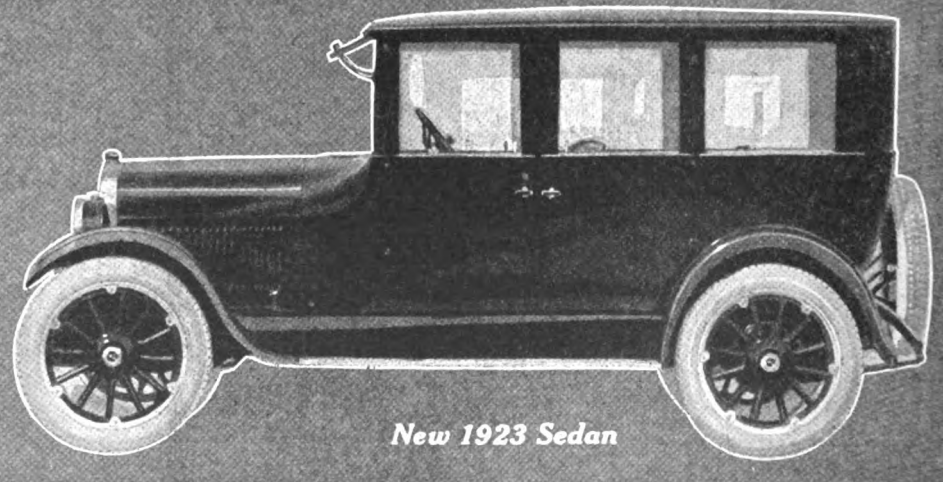
Oakland Motor Car Company, Pontiac, Michigan
Division of General Motors Corporation

The New Oakland Six

The 1923 Series

Roadster, 2-Passenger	$ 975
Touring Car, 5-Pass.	995
Sport Car, 4-Passenger	1165
Coupe, 2-Passenger	1185
Coupe, 5-Passenger	1445
Sedan 5-Passenger	1545

All prices f. o. b. at Factory



New 1923 Sedan

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN†			ENGINE																	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Coo'l'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	
(SEE FOOTNOTES) FOUR-CYLINDER PASSENGER CARS																													**(SEE FOOTNOTES)**
*Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645	5	Starter-Dem.Wheels	3¾x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	C	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760§	5		3⅝x4	Own	L	H	T		Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680§	2	860	5	C	3¼x4	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5		3⅝x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980§	2	1,195§	5	C, N, P, V	3⅞x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3½x4¾	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3⅛x5¼	Own	H	H	P		Zen	Rmy	A-L	Own	Own	Own	S	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B	885	2		1,045§	2	1,095§	5	B	3½x5	Lyc	L	H	T		Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	985§	2	1,335	5	C, D, K, P, T	3⅝x4½	Own	L	H	T		Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3⅞x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D, H	895	2	C, D, H	1,095§	2	1,345	5	C, D, H	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5		3½x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5		1,075	4	C, D, M, P, Z	1,375§	5	1,595	5	P, V	3⅛x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5		985	2		1,400	3	1,450	5		3½x5	Gry	H	H	T		Soo	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5		1,195	5				1,450	5		3½x5	Gry	H	H	T		Soo	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, O	1,095	4	D, E, G, O	1,395	3	1,395	5	D, G, N, O, V	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, D, H				1,245§	5				3½x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, M, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3⅛x5¼	Own	L	H	T		Soo	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C,D,H,N,O,P,T,U,b	3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, O, N P, V	3½x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	5		1,795	4	1,795	5		3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B	1,235	2	B	1,795	4	1,950	5	B	3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B						2,195	7	B	3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3⅝x5½	Own	H	C	P		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T			Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q	2,790	4	B, D, H, J, L, O, Q, X	3,490	4			B, D, H, J, L, O, U	4⅜x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T		Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3⅛x5⅛	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, J, L, Z	3,785	2	A, D, G, J, L, Z			4,650	4		4¼x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer	3,950	6	B, G, 2I, L	3,950	4	B, G, 2I, L	4,850	4	5,250	7	B, G, 2I, L	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer
SIX-CYLINDER PASSENGER CARS																													
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	1,550	5	B, D, C, G	3⅛x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3⅛x4¼	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S		31x4	115	Columbia Light Six
Hanson Light Six	995	5	B, G, H, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, V	3¼x5	Own	L	H	P		Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2¾x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3⅞x4½	Own	H	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4¼	Fal	H	H	T		Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Chalmers	1,185	5	C, K, P	1,185	2	C, K, P	1,595	4				3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, G, H, O, P				1,450§	4				3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.75	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3⅝x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R	1,645	4	C FH2I2JKQRWYb			2,040	5	D, R, V	3¼x5	Own	L	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G	1,250	2	B, C, D, G	1,875	4	2,050	5	B, D, G, S	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Tim	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z						1,795	5	E, O	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Elgin "K-1"	$1,295	5	C, D	$1,345	4	C, D, H, K, Z	$1,695	4	$1,695	5	C, H, N	3 1/8x4 1/4	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Moon "6-40"	1,295	5	B				1,595	4	1,695	5	B, N, V	3 1/8x4 1/4	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3 1/4x4 1/2	Own	L	C	T		Str	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		1,395	4				2,095	7	B, G, N	3 1/4x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T Vab	3 1/8x4 1/2	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3 1/4x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4 1/2	127	Nash Six
Barley	1,395	5	D, H, P, Z						1,850	5	D, H, P, Z	3 1/8x4 1/4	Con	L	C	P		Str	Del	Del	B&B		Col	S		32x4	118	Barley
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, P, Z, b	2,065	3	2,165	5	N, P, V, Z	3 1/8x4 1/2	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3 3/8x4 1/2	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, H, K, O, T, Z	1,695§	2	2,095	5	C, D, H, K, T, V	3 3/8x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3 3/8x4 1/2	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4 1/2	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3 1/4x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W X Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3 3/8x4 1/2	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3 3/8x4 1/2	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3 1/4x4 1/2	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4 1/2	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Zb	1,835§	4	1,885§	5	C, D, K, N, T, V, Z	3 1/16x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3 1/8x4 3/4	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, G, H, M, O, P	1,945	4	A C F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3 3/8x4 1/2	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3 1/2x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K[1], O, P	1,545	2	D, G, H, K[1], O, P	2,095§	3	2,395	5	D, G, H, K[1], O, P, U, V	3 1/2x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4 1/2	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3 1/8x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3 1/4x4 1/2	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4 1/2	120	Paterson
Hudson	1,575	7	B, D, H	1,525	4	B, D, H	1,625§	5	2,295	7	B, D, H, U, V	3 1/2x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4 1/2	125 1/2	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3 1/2x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Davis "61"	1,595	5		1,695	4		2,095	4				3 3/8x4 1/2	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "61"
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3 1/8x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "60"	1,595	5	G, H, P	1,695	4	G, H, P	2,475	4	2,585	5	G, H, P	3 3/8x4 1/2	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "60"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3 1/4x4 1/2	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4 1/2	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3 1/4x4 1/2	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3 1/4x4 1/2	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.11	32x4 1/2	123 1/2	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, O, S	3 7/16x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4 1/2	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K[1], W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3 3/8x4 1/2	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3 1/2x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4 1/2	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P T X Z			2,890	5	E2I2JMNOPTUVX	3 3/8x4 1/2	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4 1/2	120	Westcott "B-44"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y Z	2,145§	5	2,545	5	U	3 1/4x4 1/2	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4 1/2	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	3 1/2x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4 1/2	127	American
Moon "6-58"	1,785	7	B, Z	1,885	5	B, X, Z			2,485	7	B, N, U, V	3 3/8x4 1/2	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4 1/2	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3 3/8x4 1/2	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4 1/2	122	Case "X"
Jordan "MX"	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,485	5	2,485	5	B, D, Z	3 7/16x4 3/4	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3 3/8x4 1/2	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3 7/16x5 1/2	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4 1/2	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Yb	1,895	2	F H 2I 2J K R T V W X Y	2,195	3	2,695	5	F H 2I 2J K R T V X Yb	3 1/2x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4 1/2	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3 1/4x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, c	2,190	7	F H 2I 2J M O P T X c						3 1/2x5 1/4	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4 1/2	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3 1/4x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4 1/2	126	Pilot "6-50"
Comet "C-53-2"	2,150	5		2,150	2		2,800	4	2,950	5		3 1/2x5 1/4	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4 1/2	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3 3/4x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4 1/2	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3 5/8x5 1/4	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4 1/2	129	Case "W"
Roamer "6-54-E"	2,285	4	A, G, H, Z	2,750	4	A, G, H, J, L, Z	3,285	3	3,585	5	A, G, H, J, L, U, Y, Z	3 1/2x5 1/4	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4 1/2	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3 1/8x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3 1/2x5 1/4	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4 1/2	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3 7/16x5 1/2	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4 1/2	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K[1], O, X, Y	2,395	2	C D H J K[1] L O T W	3,095	5	3,395	7	A D G H K[1] O U V X Y	3 1/2x5 1/2	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4 1/2	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3 1/2x4 1/2	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4 1/2	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3 3/8x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4 1/2	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3 1/2x4 1/4	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4 1/2	126	Holmes
Packard Single-Six	2,685	7	C, G, O, M						3,525	7		3 3/8x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4 1/2	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3 3/8x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4 1/2	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**SIX-CYLINDER PASSENGER CARS—Continued**																											(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X	.....	...	$3,795	4	A C F G H J K O P T X	3⅝x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5	.....	2,975	2	.....	.....	...	4,500	5	.....	3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¼x5½	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6	.....	3,100	4	.....	.....	...	5,500	5	.....	3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, O	3,300	4	A, B, C, D, G, L, O, X, Y	4,300	4	5,100	7	A, B, D, G, N, O	3⅜x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	33x5	132	Winton "40"
Ogren	3,750	5	.....	3,750	4	.....	4,500	4	4,800	5	.....	3⅝x5¼	Con	L	C	P	...	Ray	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	.....	3,800	4	.....	4,600	4	4,800	7	.....	3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z	4,900	3	4,900	5	A C D G H J M O T Z	3¾x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y	.....	...	6,500	5	A, G, H, O	3¾x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,600	5	.....	.....	...	.....	.....	...	6,825	...	.....	3¾x5½	Own	H	S	P	...	Ray	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M O Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4	.....	.....	...	8,900	7	.....	4⅞x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X	.....	...	11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	...	B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	10,900	2	.....	.....	...	12,900	7	.....	4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
	EIGHT-CYLINDER PASSENGER CARS																											
Oldsmobile "47"	1,375	5	C, D, P, T	1,675	4	F H K O P Q T W Z b	1,875	4	2,025	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P	.....	...	2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	5	A, B, G, H, M, Z	1,795	2	A, B, G, H, J, Z	2,400	4	2,550	5	A, B, D, G, H, N, V, Z	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	⅛L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G	2,395	4	A, D, G	2,750	4	3,200	7	A, D, G	3½x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, G	2,620	4	.....	3,625	4	3,695	7	A, G	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A, B, G, M, N, O, X	2,685	4	A, B, G, M, N, O, X	3,385	4	3,685	7	A, B, G, M, N, O, X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3½x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3⅜x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, O, T	4,990	4	A, B, C, D, G, H, O, T	5,500	4	5,500	7	A B C D G H O T U V	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2	.....	5,350	...	6,000	...	.....	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A E G H J M U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	.....	6,500	4	.....	7,800	4	7,800	7	.....	2⅞x5	Own	H	V	P	...	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
	TWELVE-CYLINDER PASSENGER CARS																											
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) A—power tire pump; B—theft lock; C—windshield wiper; D—cowl lights; E—front bumper; F—bumpers front and rear; G—clock; H—heat indicator; I—spare tire; J—spare wheel; K—disc wheels; K¹—disc wheels optional; L—wire wheels; M—wheels optional; N—car heater; O—snubbers or shock absorbers; P—pressure chassis lubricating system; Q—spotlight; R—gasoline gauge (dash); S—glove box; T—mirror; U—vanity and smoking sets; V—sun visor; W—windshield wings; X—trunk rack; Y—trunk; Z—color option or special color; a—tilting steering wheel; b—rear signal; c—permanent top.

†CLOSED MODELS: Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §.

ENGINE: Ans—Ansted; Con—Continental; Due—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lyc—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wel—Weidely.

VALVES ARRANGED: H—in head; L—at side; N—side and head; R—horisontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith.

IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Leece-Neville; N-E—North East; Rmy—Remy; Scn—Scintilla; Sim—Simms; Spl—Splitdorf; S-W—Splitdorf & Westinghouse, 18 plugs; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

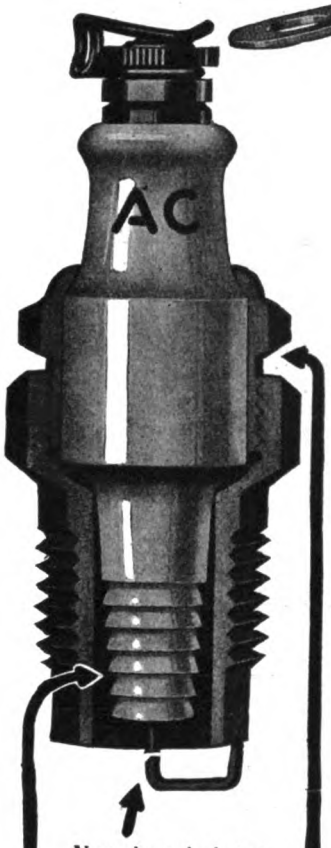
REAR END: Adm—Adams; Col—Columbia; Fln—Flint; GMC—General Motors Corp.; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

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Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost



New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain with its high temperature fins attains sufficient heat to burn oil deposits, thus offering effective resistance to carbon

78 LT



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

SAELT



Long SAE
Durant 4
Oakland
Olds
Saxon

78 DT



Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

78 LBT



Long Body 7/8
Chandler
Willys-Knight

Here Is the Way to Make Real Money Out of Plugs

Just a little attention to your spark plug business will enable you to make real money out of plugs. You can easily prove this truth for yourself. Follow the plan that money-making dealers have already adopted and see how your plug sales are multiplied.

You'll find that few motorists realize that hard starting, spluttering, backfiring, and other motor troubles usually are caused by old, worn-out, or incorrectly designed spark plugs.

THAT'S YOUR CHANCE! Sell new sets of AC's.

When you provide a car owner with a new set of AC's you sell him properly designed plugs that will certainly give him snappy, efficient service.

Make it a practice to look at the plugs in every customer's car. When you find a mixed assortment of plugs remind the owner that he needs a set of AC's.

Sell AC's when you find old, worn-out plugs.

Sell a few spare plugs to owners of old cars or new ones. Spare plugs are as important as spare tires.

In no time, you'll find that the car owners are looking upon you as the spark plug expert of your community. Pleased motorists will tell others, and in every instance the quality of AC Plugs make it certain that all your customers will be satisfied.

AC 1075

Special for Fords

The Best Spark Plug Ever Made for Fords

The AC 1075 is AC's answer to the need for better plugs for Ford engines—cars, trucks, and tractors.

In addition to many other efficient features, it has the famous AC Carbon Proof Porcelain with its high temperature fins that facilitate starting and avoid short circuiting.

Every Ford owner who comes into your store is a prospect for a set of AC 1075 Plugs.

Think of it—this plug gives you first place in the biggest plug market. And when you build up an AC trade among Ford owners of your vicinity you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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The Standard Spark Plug of the World

18 MT



Reg. Metric
Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½
Overland 4

SAENT



Extra Long SAE
Elgin
McFarlan
Nash

SAET



SAE
Apperson
Durant 6
Mitchell
Marmon
Standard 8



Reg. ⅞ T

Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton

and 170 other makers of cars, trucks and tractors

Why You Should Sell AC's —and AC's *Only*

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum.

A line of AC Spark Plugs will enable you to put your plug stock on that profitable basis. You need only one line of plugs—AC's—for there are AC's for every make and model engine.

Millions of car owners must have the AC Plugs shown on these pages. The fact that their cars were factory-equipped with AC's makes them AC buyers. This alone creates a tremendous market, and also is an outstanding proof of AC quality.

DODGE BROTHERS cars have been AC-equipped since the company was founded.

BUICK cars have been AC-equipped for fourteen years.

NASH cars, both Sixes and Fours, have always been equipped with AC's.

OAKLANDS for the past fourteen years have been AC-equipped.

CHEVROLET cars have always had AC Plugs in their engines.

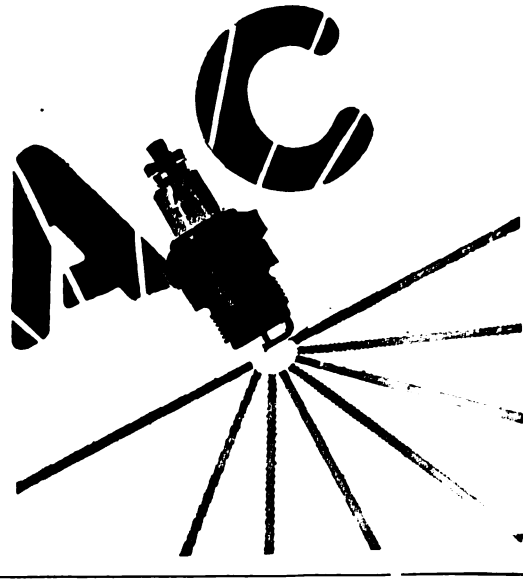
CADILLAC, CHANDLER, CLEVELAND, DORT, DURANT, ESSEX, HUDSON, HUPMOBILE, LAFAYETTE, MAXWELL, OLDSMOBILE, OVERLAND, PAIGE, WILLYS-KNIGHT and many others are all standard AC-equipped.

The leading racing men use only AC's. The first, second and third place winners at Indianapolis last May used AC Plugs.

Car Owners Everywhere Know "AC" Means Quality

You can sell AC Plugs to all motorists, for there are specially designed AC's for all engines, whether originally AC-equipped or not. And when you sell AC's you need waste no time on long-winded "introductions" or "explanations." AC's are the established plugs, the plugs that motorists everywhere know through experience and AC's strong advertising.

All you have to do is say "AC"! Don't overlook the opportunity to create new AC users!



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915, U. S. Pat. No. 1,216,139. Feb. 13, 1917. Other Patents Pending

by the Set

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The time will surely come when those who were slow to grasp the true significance of recent developments will regret that they did not try to get the Stutz franchise before the opportunity had passed.

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They Know What Its Future Holds

Why have Walter M. Brown, *Los Angeles;* George Abernathy, *Memphis;* Bert Latham, *San Francisco;* Ed Updyke, *Indianapolis;* and other leading automobile dealers—who were identified with Stutz in the days of its earlier successes—welcomed the chance "to get back in the family" again?

Why are Parkinson, *New York;* Becker, *Boston;* Blocksom, *Philadelphia;* Glossbrenner, *Louisville;* Brunton, *Cincinnati;* Norwood, *Baltimore;* Thomas, *Cleveland;* Schaefer, *Wheeling;* Hoeveler, *Pittsburgh;* Graves, *Nashville;* Baughman, *Akron;* Abbott, *Atlanta;* Kaeser, *Hartford;* Andrews, *Providence;* Prince, *Washington, D. C.;* and a host of others, backing their confidence in the Stutz with the most aggressive efforts in the history of their long connection with the company?

The Stutz is on the threshold of another great era of prosperity. It has made fortunes for its dealers in the past. History is about to repeat itself!

All of the vast financial and industrial resources of the company are focused on developments destined to outrival any previous achievements of this organization.

No more profitable opportunity exists today for a permanent connection with one of the real factors in the industry affording a line of cars as representative as any built in this country.

If you have not investigated the Stutz—if you are not informed on present Stutz developments—write today.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

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The Courier Six for

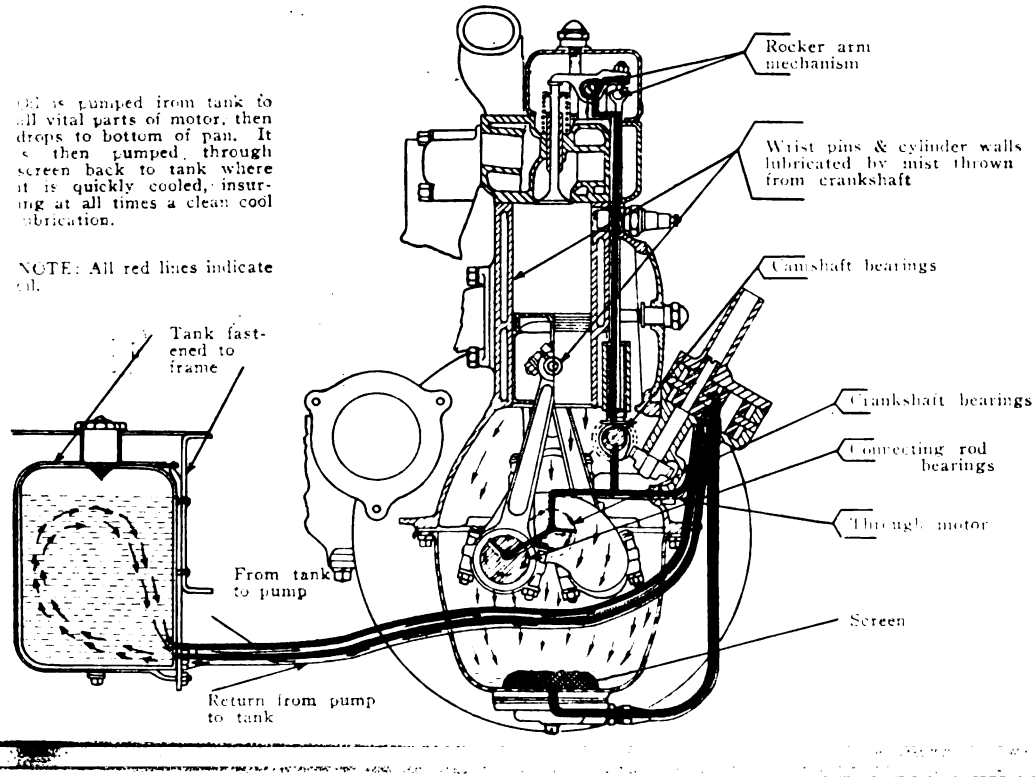
Features That Sell Cars and Keep Them Sold

Back of every motor car there must be sound, convincing reasons for the public to buy it. Any features must be practical and fill a great need. The Courier Six offers two distinct improvements in lubrication which have long been urgently required. They are

Automatic Chassis Lubrication
Dry-Sump Engine Lubrication

The Courier Automatic Chassis Lubrication forces oil at high pressure to every wearing part of the chassis.

The Courier Dry-Sump System keeps the engine thoroughly lubricated at all times. It maintains a continuous volume of oil flowing through every engine part. It eliminates the storing of oil in the bottom of the crankcase. It prevents smoking and insufficient lubrication. By using the same oil over and over again, there is big economy—500 miles to a single quart is the average oil consumption. This system keeps the oil in a separate tank, removed from the heat of the engine, and so mounted on the frame that it is cooled by the forward motion of the car. The oil is forced through the engine, and then drains to the bottom of the crankcase, where it is screened, picked up by a scavenger pump and forced back through a filter to the oil tank, where it is cooled and then sent on a return trip through the engine.



The Courier Dry-Sump Oiling System

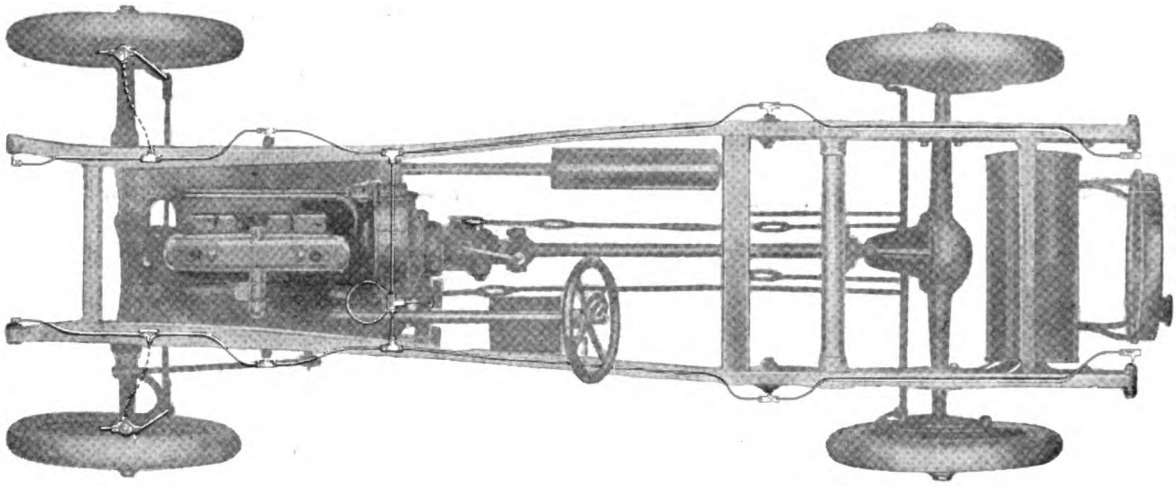
Regardless of the speed maintained, the oil is constantly forced between every bearing surface.

The same oil is used over and over again, without losing any of its original lubricating qualities or its original color.

THE MOST COMPLETELY AND CONVEN-

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Care-Free Service



Automatic Chassis Lubrication

Grease and oil cups have no place in the Courier chassis. You have them in other cars, but you know how neglected they are. It's a dirty, disagreeable task that is dodged until the last minute.

Everyone knows that proper lubrication adds years to the life of a car, and chassis lubrication in the Courier is so simple and positive that it is never neglected.

Just releasing a plunger on the cowl sends the oil dashing through the chassis, thoroughly lubricating every wearing surface, and adding years to the car's life. The red lines above indicate the path taken by this oil. The tank holds enough for 3000 miles.

There are no grease cups to tamper with, no dirty, messy job to try the owner's clothes and temper. Is it any wonder that a car designed with the owner so clearly in mind is fast gaining in popularity?

What Courier Means to Dealers

The Courier policy is open and above board. We have no special deals or secret agreements. We are here to build and sell cars, and to produce the type of vehicle that dealers can market with the least energy and effort. We are not trying to do all the business in the world, nor are we competing with the stereotyped vehicles that are churned out in big quantities. The Courier production is necessarily small. The car is individual. It is classy. It is brilliantly painted, handsomely and richly upholstered, buoyant as a sailboat, and its running expense is small. With all of its rich, custom appearance, it also has a powerful and sturdy mechanism that gives the most thrilling sort of six-cylinder performance.

If you are interested in building a permanent business for yourself, and want to do business with a Factory more intent upon your success than its own, then write or wire us. It will pay you.

PRICES	
Phaeton—5 Passenger	$1395
Roadster—3 Passenger	1395
Sport Roadster—3 Passenger	1495
Coupe—3 Passenger, extra folding seat	2065
Sedan—5 Passenger	2165
Sport—4 Passenger	1495

All prices are f. o. b. Sandusky—Revenue Tax to be added

EXPORT MODELS	
Specially equipped with khaki top, 5 wire wheels, right-hand drive, special speedometer, etc.	
Phaeton—5 Passenger	$1495
Roadster—2 Passenger	1495
Sport—4 Passenger	1595
Sport Roadster—2 Passenger	1595

Export Department: NO. 2 RECTOR ST., NEW YORK

THE COURIER MOTORS COMPANY

SANDUSKY, OHIO.

IENTLY LUBRICATED CAR IN AMERICA

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It's a Safe Bet That Gilmer Will Do It

IT'S fair to assume that the next big step forward in the manufacture of woven automotive products will be made by the Gilmer Company.

Just a glance at the Gilmer record would justify such a belief. Gilmer was the pioneer of woven products for automotive use. Every advance that has been made in their manufacture has been started by Gilmer.

The Gilmer Company is the largest of its kind in the country. It owns three large modern plants that offer every facility for the improvement of old ideas, and the creation of new ones.

Gilmer is the recognized leader in the field of automotive products. The trade automatically looks to Gilmer when a need arises for some new woven product —they know that Gilmer will produce it.

Therefore, it is safe to assume that if a new improvement can be made in the manufacture of woven automotive products, Gilmer will be the first to make it.

L. H. GILMER COMPANY, Philadelphia



It's a Gilmer Product— you can depend on it

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How Would You Sell A Tight-Fisted Prospect?



YOU'VE met him—the fellow whose money is all rusty, it's been out of circulation so long. He parts with it hard—spending hurts him. He's bought a car and wants it to last the rest of his life.

He's a *live* prospect for Gilmer Bull Dog Bounce Absorbers. Tell him how they will increase the life of his car. Tell him how the hundreds of *small* bumps in the road will rack his car to an early turn-in. Tell him that the Gilmer is the absorber that operates fast enough to absorb *all* these *small* bumps.

Explain the lightning-fast action of Gilmer —how it will smooth every jar in a series of quick, successive bumps, such as cobblestones, worn macadam and trolley tracks. Show him how easy it is to install the Gilmer. (Fifty per cent of all cars, including Fords, require no drilling. The majority require no drilling in the rear.)

Show him that the Gilmer Absorber is trouble-proof because it is so simple in construction—only two working parts, neither of them metal. Show him that it is instantly adjustable to any weight of car, stiffness of springs or any driver's preference—and that he can make the adjustments himself. He's a hard nut! But the strong Gilmer selling points plus some real salesmanship will crack him wide open with a sale.

There are two types of the Gilmer Absorber—one for Ford cars and one for all other cars. The same turnover that applies to all Gilmer Products is enjoyed by dealers who sell the Bounce Absorber. Write your jobber for complete information to-day.

L. H. GILMER COMPANY, Philadelphia



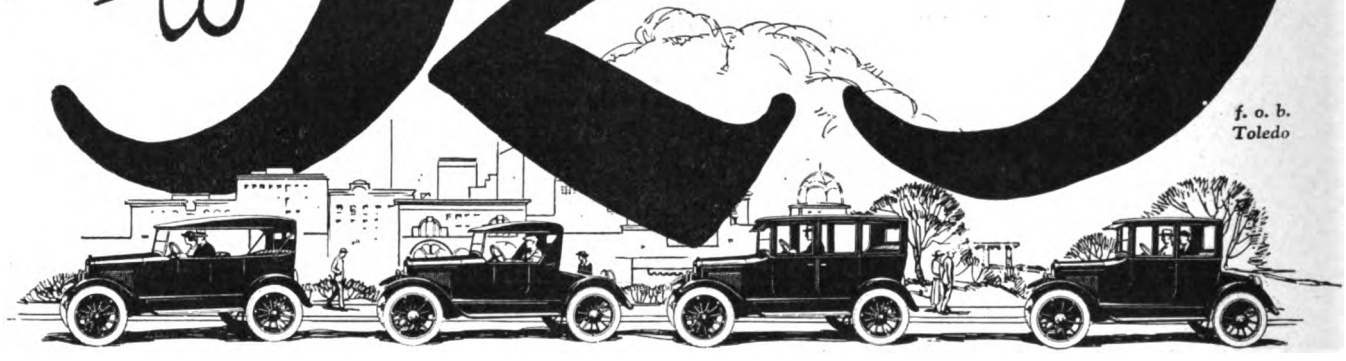
"Works with lightning speed"

Gilmer *Bull Dog Bounce Absorber*

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$525

Reduced to



f. o. b. Toledo

TOURING		ROADSTER		SEDAN		COUPE	
Was	*Now*	*Was*	*Now*	*Was*	*Now*	*Was*	*Now*
$550	$525	$550	$525	$895	$875	$850	$795

f. o. b. Toledo

Now! Beyond any shadow of doubt Overland is the GREATEST automobile value in America

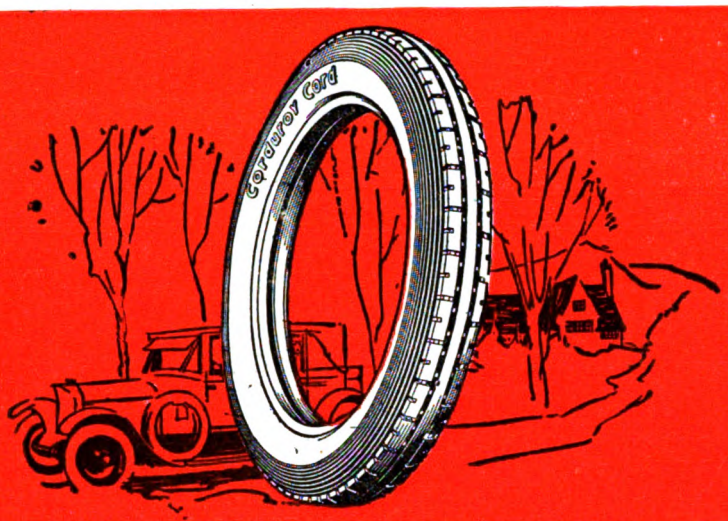
Overland

TRADE MARK REG.

All-Steel Body.
Baked Enamel Finish.
Smooth-Riding Triplex Springs.
Greatly Strengthened Rear Axle.
25 Miles to a gallon.

WILLYS-OVERLAND, INC., TOLEDO, OHIO

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Because of the growing demand for Corduroy Cord Tires we have been compelled to start construction on a new quarter of a million dollar addition to the factory, which, when completed, will enable us to more than double the present production.

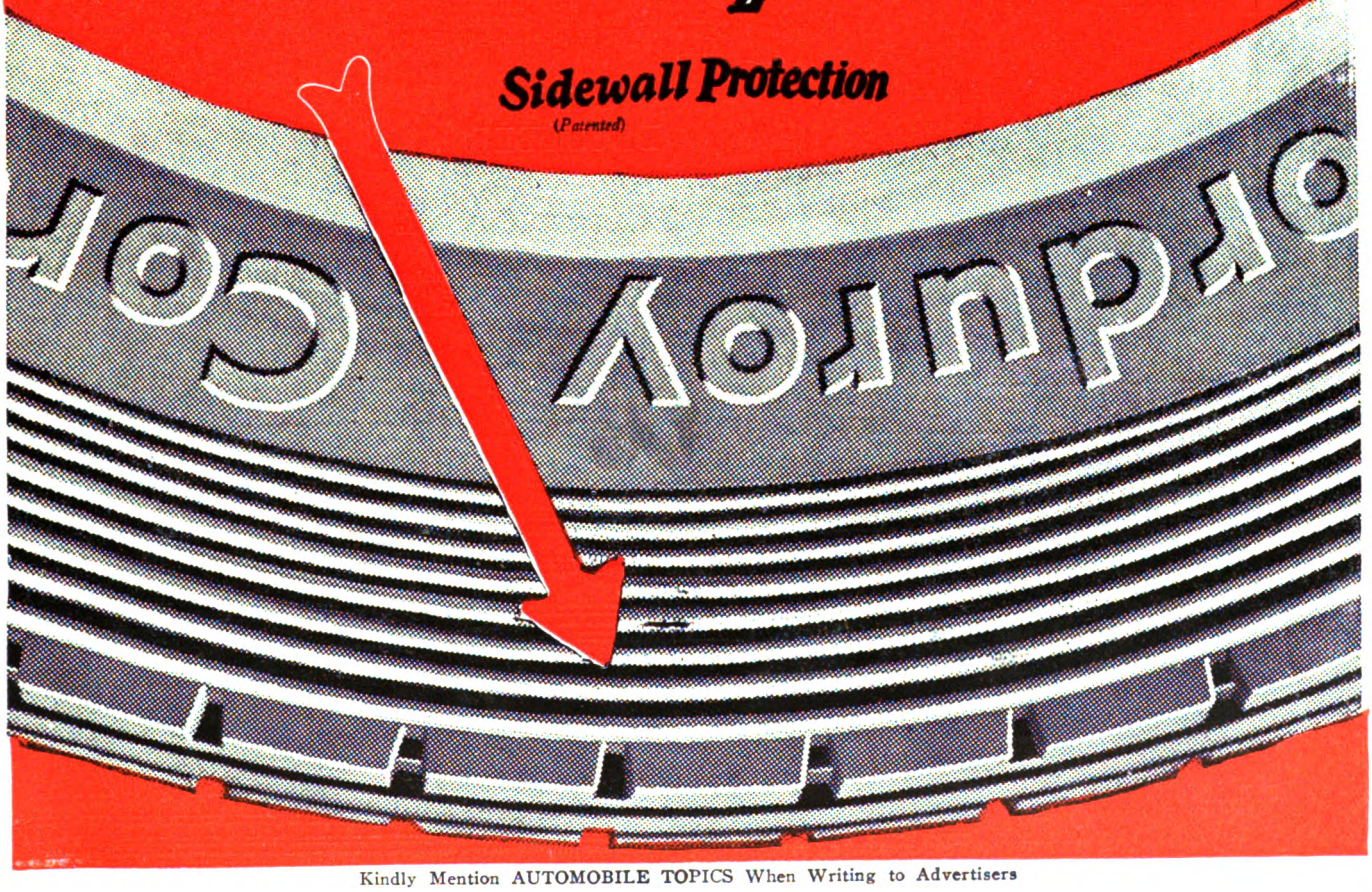
The exclusive sidewall protection feature of Corduroy Cords, the high mileage records they are establishing, the low cost per mile of service, the liberal discount, the fair and square dealer policy, the exclusive selling rights and positive dealer protection—all combine to make the Corduroy Cord proposition profitable for any dealer. Write for information.

THE GRAND RAPIDS TIRE & RUBBER CORPORATION
Grand Rapids, Michigan

Corduroy Cords

(45)

Sidewall Protection
(Patented)



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WAR DEPARTMENT SELLING PROGRAM

OCTOBER

Oct. 10—Q. M. SUPPLIES—Camp Grant, Ill., Auction. For catalog write Q. M. S. O., 1819 W. Pershing Road, Chicago, Ill.

Oct. 10—MEDICAL SUPPLIES—New York City, Auction. For catalog write Surplus Property Sect., Office, Surgeon General, Washington, D. C.

Oct. 11—AIR SERVICE SUPPLIES—Carlstrom Field, Fla., Auction. For catalog, write Commanding Officer, Carlstrom Field, Fla.

Oct. 17—Q. M. SUPPLIES—Camp Dix, N. J., Auction. For catalog, write Q. M. S. O., 1st Ave. and 59th St., Brooklyn, N. Y.

Oct. 19—POWER HOUSE EQUIPMENT—Rock Island, Ill., Sealed Bids. For catalog, write C. O., Rock Island Arsenal, Rock Island, Ill.

Oct. 24—AIR SERVICE EQUIPMENT—Montgomery, Ala., Auction. For catalog, write C. O., Air Reserve Depot, Montgomery, Ala.

Oct. 24—FLOATING EQUIPMENT—Port Newark, N. J., Auction. For catalog, write Q. M. S. O., 1st Ave. and 59th St., Brooklyn, N. Y.

Oct. 27—MEDICAL SUPPLIES—Washington, D. C., Auction. For catalog, write Surplus Property Sect., Office, Surgeon General, Washington, D. C.

Oct. 30—AIR SERVICE EQUIPMENT—Richmond, Va., Auction. For catalog, write C. O., Air Reserve Depot, Richmond, Va.

NOVEMBER

Nov. 10—Q. M. SUPPLIES—Schenectady, N. Y., Auction. For catalog, write Q. M. S. O., 1st Ave. and 59th St., Brooklyn, N. Y.

Nov. 14—Q. M. SUPPLIES—Camp Lewis, Wash., Auction. For catalog, write Q. M. S. O., Ft. Mason, San Francisco, Calif.

Nov. 14—AIR SERVICE EQUIPMENT—Long Island, N. Y., Auction. For catalog, write C. O., Air Service Depot, Long Island, N. Y.

Nov. 15—Q. M. SUPPLIES—Brooklyn, N. Y., Auction. For catalog, write Q. M. S. O., 1st Ave. and 59th St., Brooklyn, N. Y.

Nov. 16—MEDICAL SUPPLIES—Philadelphia, Pa., Auction. For catalog, write Surplus Property Sect., Office, Surgeon General, Washington, D. C.

Nov. 21—Q. M. SUPPLIES—Camp Knox, Ky., Auction. For catalog, write Q. M. S. O., 1819 W. Pershing Road, Chicago, Ill.

Nov. 23—Q. M. SUPPLIES—Chicago, Ill., Auction. For catalog, write Q. M. S. O., 1819 W. Pershing Road, Chicago, Ill.

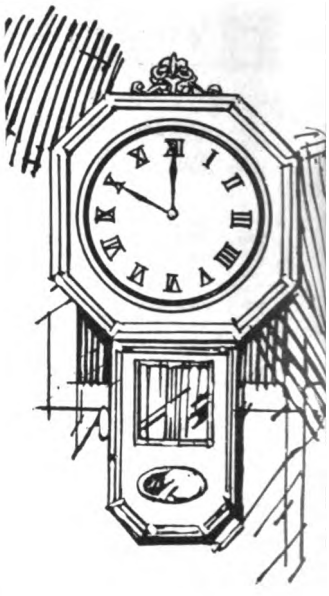
Nov. 28—Q. M. SUPPLIES—New Orleans, La., Auction. For catalog, write C. O., Q. M. Surplus Property Depot, Atlanta, Ga.

DECEMBER

Dec. 5—Q. M. SUPPLIES—San Antonio, Tex., Auction. For catalog, write Q. M. S. O., Ft. Sam Houston, San Antonio, Texas.

Dec. 12—Q. M. SUPPLIES—Columbus, Ohio, Auction. For catalog, write Q. M. S. O., 1819 W. Pershing Rd., Chicago, Ill.

SEND FOR CATALOG **SEND FOR CATALOG**





The Government reserves the right to reject any or all bids.

WAR DEP

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8-G-B

Hundreds of Dollars from Ten Minutes of His Time

—he is one of your clerical force——



YOU know this man? Eight hours of his time, six days a week, belongs to you. He is in your office to serve your interests to the best of his ability. If he is properly directed, ten minutes of his time, every now and then, will put hundreds of dollars on the right side of your ledger. Here's how—

Have Him Get Catalogs of all War Department Sales.

Virtually every day there is a sale of War Department surplus materials. Every time the auctioneer's hammer falls, or an award is made to a bidder, somebody gets a bargain that means quick and certain profits.

Perhaps not all these sales would interest you—the commodities offered might not be in your line, or the sale might not be convenient to your place of business.

But, you never can tell.

The only way to be **certain** no profit opportunities are overlooked is to get the catalogs and check up the offerings in all sales.

This you can do easily and with negligible expense by having a clerk lay aside his pencil for ten minutes and send for our free information.

Every sale is advertised in business papers and the daily press. Each ad tells where you may obtain catalogs. Have all War Department ads routed through your establishment so they reach your "Catalog Clerk" for prompt attention. It will pay.

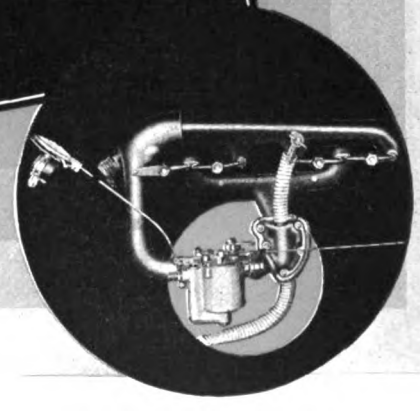
J. L. Frink, Chief, Sales Promotion Section
Office, Director of Sales
Room 2515 Munitions Building, Washington, D. C.

ARTMENT

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OFFICIAL TEST

51 6/10 miles on a gallon of gasoline



A standard Ford car carrying three passengers—total weight of car and passengers 2370 pounds—was recently driven 51 6/10 miles on one gallon of 57 test gasoline. This world's record mileage test was made under observance of American Automobile Association. Minimum speed was 6 miles per hour—maximum speed 45 miles per hour.

The Ford was equipped with new 1922 Stromberg Carburetor and Hot Spot—that's what turned the trick.

Easily installed. Low price—$15.75 for Carburetor and Hot Spot complete.

Attractive proposition for good live dealers—write for details.

Stromberg Motor Devices Co. Dept. 1019 64 East 25th Street, Chicago, Ill.

Stromberg Carburetor with the Stromberg HOT SPOT for Ford Cars"

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Will You Double Your Sales With Us in 1923?



—goes a long way to make friends

There has never been a year in our history that hasn't shown General's dealers large sales increases. Even in the bad year of 1921, General's sales kept right on increasing, with never a let-up.

There are no such things as hard times for a tire merchant with a factory that treats its dealers right—and that continually seeks to improve its line.

More than 175 makers of tires want your business. When we started in 1916, there were only 50 of us—but we treated our dealers just the same then as we do now—because the men who manage the General factory were once tire dealers themselves, and know the business from both sides.

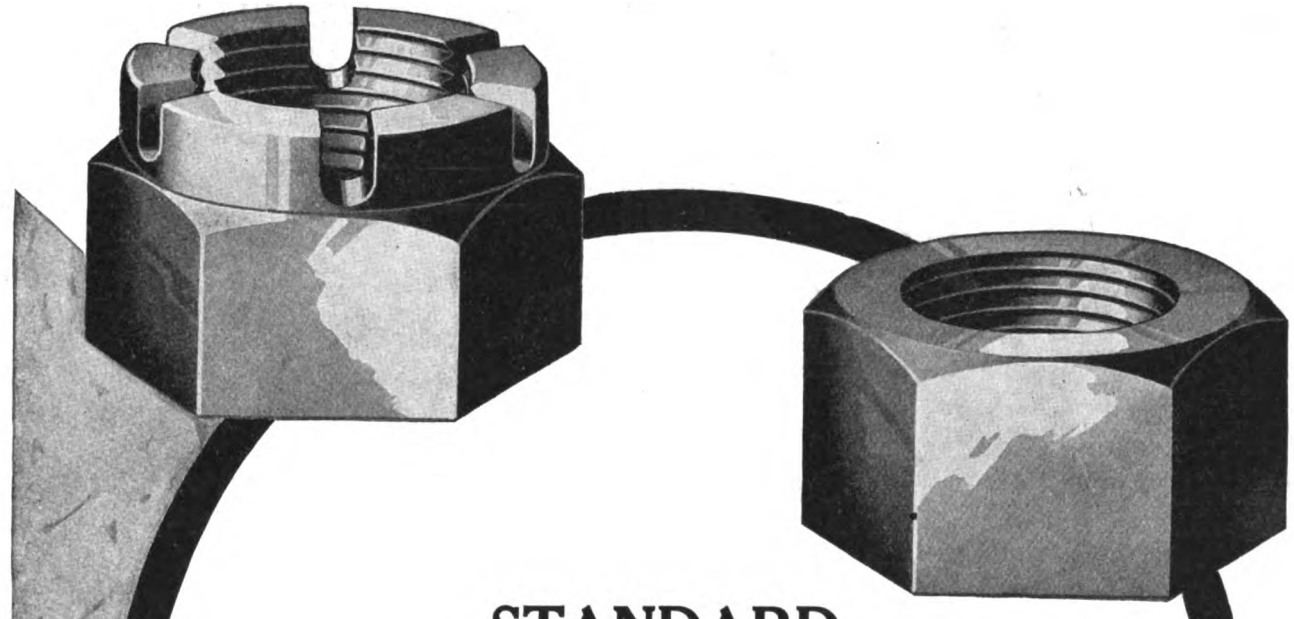
Don't let another year roll by without investigating the truth of what we tell you. Ask us to give you a list of General Tire dealers near you. Then ask them why it pays to be a General dealer and why sales constantly increase even when business as a whole may be dwindling. Write today for our Class "A" proposition for 1923.

THE GENERAL CORD TIRE

THE GENERAL TIRE AND RUBBER COMPANY
Dept. F 10
AKRON, OHIO, U. S. A.

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Namco Nuts
Standard or Special



STANDARD

S. A. E. Plain & Castellated Nuts
Standard Studs
U. S. S. & S. A. E. Cap Screws
U. S. S. Set Screws

SPECIAL

Screw machine product up to 4″ diameter—to specifications.

Hardened and Ground Product—to specifications.

THE NATIONAL ACME COMPANY
CLEVELAND, OHIO

Branch Offices: New York Boston Chicago Detroit Buffalo
Warehouses: New York and Chicago

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New 1923 Models

MOON



Favorably Known the World Over

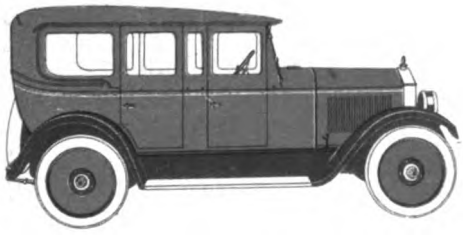
going great guns!

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The New Six 40's



Six 40 Five Passenger Touring
$1195



Six 40 Tourlux
$1445

Here's What Moon Dealers Are Doing—

Moon sales for 1922 have shattered all previous records!

One month's production *now* is equal to six months' production two years ago—and 1920 was the banner year of Moon manufacture.

In practically every section of the country this increasing demand for Moon cars has made money for Moon dealers.

Bill Coghlan, in New York, the first eight months sold 1,000 cars—a 260% increase.

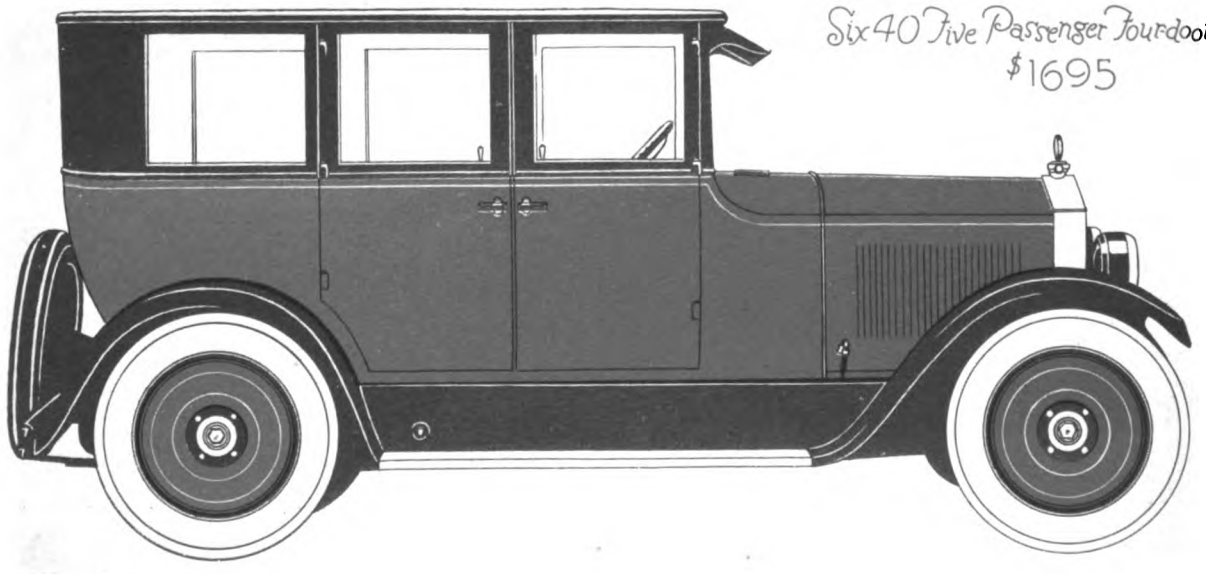
In Chicago, Jack Quinlan made a 300% increase in sales the first eight months of this year over same period of last year. He took 200 cars in August.

Mackin Motors, Inc., in Philadelphia, a new distributor, starting at the New York show time last January, has sold over 400 cars.

Igou Motor Company, one of the eight sub-dealers in St. Louis, has averaged better than a car a day.

Mexico City, Mexico, is taking twenty-five cars a month.

And speaking of twenty-five cars a month—look at this list of towns where dealers did even *better:* Austin, Texas,



Six 40 Five Passenger Fourdoor Sedan
$1695

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Harrisburg, Pa., Richmond, Va., Pawtucket, R. I., Winnipeg, Can., New Orleans, La., Lincoln, Neb., Denver, Colo., Rochester, N. Y., Houston, Texas.

And these are selling more than fifty cars a month: Portland, Me., Cincinnati, Boston, Pittsburg.

Quincy, Mass., a town of less than 50,000 population, is selling better than forty cars a month. Metz & Hart, Evanston, Ill., averages thirty-five a month.

Moon production reached its highest peak in August in the building and shipping of more than 1,000 cars—500% better than last year.

The Moon's irresistible appeal to the desire for beauty—its dependable performance—and its attractive price—remove any need for so-called super-sales effort.

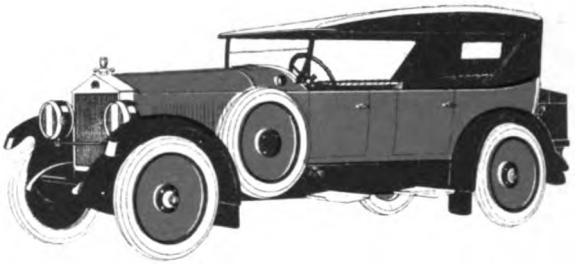
It's the car people instinctively want to own—it's the car you want to sell.

The year's overwhelming demand has taxed our factory capacity to the utmost—and it's Moon's policy not to take on more dealers than production permits.

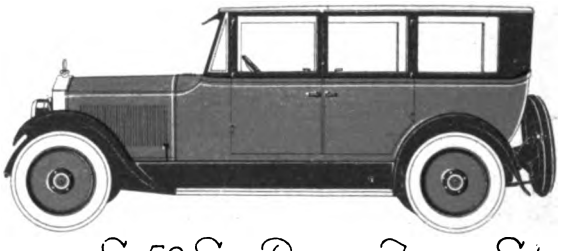
But now that our facilities have been greatly increased, we are ready to award the Moon franchise to a few more good dealers—of course, where the Moon is not now represented.

All new dealers will be able to sell Moon cars in the complete confidence that their interests will be as well safeguarded in the future as those of our older dealers have been in the past.

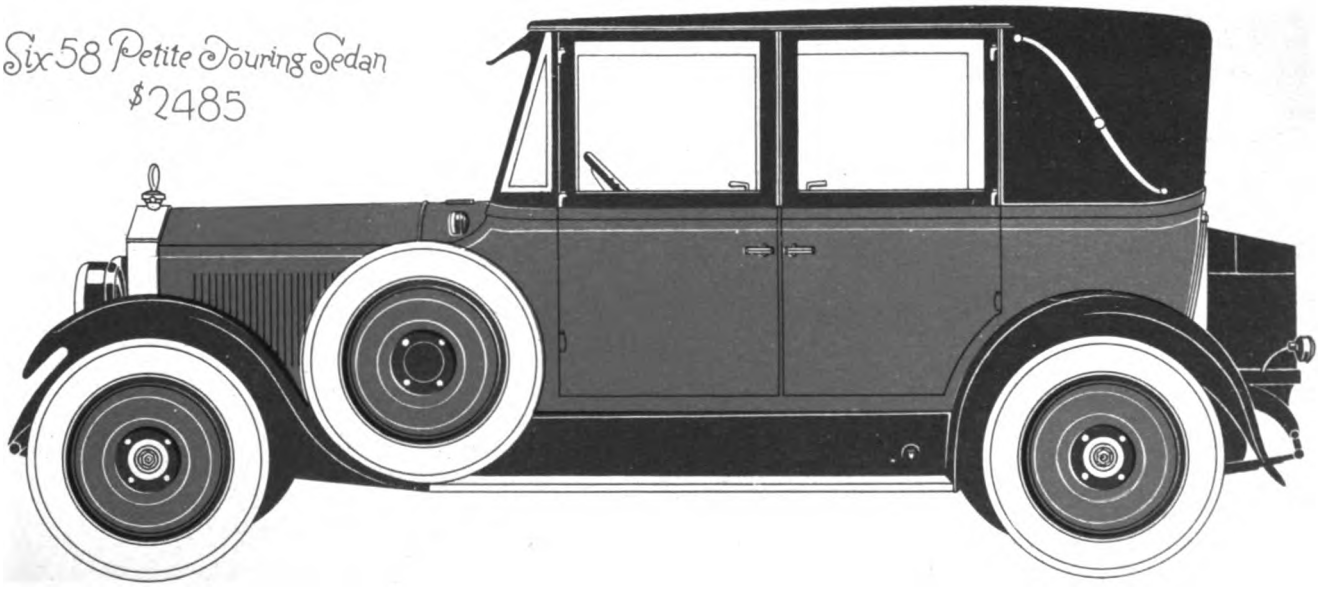
The New Six 58's



Six 58 Sport Touring
$1885



Six 58 Seven Passenger Fourdoor Sedan
$2485



Six 58 Petite Touring Sedan
$2485

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Specifications 1923 Models

The Six 40

MOTOR—"Red Seal" Moon Continental 3⅛-in. bore x 4¼-in. stroke. Six-cylinder, cast en bloc. Removable cylinder head. Enclosed valves. Four-bearing crankshaft. Force-feed lubrication.

ELECTRICAL EQUIPMENT—Delco starting, lighting and ignition. Two-unit system.

AXLES—Timken front and rear. Timken bearings throughout. Spiral bevel gears.

TRANSMISSION—Warner Gear Company. Unit construction with motor and clutch; selective sliding gear type, three speeds forward and reverse. Main shaft mounted on Timken bearings. Transmission equipped with approved type Johnson theft-proof lock.

CLUTCH—Borg & Beck. Ten-inch dry plate.

CARBURETOR—Stromberg.

BATTERY—Exide. Three-cell, six volts.

RADIATOR—Fedders cellular type with large frontal area. Solid German silver shell. Water pump circulation.

FRAME—New design. Four cross members tie the side members of frame rigidly together. Steel deck at rear provides additional strength and acts as protection for gas tank.

SPRINGS—Front, semi-elliptic, 2 inches wide, 36 inches long; rear, semi-elliptic, 2 inches wide, 54 inches long. Alloy steel. Spring eyes, bronze bushed, equipped with large hardened and ground spring bolts. Spring clips of alloy steel.

STEERING GEAR—Gemmer. Full worm-and-gear type. Worm and gear adjustable to take up wear. 18-inch steering wheel. Aluminum spider and nickeled control.

UNIVERSAL JOINTS—Spicer, with large diameter drive tube to eliminate whipping at high speeds.

GASOLINE SUPPLY—Vacuum feed; gasoline tank in rear, capacity 15 gallons. Tank is set up in, and under, a heavy gusset plate, giving full protection. Automatic gauge registers gas content.

BODY—Constructed of silver-finish steel. Superstructure of hardwoods. Deep one-piece stamped crown fenders.

UPHOLSTERING—20-ounce broadcloth of beautiful design.

WINDSHIELD—Two-piece. Car equipped with cowl ventilator, adjustable from instrument board.

LAMPS—Adjustable snare-drum type, silver-nickel rims with deflecting lens. Dual lamps for headlights and dimming.

TIRES—Cords, 31 x 4, with demountable rims. Extra rim on rear. Wire and disc wheel equipment consists of extra wheel on rear.

WHEELBASE—115 inches.

STANDARD EQUIPMENT—Robe rail; major tool kit carried under front seat. Handy tools in small compartment right front scuff pad; jack; dash light; ammeter; oil gauge; speedometer and carburetor dash control and motor-driven horn.

The Six 58

MOTOR—"Red Seal" Moon Continental 3⅜-in. bore x 4½-in. stroke. Six-cylinder, cast en bloc. Removable cylinder head. Enclosed valves. Four-bearing crankshaft. Force-feed lubrication.

ELECTRICAL EQUIPMENT—Delco starting, lighting and ignition. Two-unit system.

AXLES—Timken front and rear. Timken bearings throughout. Spiral bevel gears.

TRANSMISSION—Brown-Lipe. Unit construction with motor and clutch; selective sliding gear type, three speeds forward and reverse. Transmission equipped with Johnson theft-proof lock.

CLUTCH—Borg & Beck. Ten-inch dry plate.

CARBURETOR—Stromberg.

BATTERY—Exide. Three-cell. Six volts.

RADIATOR—Fedders cellular type with large frontal area. Solid German silver shell. Water pump circulation.

FRAME—The frame is of new design and contains many exclusive Moon features. It is 7 inches deep; has tubes at front and rear holding the frame rigid at both ends; has a steel deck at rear, which provides additional strength and acts as protection for gas tank. Four cross members insure rigidity and eliminate body weaves.

SPRINGS—Front, semi-elliptic, 2 inches wide, 39 inches long; rear, semi-elliptic, 2 inches wide, 55 inches long. Alloy steel. Spring eyes, bronze bushed, equipped with large hardened and ground spring bolts. Spring clips of alloy steel.

STEERING GEAR—Gemmer, full worm-and-gear type. Worm and gear adjustable to take up wear. 18-inch steering wheel. Aluminum spider and nickeled control.

UNIVERSAL JOINTS—Spicer with large diameter drive tube to eliminate whipping at high speeds.

GASOLINE SUPPLY—Vacuum feed; gasoline tank in rear, capacity 22 gallons. Tank is set up in, and under, a heavy gusset plate, giving full protection. Automatic gauge registers gas content.

BODY—Constructed of silver-finish steel. Superstructure of hardwoods. Deep one-piece stamped crown fenders.

UPHOLSTERING—Genuine tan Spanish leather; French plaited throughout.

WINDSHIELD—Two-piece. Lower half stationary, upper half ventilating. It is water-tight and non-rattling. Exclusive Moon design.

TOP—One-man extension top. Double texture material. Bevel plate glass window in rear. Curtains of same material as top; open with doors.

LAMPS—Adjustable snare-drum type, silver-nickel rims with deflecting lens. Dual lamps for headlights and dimming.

TIRES—Big, fat cords, 4½-inch. Mounted on demountable rims. Extra rim on rear. Wire and disc wheel equipment consists of extra wheel on rear.

WHEELBASE—128 inches.

STANDARD EQUIPMENT—Robe rail, complete tool kit carried in front door of open models; jack; oil can and holder; ammeter; oil gauge; speedometer and carburetor dash control and motor-driven horn.

Prices f. o. b. St. Louis

Six-40—5-passenger Touring	$1,195
Six-40—Tourlux	1,445
Six-40—Coupe	1,585
Six-40—5-passenger four-door Sedan	1,605
Six-58—5-passenger Touring	1,785
Six-58—7-passenger Touring	1,785
Six-58—Sport Touring	1,885
(Aluminum body rail and trunk rack; six disteel wheels, two mounted on side; cowl lamps; individual steps and fenders)	
Six-58—7-passenger Sedan	2,485
Six-58—Four-door Petite Touring Sedan	2,485

The MOON Lets go!

Built by Moon Motor Car Company, St. Louis, U. S. A. Founded 1907 by Joseph W. Moon

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A List of Westinghouse Service Representatives, from whom you can obtain Genuine Parts, will be supplied at your request.

From Garage to Service Station

Is your garage a part of a great service organization? Or, is it just an isolated unit depending on whatever wind may blow to bring you business?

Westinghouse proposes to make you a factor in Westinghouse Service by supplying you with The Westinghouse Automotive Electric Service Encyclopedia and Parts Data. From it you will learn how you can supplement the already well-organized efforts of the 290 Westinghouse Service Stations, located throughout the country, and at the same time increase the earning power in your garage.

In simple, direct language, the mysteries of automotive equipment are dispelled. Beginning with elementary electricity, all the various classes of electric machines, their functions, their construction and their regulation are described clearly in the Westinghouse Service Encyclopedia.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Automotive Equipment Department
Sales and Service Headquarters: 82 Worthington St., Springfield, Mass.

Furnishes Accurate Knowledge of Westinghouse Automotive Equipment

Besides giving the fundamental operating principles of all classes of automotive electrical apparatus, every type and style produced by Westinghouse is described and illustrated. Full page diagrams showing the exact wiring of every car that is Westinghouse equipped, how to locate trouble in the electric system of an automobile and how to adjust it when it is found are important chapters in Volume I, the Westinghouse Service Encyclopedia.

Volume II, the Parts Data, tells how and where to order parts.

There is an authorized Westinghouse Service Station near you where you can obtain from stock the Genuine Westinghouse Parts to meet your requirements.

Volume II also gives you the style number and price of every Westinghouse unit and each of its parts on every car that is Westinghouse equipped. You will obtain co-operation and parts to fill your requirements from the nearest Westinghouse Service Station.

Within the Reach of Every Garage Owner and Operator

This handy reference instruction book gives you the benefit of the years of experience in Westinghouse Service supplied to you in two handsomely bound volumes, containing between 700 and 800 sheets of valuable information, at cost. Volume I, or Volume II, can be obtained separately for only $12.50 each, both volumes for $24.00. Prepaid carrier charges. Free service on additional sheets until January 1, 1923, is included. Thereafter a nominal charge of $2.50 a year per volume will be made for the information and instruction sheets that may be sent you quarterly should you so desire.

Here is a small investment that will bring you big returns, by enabling you to supplement the work of the Westinghouse Service Stations. (Fill out the coupon below without delay). Increase the profits in *your* business by building up the Service you can give.

Westinghouse
STARTING, LIGHTING & IGNITION SERVICE

Enclosed find $..... In return please send me Volume I and Volume II, Westinghouse Service Encyclopedia and Parts Data. (If you desire both volumes send $24.00 with the coupon. If you desire Volume I, the Service Manual, send only $12.50 and cross out the words "and Volume II".)

Please send me more information about the Westinghouse Service Encyclopedia and Parts Data.

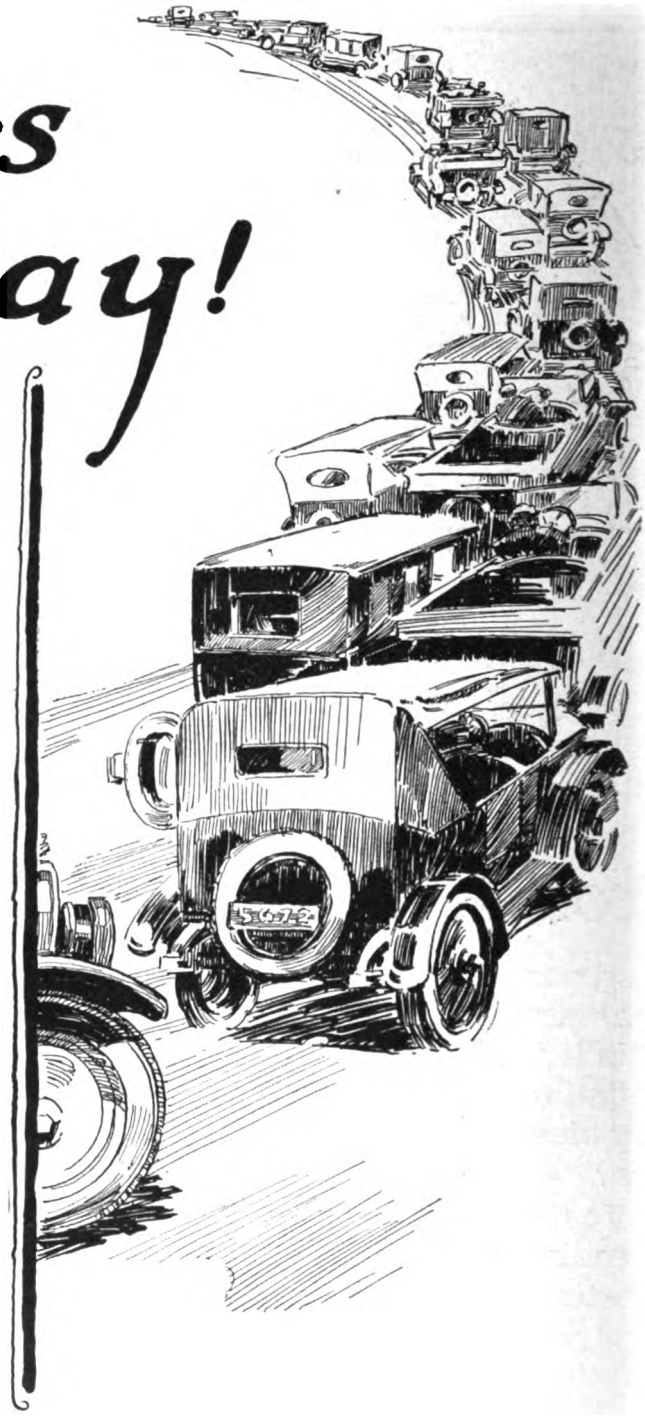
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2000 Cars a Day!



Morse Front End Drives are now being produced for 2000 cars daily. Twenty-three makes of leading cars use them as standard equipment.

Such a volume of production for so exacting a market reflects the high confidence placed in this equipment by automotive engineers. It registers their conviction that no better form of cam and accessory drive is available.

The correct rocker-joint design of Morse Silent Chain, the rigid adherence to Morse standards in its manufacture, and the ability of Morse engineers to co-operate in the solution of every problem of front end drive are the factors to which we credit this success.

Investigate this equipment for your car. It is your only assurance of silent, flexible, durable cam and accessory drive.

MORSE CHAIN COMPANY

Main Office and Works
ITHACA, NEW YORK

Sales and Engineering Office
DETROIT, MICHIGAN

MORSE

GENUINE SILENT CHAINS

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FISHER BODIES



A body by Fisher gives the final touch to the lasting satisfaction you derive from a durable, sweet-running chassis.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT.



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SALESMANSHIP!

is more important to-day than at any time in the history of the automotive industry, and every automobile, truck and tractor dealer in the country needs this new and vital reading course in

Automotive Salesmanship

which has been prepared by some of the leading automotive executives in the country. It has been divided into three parts as follows:

PASSENGER AUTOMOBILES

Course Consists of Seven Books

The subjects discussed in this course include:

Simple mechanical definitions that salesmen should know.
Building methods of factories.
The various inspections each part receives.
Manufacturing procedure in motor car factories.
The work of the engineering department.
How the different assemblies are put together.
The natural laws in automobile salesmanship.
How to deal with competitors.
How to secure a prospect.
How to approach him after you have secured him.
How to interest the prospect.
The steps necessary in selling a car.
Face to face with the prospect.
The points you should emphasize.
What constitutes beauty, comfort, convenience, durability, style, easy riding, etc.
The woman in the case.
How to close a sale, etc., etc.

MECHANICAL TRACTORS

Course Consists of Five Books

The subjects discussed in this course include:

The history of the motor tractor. How it is constructed. Mechanical terms every tractor salesman should know. The different tasks the tractor will perform on the farm. The number of tractors in use in the United States. A survey of the future market. The average life of a tractor.
How to determine the relative values and capabilities of the various makes of tractors on the market.
How to demonstrate a tractor. Five important features to emphasize during a demonstration. The various grades of farm soil and how they are classified.
The Science of Scientific Farming.
Finding the tractor market.
The value of sales vision.
The banker and how he aids in tractor promotion work.
How to approach the farmer.
Handling the question of price.
How to figure horse power.
What draw-bar pull means.
Figuring the cost of farm labor.
The number of acres of hay and grain the horse consumes yearly in the United States.
The year-'round utility of the tractor.
When to close a sale. And how.
Procrastination and how to defeat it.
The use of sales letters.
The worth of "word of mouth" advertising.

MOTOR TRUCK

Course Consists of Eight Books

The subjects discussed in this course include:

The growth of the truck industry.
Truck salesmanship and its responsibilities.
The mechanical units of the motor truck.
The cost of motor compared with animal transportation.
The industrial value of the motor truck.
Its adoption for long distance transportation.
The potential market.
How retail truck business is conducted.
The dealer's relation to the manufacturer.
Retail store salesmanship.
The use of advertising literature in the store.
How to handle the man who comes in to "look around."
How to show a truck to a prospect advantageously.
How to draw out a prospect.
The point of contact.
The time for launching your sales talk.
Encouraging the prospect to ask questions.
Meeting the prospect on his own level.
How to explain the mechanical details of the truck. And when.
Meeting your prospect's arguments.
Using your competitor's claims for sales weapons.
Handling the question of price.
Closing the sale.
The matter of service.
Selling the man who is to drive the truck.
Keeping a prospect file.
How to discover valuable sales leads.
How to systematize your selling efforts.

The whole course of twenty booklets sent complete for $10.00. Parcel Post Paid

ORDER BLANK

.....192....

AUTOMOBILE TOPICS,
1790 Broadway, New York, N. Y.

Gentlemen:—I enclose $10.00 for which please send me prepaid:

....The combined course of twenty books covering passenger car, motor truck and tractor salesmanship.

Name .....

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R. F. D. No.....State.....

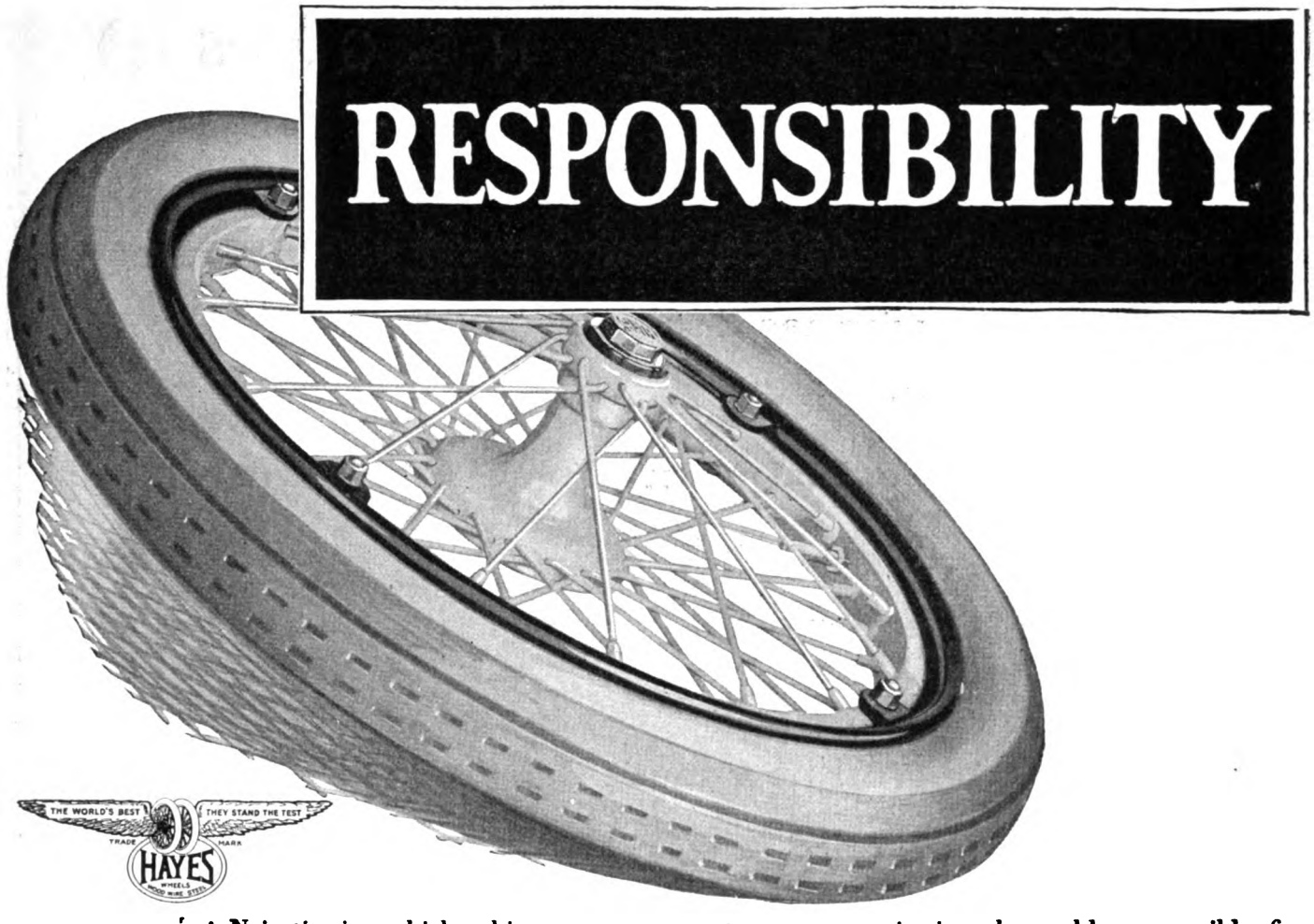
You Must Work as You Never Worked Before

Every live dealer in the country needs these books right now. Manufacturers need them. The average salesman is especially in need of this stimulating reading course. It is the first complete sales course to be offered to the automotive industry.

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HAYES

DEMOUNTABLE AT THE RIM



AN institution which achieves success cannot escape responsibility.

In all its career, throughout years of progressive growth, the Hayes Wheel Company has been and continues a pillar of strength—a successful institution because it is a responsible institution.

Whatever situation may develop—Hayes has already developed a wheel to meet the situation and to merit the confidence of every automotive manufacturer.

It is an immense satisfaction to know that every wheel of Hayes manufacture is a product of an organization thoroughly responsible financially, and physically equipped to meet its obligations as becomes a leader of the wheel industry.

There are good and sufficient reasons why the majority of all motor cars produced are Hayes wheel equipped—and one of the foremost is that Hayes has accepted and deserved the responsibility of every motor car maker.

We welcome an opportunity to be of service to the automotive industry. Let us discuss your next wheel requirements, whether wood, wire or steel.

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WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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STANDARD EQUIPMENT ON OVER 100 MAKES OF PASSENGER CARS AND TRUCKS

PERFECTION
SPRINGS

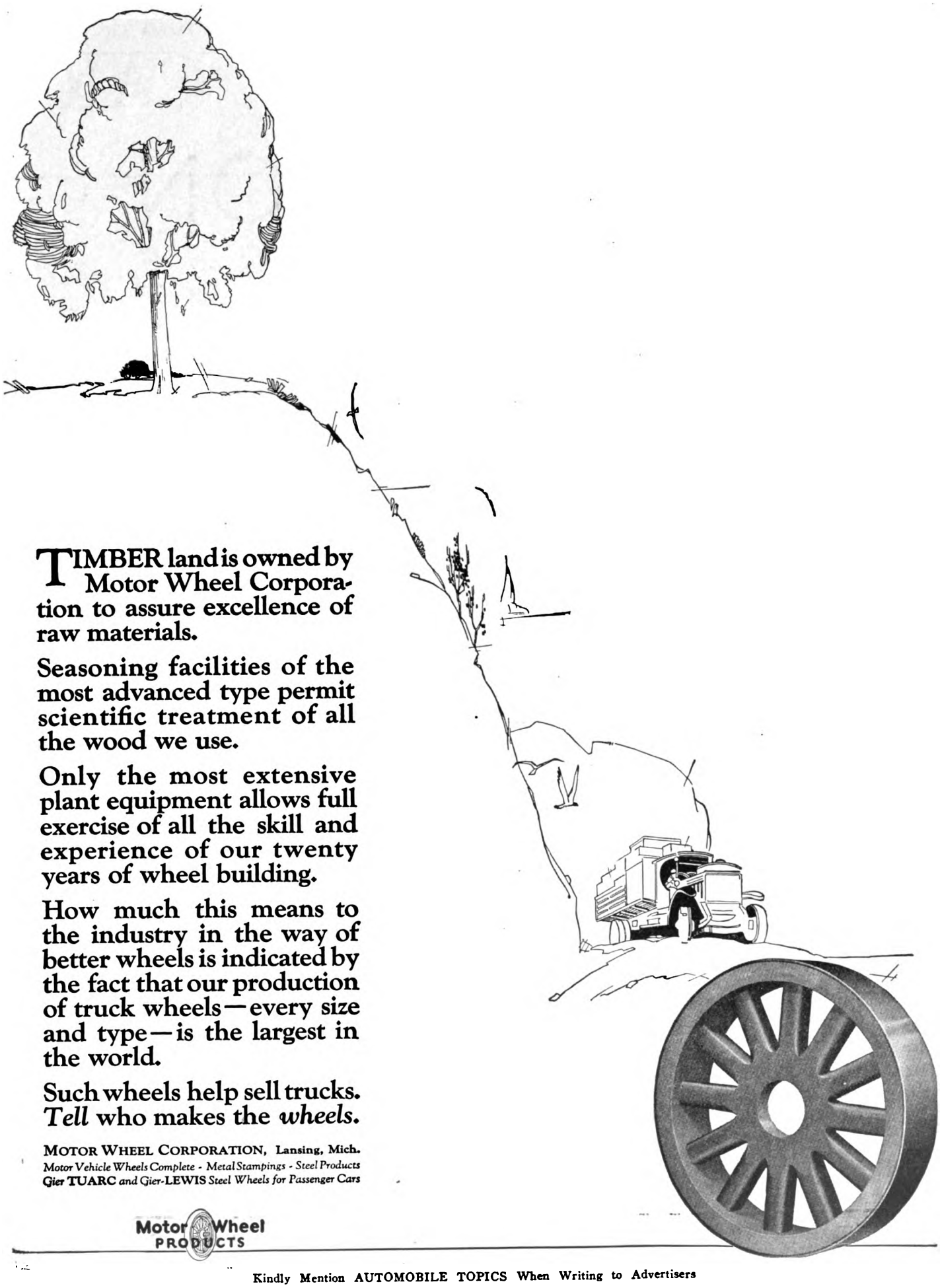
Name one manufacturer
who has discontinued
the use of
Perfection Springs
on account of
either quality
or service.
We know that's
a hard one,
because we
can't do it
ourselves.

THE PERFECTION SPRING COMPANY
CLEVELAND, OHIO

STANDARD EQUIPMENT ON OVER 100 MAKES OF PASSENGER CARS AND TRUCKS

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TIMBER land is owned by Motor Wheel Corporation to assure excellence of raw materials.

Seasoning facilities of the most advanced type permit scientific treatment of all the wood we use.

Only the most extensive plant equipment allows full exercise of all the skill and experience of our twenty years of wheel building.

How much this means to the industry in the way of better wheels is indicated by the fact that our production of truck wheels—every size and type—is the largest in the world.

Such wheels help sell trucks. *Tell* who makes the *wheels.*

MOTOR WHEEL CORPORATION, Lansing, Mich.
Motor Vehicle Wheels Complete - Metal Stampings - Steel Products
Gier TUARC *and Gier-*LEWIS *Steel Wheels for Passenger Cars*

Motor Wheel PRODUCTS

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A FINER CAR

COLE

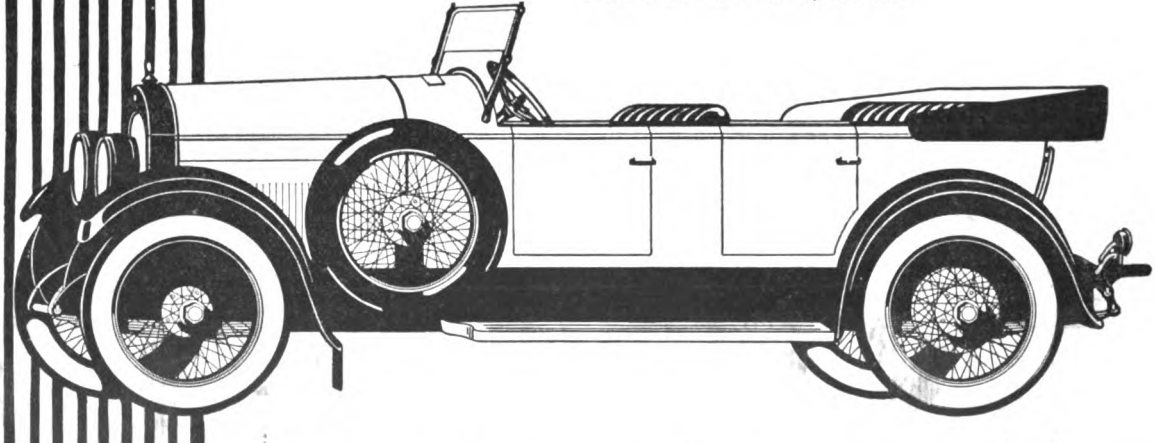
EIGHT NINETY

Ultra Series

THERE are four important points for the consideration of a dealer when he is selecting a franchise. The first two are the salability, dependability and popular approval of the car itself and the integrity and stability of the manufacturer behind it. The third is dependent, to a greater or less degree, upon the first two—the possibility of handling the car at a profit. The fourth is his own ability as a salesman and executive.

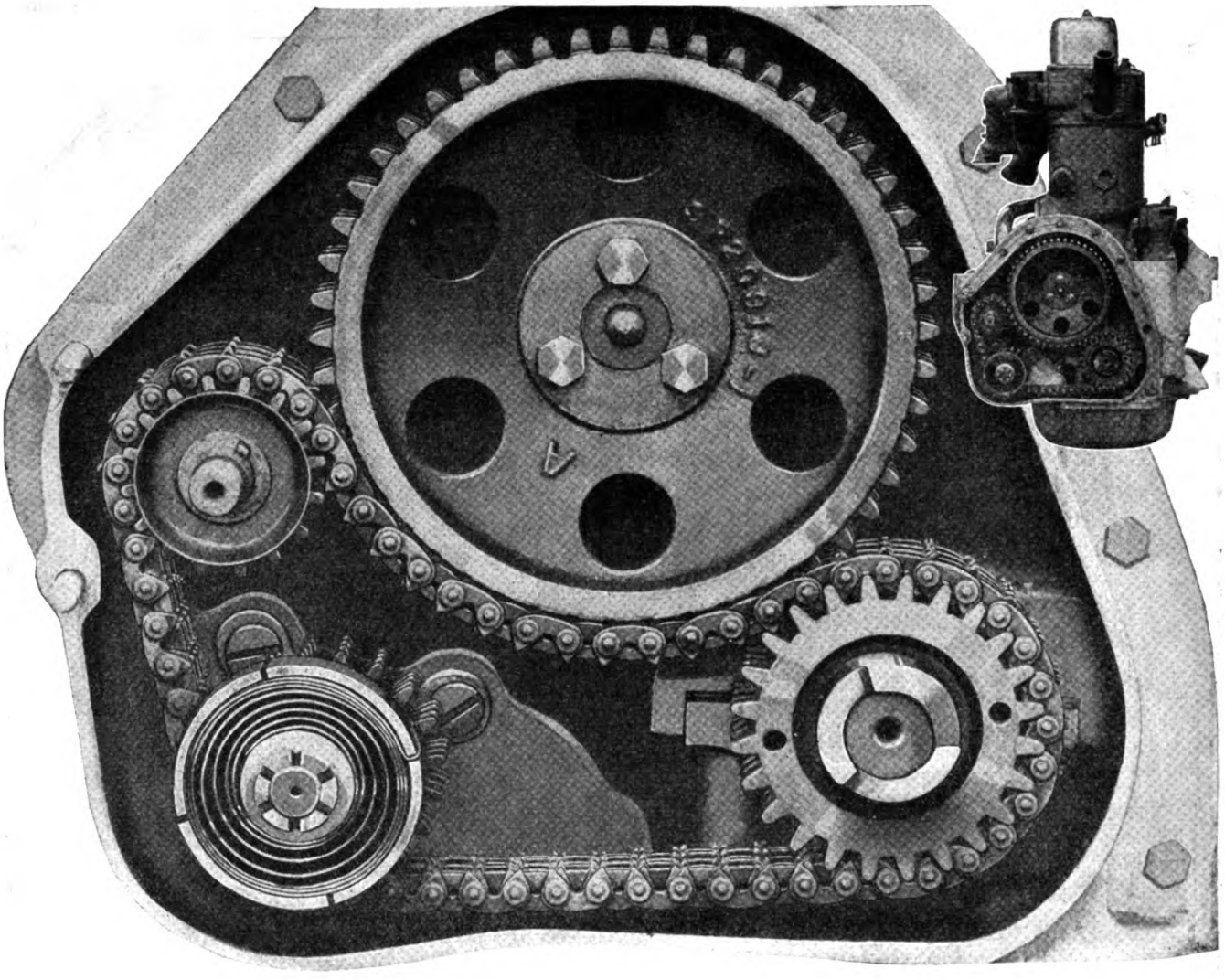
Consideration of a Cole franchise clearly disposes of the first three and the close co-operation of the Cole factory goes far toward solving the fourth.

COLE MOTOR CAR COMPANY
INDIANAPOLIS, U.S.A.



There's a Touch of Tomorrow in All Cole Does Today

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ANOTHER SUCCESSFUL LAYOUT

HERE is a very good example of the Link-Belt Automatic Tightener on a "front end" drive — and the successful Link-Belt "Back Type" Chain that makes it possible.

Notice the tightener in the lower left corner of the illustration. A smooth-running, quiet engine is the result.

Notice the teeth on the front and back of the silent chain. See how both sides of the chain mesh with the gears.

You must see this winning combination to fully appreciate what it really accomplishes. Let us show you how we would build continued quiet-running into your engine.

We welcome the opportunity to demonstrate. Our staff of experienced engineers at your service.

LINK-BELT COMPANY, INDIANAPOLIS

1009

LINK-BELT

SILENT CHAIN FRONT END DRIVES

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Merchants and Money-Makers

Mr. B. W. Traylor, President of Traylor Motor Company, Allentown and Philadelphia, Pa., briefly reviews his profitable experience and personal satisfaction in merchandising Stephens motor cars both as distributor and dealer.

"TO sum up our experience in marketing the Stephens Six, let me say that we know you are building a great motor car—and that you are in a position to make it better just as soon as a better motor car can be built.

"You certainly have the facilities and the organization to manufacture fine cars at moderate prices—and to keep on rendering the good service we have always received at your hands.

"You have a car we have been able to market in large quantities, both at first hand and through dealers, with little or no trouble. No matter where they are, Stephens owners are 99% satisfied all the time. (We say 99% because no one is ever entirely satisfied.) All in all, we would not give up the Stephens line for any other car built today.

"As you know, our Stephens business has grown so steadily and profitably that this year we gave up the _____ (a well known car in the $3000 class) so that we could give our entire attention to the Stephens. We saw nothing but good business and real profits ahead for the reason that the car is right and an extraordinary value.

"So far as competition is concerned, we are so far ahead of anything in its price range that we do not compare it with cars costing $400 or $500 more. In every-day business, we do compare it with the leading cars in the $2500-$3000 price group, and make a lot of sales."

. . . . Mr. Traylor leaves very little for a factory man to say about the Stephens line and the market open to it in any city or district where it is not represented now. You would understand his enthusiasm and the enthusiasm of Stephens owners on which his business rests, if you could come to our factories and see the Stephens *building* from crank-shaft forgings to final shimmering coat of varnish. Write today for a catalog and our contract terms.

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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U-LOY STEELS

125 miles per hour!

The flag waves—engines roar—and the race is on! At terrific speed the cars cover lap after lap.

What a strain the parts of a racing car are subjected to! The steel especially, must be strong for upon it falls the racking strain of sustained high speed. It is noteworthy then, that the vital parts of the well known Miller Racing Cars are made of U-LOY Steel. The splendid record of these cars is noted below. In practice laps they have reached as high as 125 miles per hour. The correct U-LOY Steel serves to keep the factor of safety as high as possible.

Whether you make racing cars, trucks, pleasure cars, or what not, there is a U-LOY Steel that will correctly meet your requirements. Consult with us.

UNITED ALLOY STEEL CORPORATION
CANTON, OHIO

New York	Chicago	San Francisco
Syracuse	Detroit	Indianapolis
Cleveland	Buffalo	Portland

Open Hearth and Electric Furnace U-LOY Steels are furnished in:—

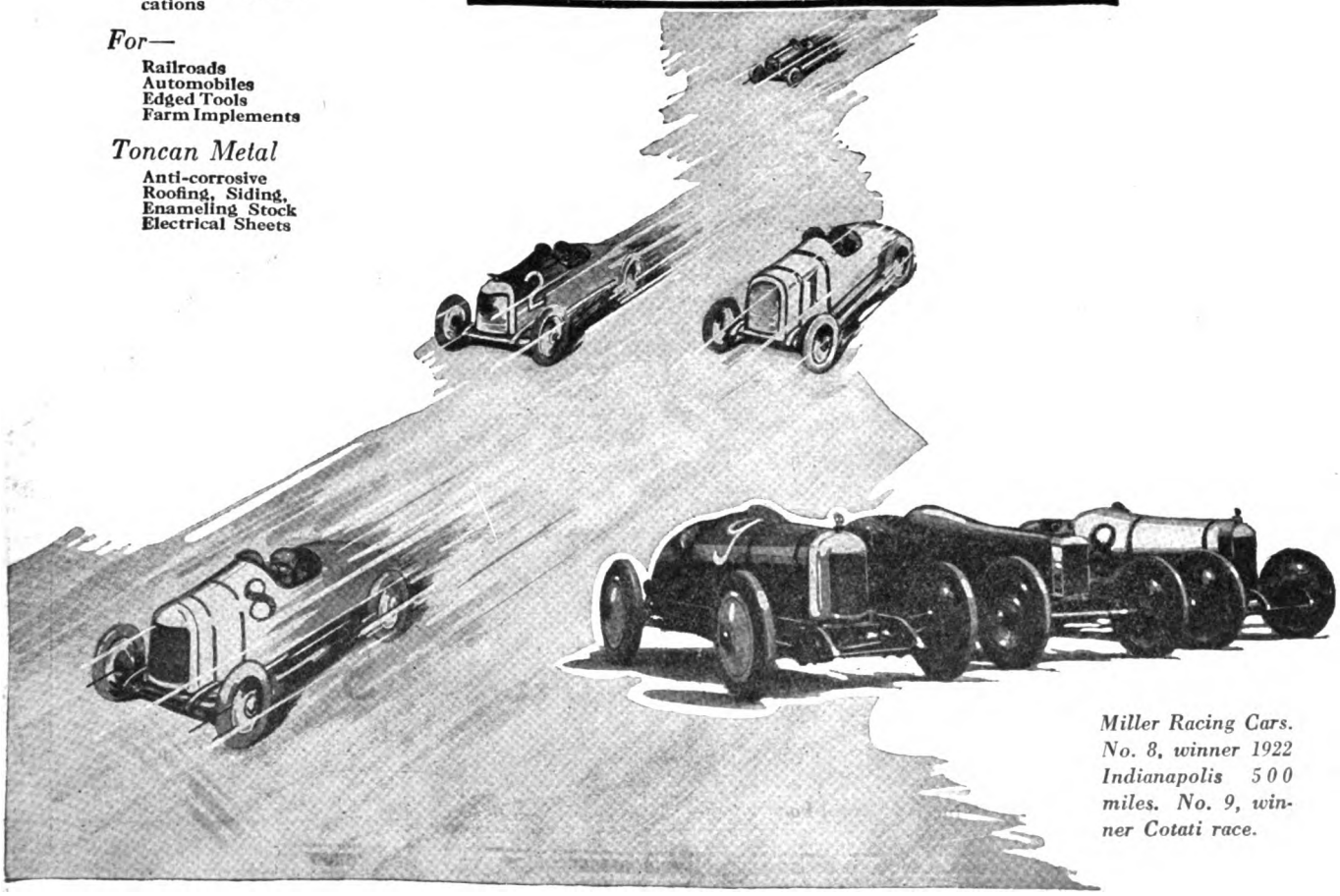
Blooms, Slabs, Billets, Plates, Bars, Rods. Bars Hot Rolled, Cold Drawn and Heat Treated to specifications

For—

Railroads
Automobiles
Edged Tools
Farm Implements

Toncan Metal

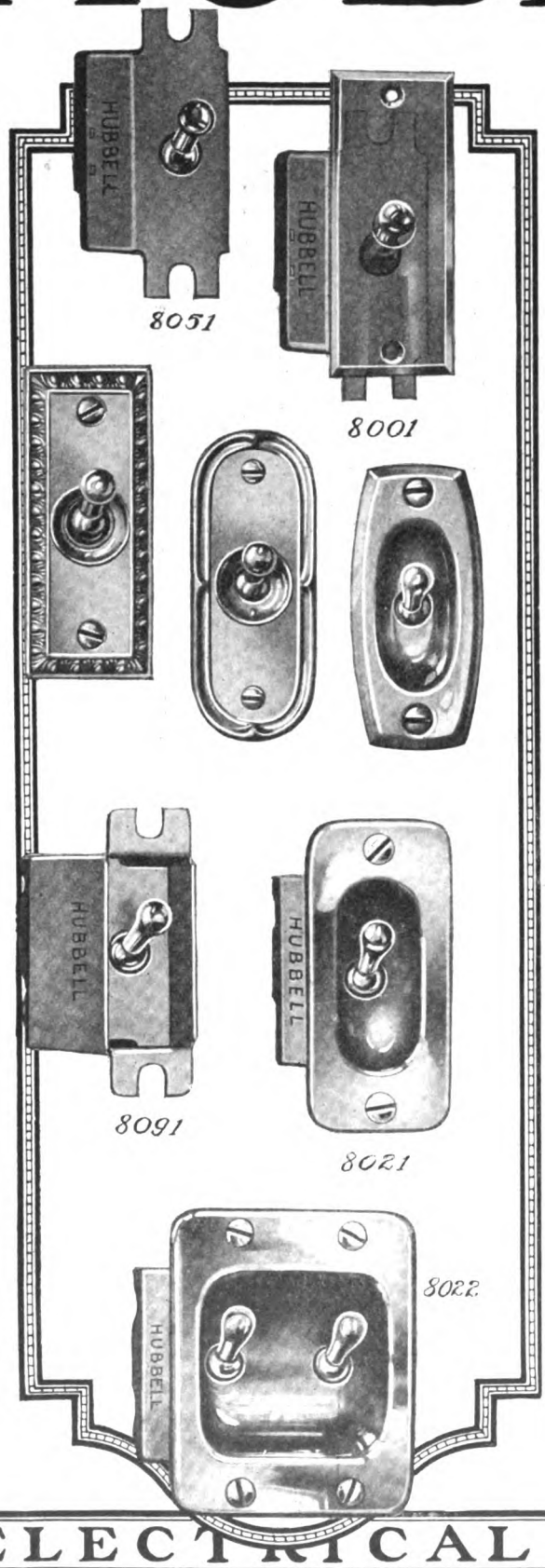
Anti-corrosive Roofing, Siding, Enameling Stock Electrical Sheets



Miller Racing Cars. No. 8, winner 1922 Indianapolis 500 miles. No. 9, winner Cotati race.

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HUBBELL



Toggle Switches

Add character to enclosed automobile Lighting Equipment.

Mechanism is strong, neat and convenient.

Furnished with standard or special plates—any finish.

Specify Hubbell Toggle Switches for enclosed body work.

HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.
2232-U



ELECTRICAL SPECIALTIES

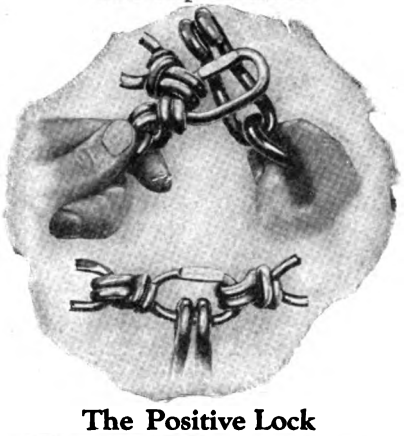
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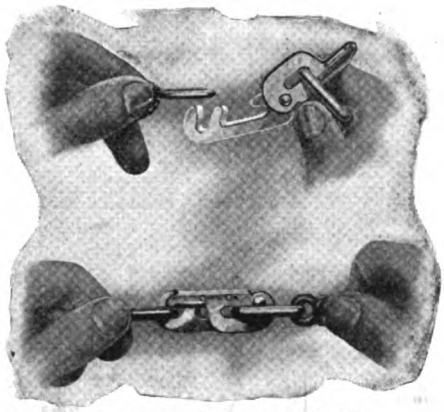
This Patented "Slip-On" Link is the Master Salesman *for*

OFF'N'ON CHAINS

The Slip-on Link



The Positive Lock



For it means that an old cross chain can be taken off at any time on the road and a new cross chain put on.

And the task is done in a jiffy

Note the ingenious design which makes it so easy to replace worn-out cross chains. Simple but secure.

These chains have a patented positive locking device, using the principle of the lever. It keeps the chain tight, saving tires, fenders, and chains. It makes the chain almost noiseless. It is so simple that a child can operate it.

OFF'N'ON Chains are uniform in wearing qualities. You will find that these special features give safety without unnecessary trouble.

And yet they cost no more

Write at once for circular and price list, giving the name of your jobber.

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers

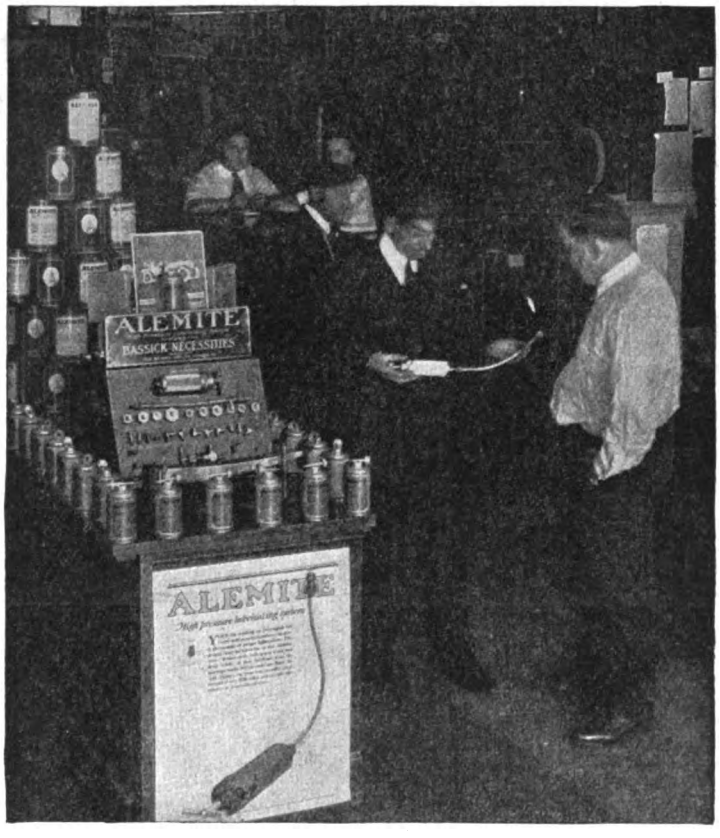
520 Belmont Avenue, Newark, N. J.

Branches: CHICAGO—17 So. Jefferson St. KANSAS CITY—1712 Grand Ave.
ATLANTA—24 Nassau St. SAN FRANCISCO—977 Mission St.

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ALEMITE

High pressure lubricating system



"John & Arthur's"
store
Boston, Mass.

This Alemite Cabinet brings bigger profits to "John & Arthur"

Motor Accessories, Inc., "John & Arthur," of Boston, say this: "Since we gave the Alemite Cabinet a prominent place in the center of our store our Alemite sales have doubled. The *Alemite Equipment Manual* is a big help in filling all orders promptly. We have found, too, that it pays to link up with Alemite's national advertising by showing posters in our windows and on our Alemite counter."

In big metropolitan salesrooms or in busy stores in country towns the story is the same: the Alemite Cabinet is assuring quick turnovers and increased profits. If you are not already one of the twenty thousand dealers cashing in on the demand for Alemite Systems, Alemite Spring Covers and Alemite Lubricant, write for our special dealer proposition. Do it today!

A Product of

THE BASSICK MANUFACTURING COMPANY, 2650 N. Crawford Ave., Chicago, Ill.

Alemite Products Co. of Canada, Ltd., Belleville, Ont.

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$1795 at factory

Quality explains the enormous demand

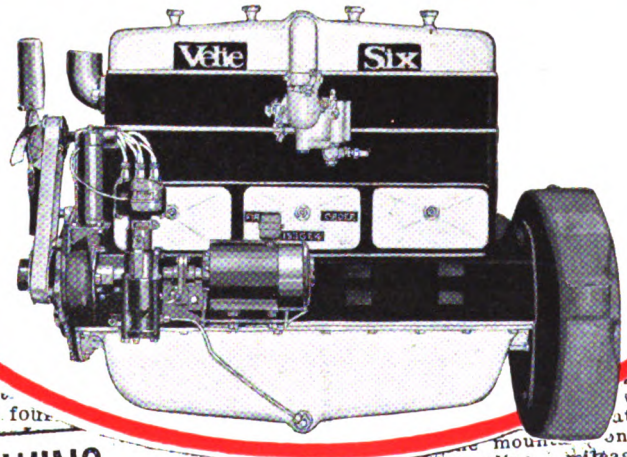
MONEY cannot buy more *Quality* than is embodied throughout in Velie Model 58, five-passenger Sedan. *A car of just the right size.* Richly furnished. Powered by the remarkable Velie-built Motor, it insures more than adequacy to every road and grade, while its silence and freedom from vibration accord satisfyingly with the comfort and luxury you expect of a sedan. One of five Velie models open and closed—a complete line. We invite correspondence with dealers in **any territory that by chance may be open.**

VELIE MOTORS CORPORATION · *Moline, Ill.*

VELIE

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The Motor With an International Reputation



VIBRATION ELIMINATED IN VELIE-BUILT MOTOR

Reports of how the Velie motor is outdoing the ordinary now come in every week. But best of all are the enthusiastic tributes to its smoothness, steadiness and freedom from vibration, the results of the Velie achievement in automatic lubrication, overhead valves, motor solidity and construction excluding dirt, dust and grit."

"The recent large installation of

VELIE SETS MARK IN WILSON CLIMB

Clips 11 Minutes 3 Seconds From Stock Car Record.

News of the breaking of Mt. Wilson climbing records for the first time in four years has just been broadcast by Velie Motors corporation to Velie agencies in all parts of the world.

The official

Velie Has Novel System of Oiling

"How much more power

in the six-cylinder

size? That is

science is

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Driven by

Velie Climbs Ligonier Mountain in High Gear

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that the new Velie

making history in

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Mr. Chisholm,

the sales-

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ature at the top

on each of the trip

mileage was careful

gasoline

average of 19

VELIE CAR WINS TEMPERATURE TEST

A stock model Velie, with its own Velie built motor, has performed another amazing feat, according to Plank Brothers, Inc., dealers at Pasadena, Calif. The Vevie car has already made sensational climbs up famous peaks and established records, but the latest Velie stunt is to shoot over the Big Bear grade from Seven

Pine Knot Lodge, a distance

VELIE REPORTS A CAPACITY BUSINESS

"Velie factories are working to capacity to keep up with the demand for our 1922 line of sixes" said Vice President F. E. Bradfield of Velie Motors Corporation.

"We are using all our resources to prevent falling behind in the filling of orders which have steadily increased month by month since the showing of our model 58.

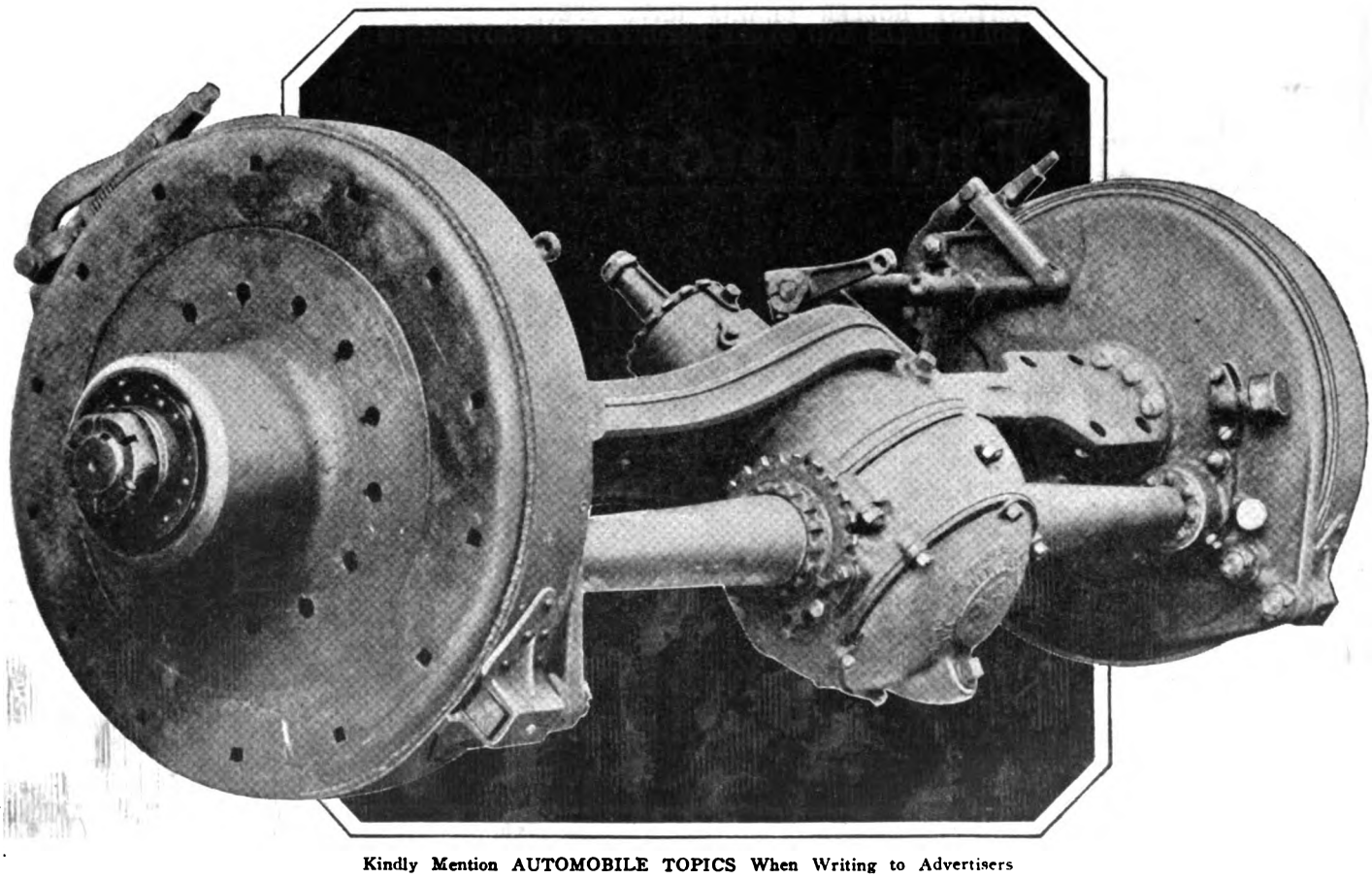
"Our recent large installation of additional machinery at the

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TORBENSEN AXLES

CLEVELAND, OHIO

The Torbensen Axle helps the manufacturer to put greater investment value into a motor truck, and to perpetuate that value in the form of the lower-cost service over a period of years. Simple construction, light weight, and unequalled strength for a given capacity, assure the high efficiency and pronounced economy of Torbensen Axles.



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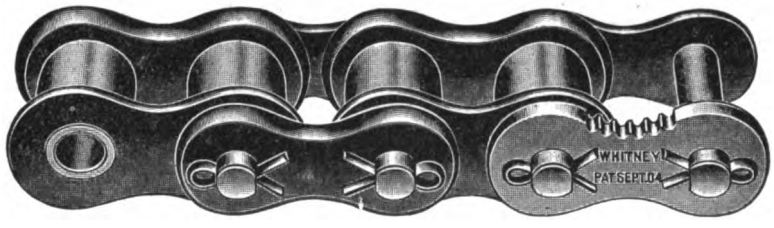
Investigate LATEST

"WHITNEY"

HIGH EFFICIENCY
ROLLER AND SILENT TYPE

CHAINS

also *Low* Cost per *Thousand Miles* of Service



LATEST ROLLER CHAINS HAVE SPECIAL QUALITY
SOLID ROLLS AND OTHER IMPORTANT IMPROVEMENTS

Front End Motor Chain Drives

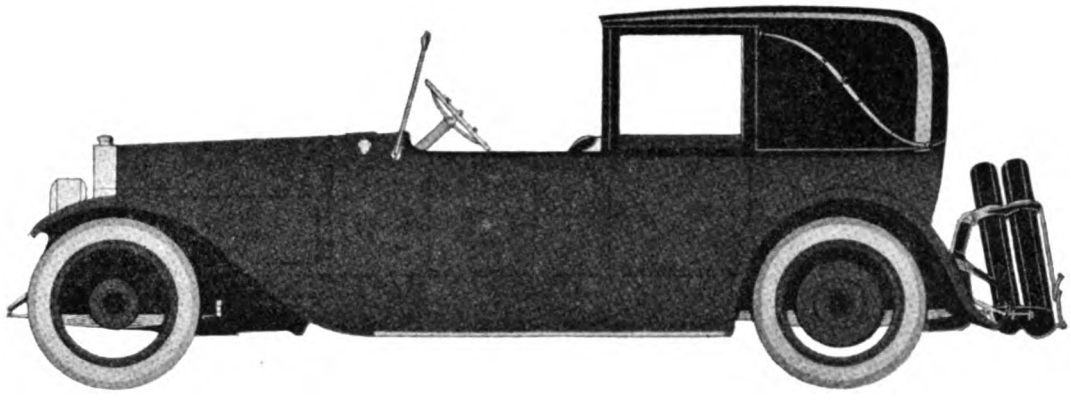


EXCEPTIONAL MILEAGE
AND NEVER KNOWN
TO SKIP THE
SPROCKET TEETH



THE WHITNEY MFG. COMPANY
HARTFORD, CONNECTICUT, U. S. A.

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Cabriolet $8900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

STEVENS-DURYEA, *Inc.*, CHICOPEE FALLS, MASSACHUSETTS



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Did You Know

The Parts Makers' Vital Relation

Eleven manufacturers supply 44 makers of automobiles with engines for 51 different models.

Eleven other specialists supply 73 makers with clutches for 89 models.

Ten builders of axles supply 74 manufacturers with equipment for 84 models.

This statement demonstrates the vital relation of the parts maker to the automobile industry as a whole. It also demonstrates the usefulness of

AUTOMOBILE TOPICS
Table of Passenger Car Selling Points
(Copyrighted)

The facts were obtained by making a simple count of 3 columns in the table.

There are 27 columns of information capable of being similarly compared.

The table appears on page 759 of this issue.
It is revised to date from information supplied directly by the manufacturers. Every issue is printed from new plates to ensure legibility.

AUTOMOBILE TOPICS
The Trade Authority
1790 Broadway **New York City**

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The Sign of Service

Let Your Nearest Ahlberg Branch Be Your Stock Room For Ball Bearings

We have all types of the highest grade ball and roller bearings in stock ready for immediate delivery.

In addition we have complete stocks of Ahlberg Ground Bearings to be had in exchange for your worn bearings, at a considerable saving.

When you next need bearings call at our nearest branch.

BRANCHES:

ATLANTA, BOSTON, BUFFALO, BALTIMORE, SEATTLE, BROOKLYN, CINCINNATI, CLEVELAND, ST. PAUL, COLUMBUS, DALLAS, DETROIT, INDIANAPOLIS, LOS ANGELES, DULUTH, KANSAS CITY, MEMPHIS, MILWAUKEE, MINNEAPOLIS, OMAHA, NEWARK, NEW ORLEANS, ST. LOUIS, NEW YORK, PORTLAND, OAKLAND, PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, WASHINGTON, TOLEDO, YOUNGSTOWN

Ahlberg Bearing Company
317 E. 29th St. Chicago, Ill.

The Next Period of Depression

The year 1921 was a bad one for the automotive industry.

Many concerns, which failed to conserve their resources in the years of plenty, were obliged to place themselves in the hands of their bankers, or seek other relief.

The more foresighted ones are now being rewarded for their prudence.

The country appears to have entered upon another era of prosperity.

Would it not be sound business judgment to begin now to set aside a portion of your profits in the form of marketable securities instantly available for future use?

Our business is to help business men invest conservatively.

Particulars on request.

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

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Interstate

"Springs That Last Longer"

A matter of interest to automobile builders, dealers and owners

Ordinary carbon spring steel is passed as "OK" when it withstands 55,000 to 60,000 three-inch deflections under laboratory tests.

Interstate Chrome-Manganese Spring Steel

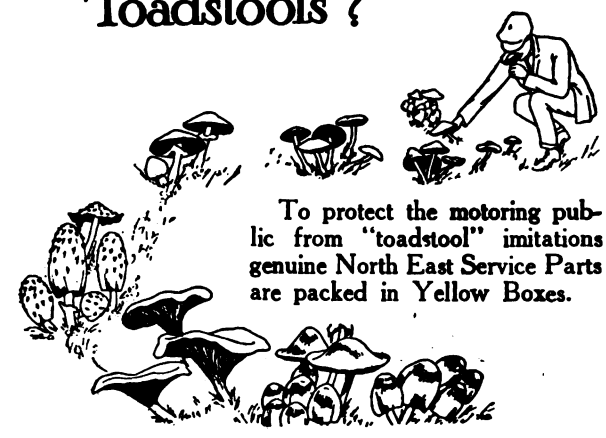
habitually withstands 110,000 three-inch deflections on the same machine.

This steel properly heat treated habitually shows 195,000# per sq. in. ultimate strength, 180,000# per sq. in. elastic limit, 10 to 12% elongation. No carbon spring steel can begin to compare with these figures.

There is really no longer any reason why springs should not last as long as any other active part of an automobile or motor truck.

Interstate Iron & Steel Co.
104 South Michigan Avenue
Chicago

Mushrooms or Toadstools ?



To protect the motoring public from "toadstool" imitations genuine North East Service Parts are packed in Yellow Boxes.

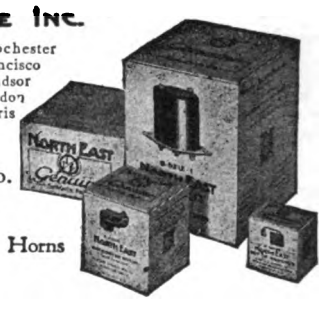
Genuine North East Service Parts are distributed to the trade by

North East Service Inc.

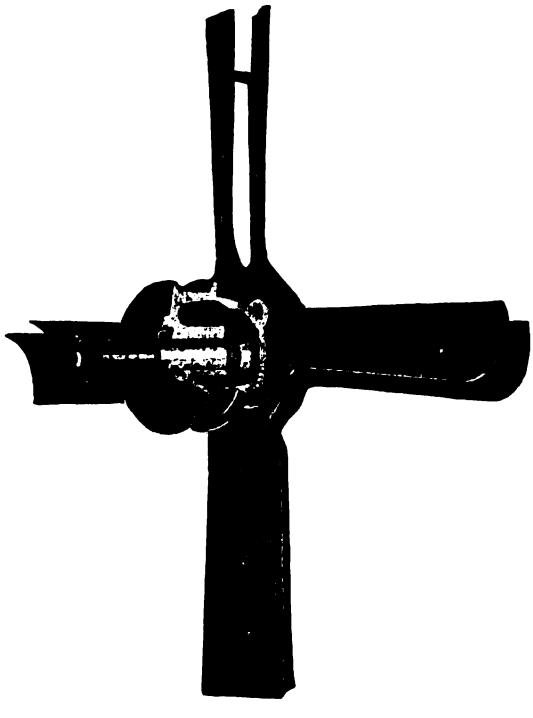
Atlanta
Chicago
Detroit
Kansas City
New York

Rochester
San Francisco
Windsor
London
Paris

Official Service for
North East Electric Co.
Rochester, N. Y.
Manufacturers of
Starters Generators Ignition Horns
Speedometers



MULTIBLADE FAN



DETROIT CARRIER & MFG. CO.
DETROIT, U. S. A.

Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

EDMUNDS & JONES CORP.
Buchanan & Lawton Avenues
DETROIT, MICHIGAN

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Proved by Test

Two Mitchell Cars, in sealed hood tests —10,000 miles over all kinds of roads, rocks and ruts—jolts and jars—through all kinds of weather—under every conceivable condition. There is a test that tells the story of

CONDENSITE CELORON Silent Timing Gears

The performance of these sturdy, non-metallic gears in the Mitchell and in many other well known makes of high grade cars, proves their superiority.

Banish the noisy timing gears or rattling chain drives now. Learn more about these remarkable Celoron silent gears, that eliminate the grind of metal upon metal, that cushion the shock of gear upon gear; and that help lengthen the life of every part of the motor because they cushion and absorb the shock. Your local dealer, authorized service station or garage repair man can install them. If they can't supply you, write us direct.

Diamond State Fibre Company
Bridgeport (near Philadelphia), Penna.

Branch Factory and Warehouse, Chicago
Offices in Principal Cities

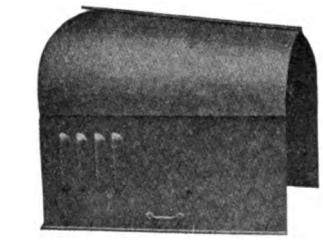
In Canada: Diamond State Fibre Company of Canada, Ltd., Toronto

Car Builders!

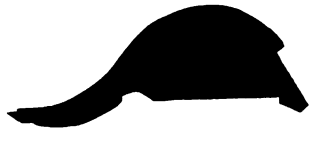
Pressed Metal Parts of Quality at Low Price, Ready Crated, Immediate Delivery to You!

This group of automobile equipment parts was made for a car just discontinued. The full list below covers the entire stock; it is for sale in whole or in part at a price very advantageous to the buyer. We are specialists in pressed and stamped parts and have filled this order in the ordinary course of business. To clear it we are willing to take a loss:

Quality Products Throughout









195 R. H. Front Fenders.
245 L. H. Front Fenders.
125 prs. Rear Fenders.
401 Four-cyl. Gas Tanks not enamelled.
6 Six-cyl. Gas Tanks enamelled.
90 prs. Hood Sills
321 prs. Hood Sills.
96 Hoods.
50 Hoods.
8 Hoods.
164 Four-cyl. Front Shields.
23 Four-cyl. Front Shields.
46 Front Shields.
135 prs. Side Pans.
6 Crates Side Pans (13 & 15 pr. to crate).
36 Six-cyl. Bottom Pans.
200 prs. Four-cyl. Bottom Pans.
9 Radiators, complete, 6-cyl. Car.
12 Radiators, complete, 4-cyl. Car.

Blue prints on any or all material forwarded to interested companies.

This is an exceptional opportunity for car builders, body builders and dealers. The entire stock is of superfine quality, dependable and durable. It is now held at the shipping point for immediate delivery. Let us know your requirements. Write or wire.

YORK CORRUGATING CO.
York, Pa.

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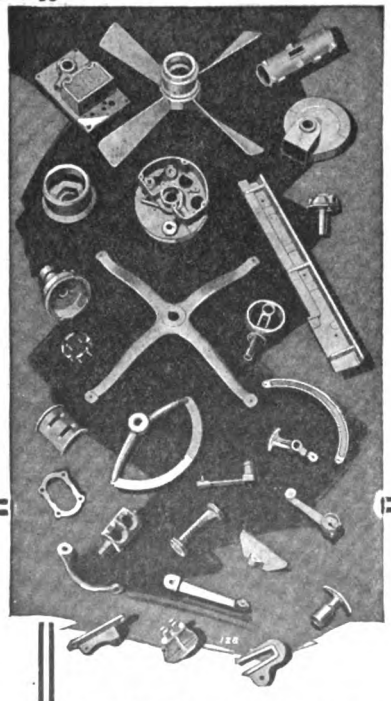
DOEHLER

The World's Largest Producer of

DIE-CASTINGS

The best buyer in the world cannot buy right, unless the concern he is dealing with sells right—honestly strives to give the buyer what he seeks. Especially is this true where die-castings are concerned, because an actual sample cannot be shown in advance of the order. Here the purchaser buys a material thing which derives its biggest value from intangible things dependent wholly upon the skill and experience of the producer. In such cases, to have served well and satisfactorily is the best proof of ability to give service and satisfaction. And the magnitude of Doehler business is the most convincing evidence of Doehler ability and willingness to produce die-castings that satisfy.

DOEHLER DIE-CASTING CO.
BROOKLYN, N.Y.
CHICAGO, ILL. TOLEDO, OHIO.



Doehler die-cast automotive parts

THRUST BALL BEARINGS, ANGULAR CONTACT THRUST BEARINGS and ANGULAR CONTACT RADIAL BEARINGS made to your requirements and dimensions. STAR BALL RETAINERS for Thrust, Magneto and Cup and Cone Bearings.



THE BEARINGS COMPANY OF AMERICA
Lancaster **Penna.**
Western Sales Office,
1012 Ford Bldg. **Detroit, Mich.**
D

CHAMPION
DROP FORGINGS

Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.

The Champion Machine & Forging Co., 3694 E. 78th St., Cleveland, O.
New York Office—30 Church St.
Philadelphia Office—Bourse Bldg.
Detroit Office—705 Ford Bldg.

MF

LET US ESTIMATE

On Your Retouching and Plate-Work.
Our Artists Are Specially Skilled on
Automobile Work

HALF-TONES—PROCESS PLATES—BENDAY—WAX

DAY AND NIGHT SERVICE

THE STERLING ENGRAVING CO.
10TH AVE. AND 36TH ST. 3900 GREELY
200 WILLIAM STREET 2900 BEEKMAN

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An Advance in Universal Joint Construction!

"M & E"

Griptite
UNIVERSAL JOINTS







The radial folds of the Disc provide a perfect grip with the specially Formed Washers of unique design.

"M & E" GRIPTITE UNIVERSAL JOINTS

alone possess this distinctive feature. It means better grip, permanent true alignment; with longer life on large angles and with heavy torque.

Write for Details.

MERCHANT & EVANS CO. **Philadelphia**

UNION DRAWN STEEL COMPANY

The World's Largest Bright Finished Steel Plant Offers You

QUALITY and SERVICE

COLD DRAWN AND TURNED AND POLISHED

Bessemer, Open Hearth, Nickel Chrome and Vanadium Steel

OUR WAREHOUSES CARRY A LARGE AND COMPLETE STOCK

Cold Drawn Shafting and Screw Stock in all sizes of Round, Flats, Squares and Hexagons

UNION DRAWN STEEL COMPANY

Main Office, Beaver Falls, Pa. **Works, Beaver Falls, Pa., and Gary, Ind.**

Offices and Warehouses—New York, Chicago, Philadelphia, Cincinnati, Detroit
Sales Offices—Boston, Buffalo and Cleveland

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GURNEY

BALL BEARINGS

Have Greatest Load Capacity



Gurney Ball Bearing Co.
Conrad Patent Licensee
Jamestown, N. Y.

Gurney Engineering Service is available at your request.

If You Are in Need of

ADDITIONAL CAPITAL

Get Into Communication with

CLINTON E. WOODS & CO.

Industrial Engineers and Financial Advisers

ADDRESS DEPT. F

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BUFFALO, N. Y.

1421 Chestnut Street
PHILADELPHIA, PA.

BOWEN-EMPRESS

High Pressure Lubricating System

FOR ALL MOTOR CARS AND TRUCKS

BOWEN PRODUCTS CORPORATION
AUBURN. NEW YORK



Jorgensen Hood Silencers

Made in one piece of rubber which weighs but one ounce. They have the strength of a giant when applied to the fasteners of Buick, Dodge, Chandlers or other auto hoods. All hood rattles are quickly and permanently eliminated. 35,000 satisfied users prove this statement.

Dealers are making nice profit. We will be pleased to add you to our list.

JORGENSEN HOOD SILENCER COMPANY
Hampton Road, Erie, Pa.

Through—

Asbestos
and its allied products
JOHNS-MANVILLE
Serves in Conservation

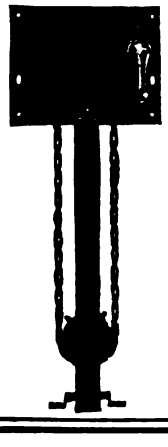
Heat Insulations, High Temperature Cements, Asbestos Roofings, Packings, Brake Linings, Fire Prevention Products

JOHNS-MANVILLE
AUTOMOTIVE EQUIPMENT

WARNER GEAR COMPANY
MUNCIE, INDIANA

WARNER GEAR CO

CLUTCHES, TRANSMISSIONS, CONTROLS, DIFFERENTIALS



PERFECT REGULATOR

Standard Equipment for America's Leading Automobiles

PERFECT WINDOW REGULATOR CO.
20 Exchange Place New York City

CLASSIFIED ADVERTISEMENTS

Rates for advertising in this department, 45 cents per line, per insertion. Minimum charge $2.25. Cash with order. Each line contains about seven words.

WANTED

One or more Automobile Accessories of merit for distribution in at least state of New York by organization being formed. Give full details in first letter. Address, Box 929, Automobile Topics.

If interested in the Automobile Industry, Subscribe to

AUTOMOBILE TOPICS THE TRADE AUTHORITY

15 Cents Per Copy **$3.00 A Year**

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"Air-Bag Cured"

Firestone Cord Tires are cured on air-bags. Internal expansion during this important operation aligns and straightens each separate cord, insuring equal distribution of strain under load.

Most Miles per Dollar

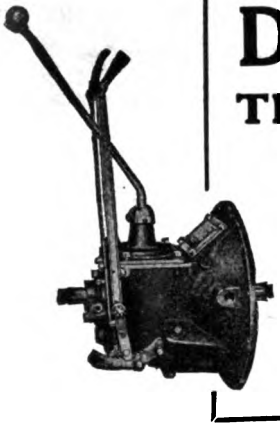
Firestone

GUM-DIPPED CORDS

MUNCIE WHEEL CO.

Wood Wheels Complete
for
Passenger Cars or Trucks

MUNCIE ∴ ∴ INDIANA



DURSTON TRANSMISSIONS

For trucks up to one-ton capacity, and Passenger Cars.

DURSTON GEAR CORPORATION

13 Maltbie St. Syracuse, N. Y.

Grant Six

—an excellent car

MOTOR-KLEEN

AN exceptionally efficient CARBON REMOVER, guaranteed harmless to engine or oil.

MOTOR-KLEEN has proven a fast-selling article with an unusual repeat sale value.

Full information will interest you.

MOTOR-KLEEN CORP.
Dept. T
Long Island City, N. Y.

Pint can (will clean 16 cylinders) $1.00

Spray—.30



Efficient, Economical
Easy to Use—Easy to Sell

SIGNAL

WORM DRIVEN MOTOR TRUCKS

1—1½—2½—3½—5 Ton Sizes

Manufactured and Serviced by

SIGNAL TRUCK CORPORATION

Detroit Michigan

BENDIX

ECLIPSE

for ELECTRIC STARTERS DRIVE AUTOMATIC ENGAGING & DISENGAGING



194 Motor Grand Truck Builders Use It

ECLIPSE MACHINE CO. ELMIRA N. Y.

Touring Car
$1195
Coach
$1450
F.O.B. Factory

The Coachbilt

ANDERSON

LIGHT ALUMINUM SIX



Is there an Anderson dealer in your town?—if not, write us.

Anderson Motor Co., Rock Hill, S. C.

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TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS
NATIONAL
TWIST DRILL & TOOL CO.
DETROIT, U.S.A.
NATIONAL TWIST DRILL & TOOL CO.


SHEET METAL STAMPINGS
From Steel, Brass, Bronze, Copper and Aluminum.
We also specialize in Case Hardening and Tool Tempering.
THE CROSBY COMPANY
Buffalo, N. Y.
New York Office: 30 Church St.
Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building

SHARON
PRESSED STEEL
MOTOR CAR and TRUCK FRAMES
AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.
SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
SHARON, PA.


COUNTER-BALANCED CRANK SHAFTS
HEAVY DIE FORGINGS
The Park Drop Forge Co.
Cleveland, Ohio

Highest Quality—Correct Finish
AUTOMOBILE
Body, Hood and Fender
Sheets
This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

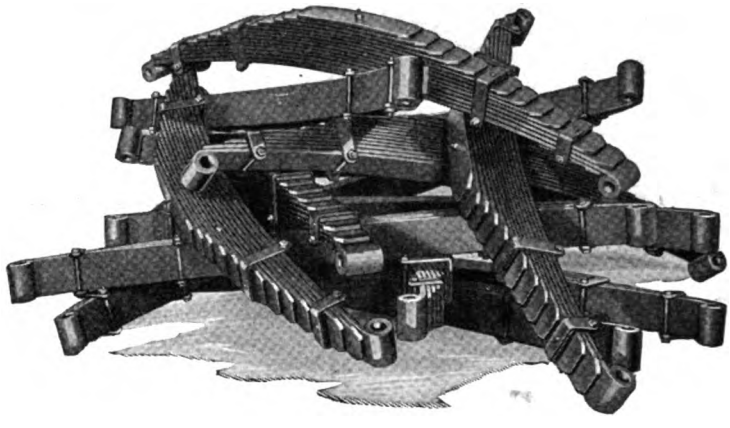
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The vital nerve system of a motor car. Nowhere is recognized merit of greater importance.
The Packard Electric Company
WARREN, OHIO

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The largest and best equipped frame plant in the world
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The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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MUSKEGON MOTOR SPECIALTIES COMPANY
MUSKEGON, MICHIGAN.

By Reputation—"The Best Cam Shafts Made"

We make a specialty of

FORMED TUBULAR

STEEL PARTS

such as

TORQUE TUBES, AXLE HOUSINGS, RADIUS RODS, EXHAUST TUBES, TAIL PIPES, IGNITION WIRING TUBES, STEERING COLUMN POSTS LAMP TIE RODS, RADIATOR OUTLET PIPES

The STANDARD STEEL TUBE Co.

TOLEDO, OHIO

General Sales Office:
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INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co. ...762, 763
Ahlberg Bearing Co. 797
American Sheet & Tin Plate Co. 804
Anderson Motor Co. 803

B

Bassick Manufacturing Co. 792
Bearings Co. of America . 800
Bowen Products Corp. 802
Bower Roller Bearing Co. 791
Brown-Lipe Chapin Co. 706
Brown-Lipe Gear Co. 706
Buick Motor Co. 713

C

Champion Machine & Forging Co. 800
Cole Motor Car Co. 784
Courier Motors Co. 766, 767
Crosby Co. 804

D

Detroit Carrier & Manufacturing Co. 798
Diamond State Fibre Co. .. 799
Dodge Brothers 714
Doehler Die-Casting Co. ... 800
Durston Gear Corp..... 803

E

Earl Motors, Inc. 751
Eclipse Machine Co. 803
Edmunds & Jones Corp. ... 798

F

Firestone Tire & Rubber Co. 803
Fisher Body Corp. 779
Fisk Tire Co., Inc. 709

G

Gabriel Manufacturing Co. 712
General Motors Truck Co. .. 753
General Tire & Rubber Co. 775
Gilmer Co., L. H. 768, 769
Goodrich Rubber Co., B. F. 715
Grand Rapids Tire & Rubber Corp. 771
Grant Motor Car Corp. ... 803
Gurney Ball Bearing Co. .. 802

H

Hayes Wheel Co. 781
Holley Carburetor Co. 707
Hoover Steel Ball Co. 807
Hubbell, Inc., Harvey 788
Hudson Motor Car Co., Back Cover

I

International Harvester Co. of America 708
Interstate Iron & Steel Co. 798

J

Johns-Manville, Inc., ... 802
Jorgensen Hood Silencer Co. 802

K

Kelly-Springfield Tire Co. .. 808

L

Laidlaw Co., Inc., Inside Front Cover
Lavine Gear Co. 711
Link-Belt Co. 785

M

Mather Spring Co. 805
Maxwell Motor Corp. 710
Merchants & Evans Co. ... 801

Digitized by Google

INDEX TO ADVERTISEMENTS

Metal Stamping Co. 702

Moon Motor Car Co. 776a

Morse Chain Co. 778

Motor-Kleen Corp. 803

Motor Wheel Corp. 783

Muncie Wheel Co. 803

Muskegon Motor Specialties Co. 806

N

Nash Motors Co. 716

National Acme Co..... 776

National Twist Drill & Tool Co. 804

North East Electric Co. ... 798

North East Service, Inc., .. 798

O

Oakland Motor Car Co. ... 758

P

Packard Electric Co. 804

Parish Manufacturing Corporation ..Inside Back Cover

Park Drop Forge Co. 804

Peerless Motor Car Co. ... 757

Perfection Spring Co. 782

Perfect Window Regulator Co. 802

Plunkett & Co., Paul 797

Pyrene Manufacturing Co. 789

R

Racine Rubber Co. 755

Rickenbacker Motor Co. ... 790

S

Salisbury Axle Co., Inside Back Cover

Sharon Pressed Steel Co. .. 804

Sheldon Axle & Spring Co., Inside Back Cover

Signal Truck Corp. 803

Smith Corporation, A. O. .. 804

Spicer Manufacturing Corp., Inside Back Cover

Standard Steel Tube Co. .. 806

Stephens Motor Car Co., Inc., ... 786

Sterling Engraving Co. ... 800

Stevens-Duryea, Inc., ... 795

Stewart-Warner Speedometer Corp. 701

Stromberg Motor Devices Co. 774

Studebaker Corp. 705

Stutz Motor Car Co. of America, Inc., ...764, 765

T

Ternstedt Manufacturing Co. 732

Timken Roller Bearing Co., Front Cover

Torbensen Axle Co. 793

U

Union Drawn Steel Co..... 801

United Alloy Steel Corp. ... 787

United States Rubber Co. .. 749

V

Velie Motors Corp. 792a

W

War Department 772, 773

Warner Gear Co. 802

Westinghouse Electric & Manufacturing Co. 777

Whitney Manufacturing Co. 794

Willys-Overland, Inc., ... 770

Woods & Co., Clinton E., . 802

Wyman-Gordon 703

Y

York Corrugating Co. 799

Z

Zenith Carburetor Co. 704

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MONEL METAL
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HOLLOW BALLS

The World's Largest Manufacturer

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Lotta Miles

IN the present condition of the tire market, where price cut has succeeded price cut until the quality of many tires has come to be regarded with suspicion, the dealer who has taken on the Kelly-Springfield franchise is in an exceedingly favorable position, because he knows he can sell Kellys with confidence in what he is selling.

Now, it costs no more to buy a KELLY

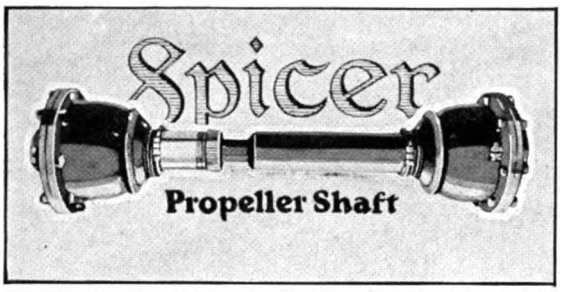
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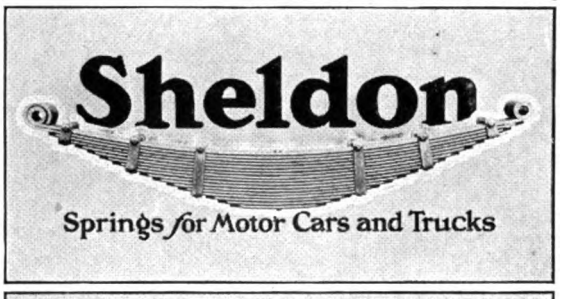
GENERAL SALES DEPARTMENT

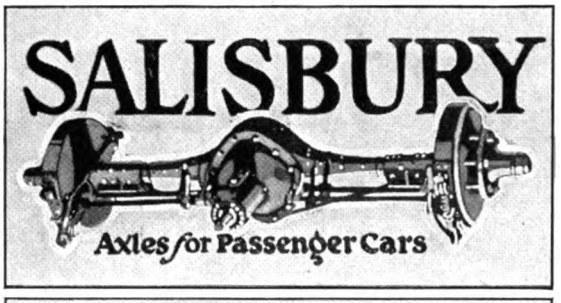
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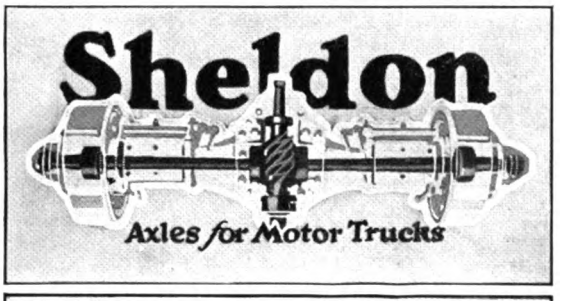
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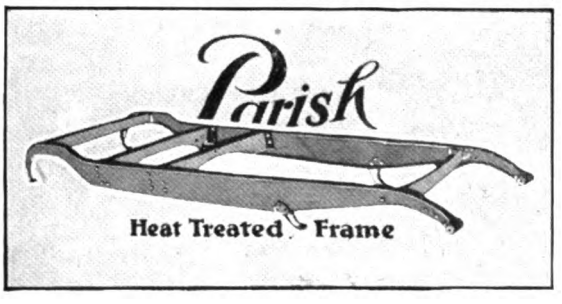
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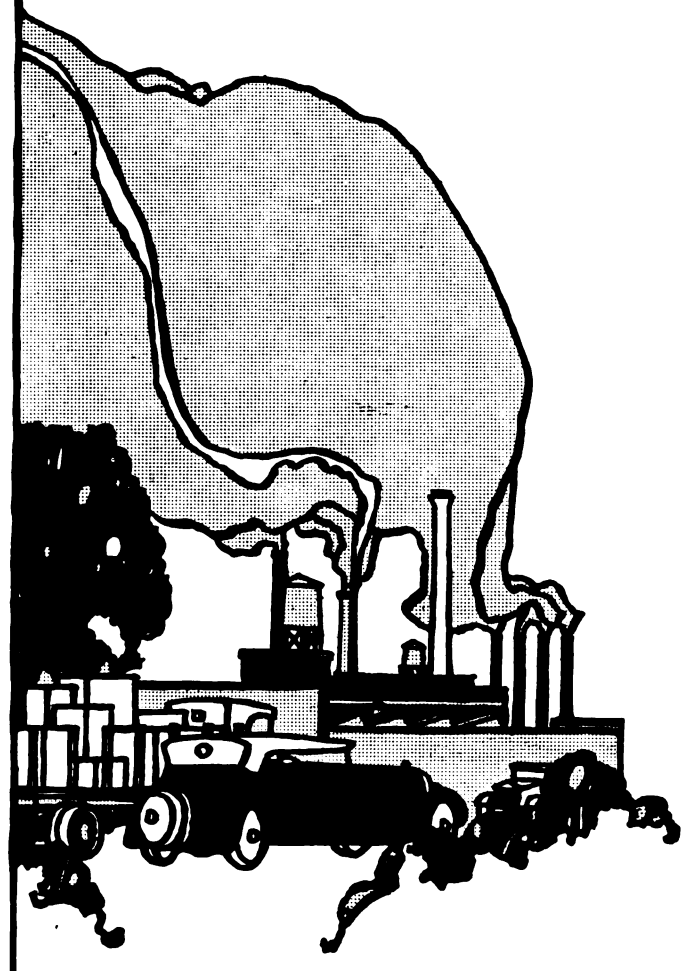












THE policy among manufacturers of the better motor cars and trucks is to use only those specialized units that will uphold the prestige of the vehicle itself. Note the number and reputation of those whose specification sheets include one or more of the load-carrying and power-transmitting parts pictured above.

Sheldon Axle and Spring Co.
Wilkes-Barre, Pa.

Parish Mfg. Corporation
Reading, Pa., and Detroit, Mich.

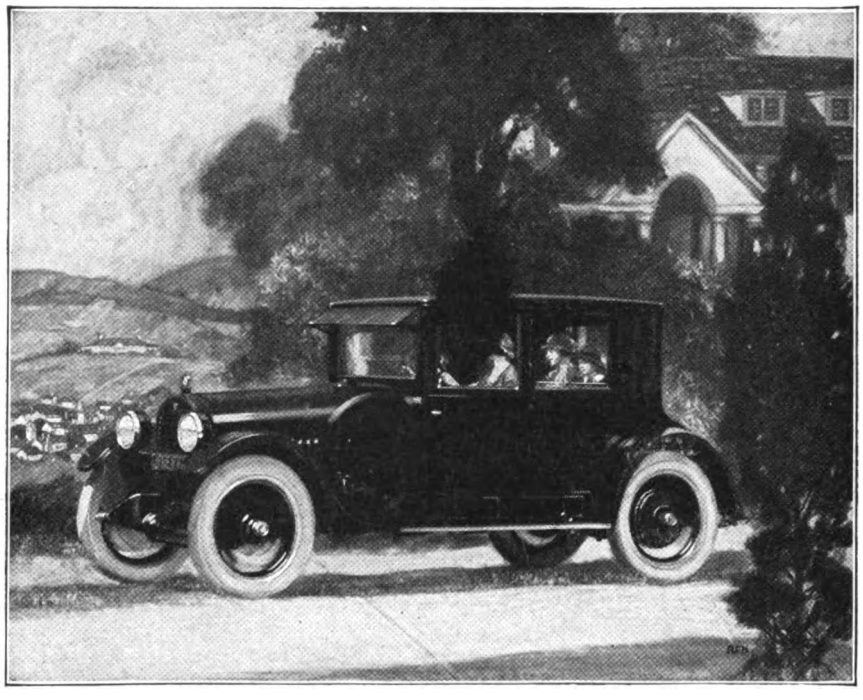
Salisbury Axle Company
Jamestown, N. Y.

Spicer Mfg. Corporation
South Plainfield, N. J.

C. A. DANA, *President*

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HUDSON



Prosperous Dealers Its Proof

A franchise is valued according to the prosperity it brings. Hudson dealers have this in generous measure.

But they have, too, a further important factor of value—permanency and security.

Ninety-eight per cent of the Hudson product is sold by men whose connection exceeds 8 years. That shows not only the satisfaction of Hudson dealers with the line—but it shows also they continue to take the rewards of the business they build.

Hudson now makes but four models—the Coach, the Sedan, the Speedster and the 7 Passenger Touring Car. They are the surpassing fine car values of motordom.

The Coach is the largest selling closed car among the fine cars of the world.

If you want such success as Hudson dealers have, write today.

Speedster, $1525 7 Passenger Phaeton, $1575 Coach, $1625 Sedan, $2295

Freight and Tax Extra

Hudson Motor Car Company, Detroit, Mich.

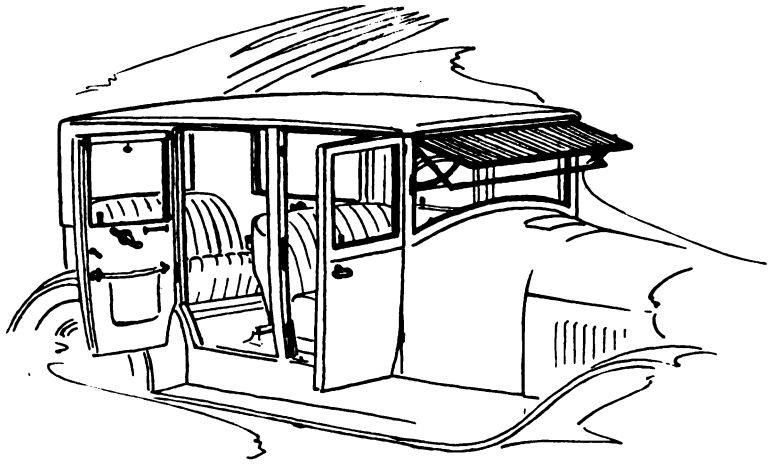
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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 9 | PUBLISHED WEEKLY NEW YORK, OCTOBER 14, 1922 | FIFTEEN CENTS A C $3.00 A Y

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



In the bodies of practically all of the better-known, better-built motor cars, Ternstedt Automobile Body Hardware is now included as a *necessary* part of equipment; in many it is featured *exclusively*.

There is equipment for every requirement.

TERNSTEDT

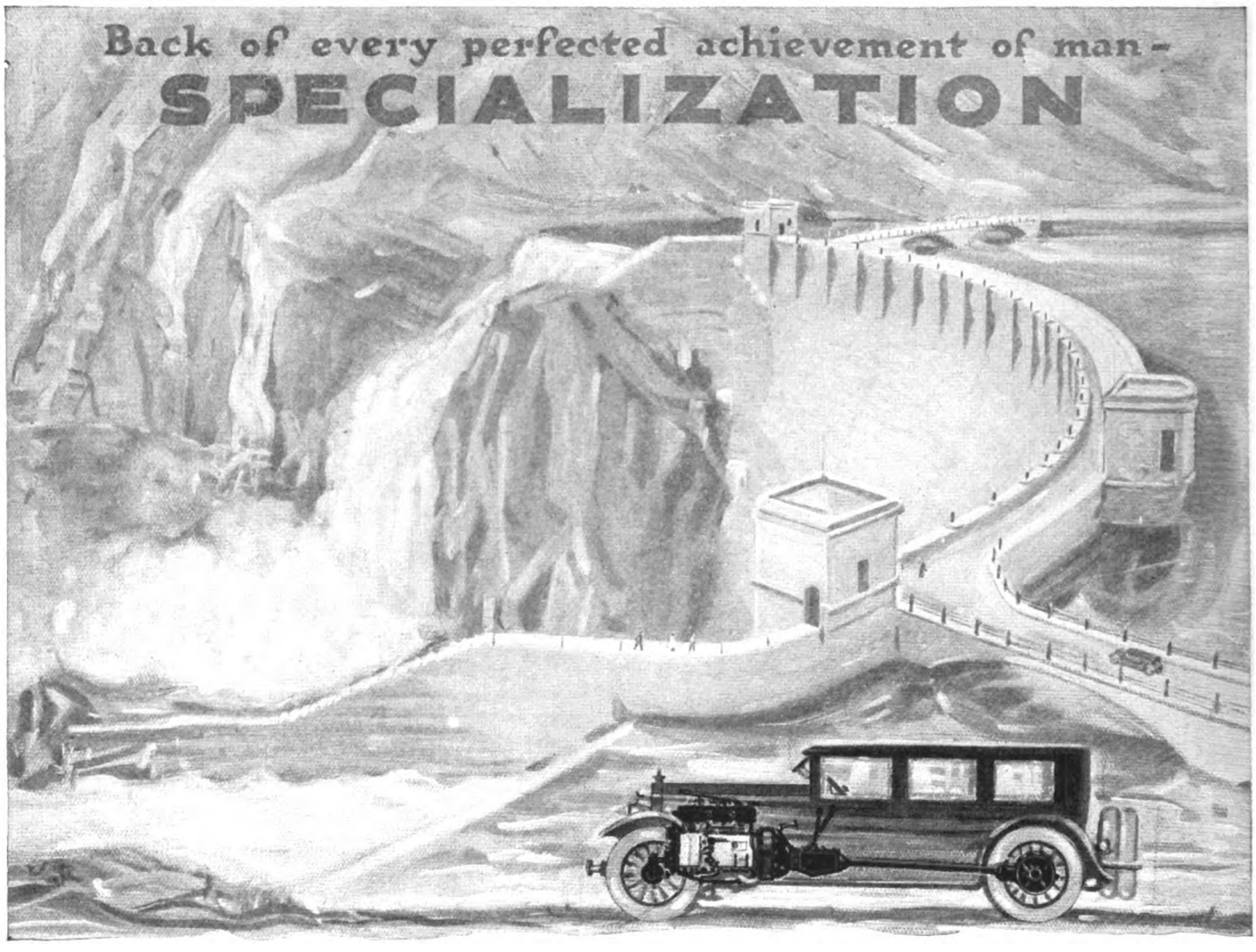
Largest Manufacturers of Automobile Body Hardware in the World

Division of Fisher Body Corporation

REG. U.S. PAT. OFF.

MAIN OFFICE AND PLANTS: 6307 FORT STREET WEST, DETROIT, U. S. A.

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ROOSEVELT DAM—Greatest work of the United States Reclamation Service, Salt River, Ariz. Reservoir contains 61,000,000,000 cubic feet of water. Dam measures 284 feet high, 170 feet thick at base, and 1080 feet wide.

Progress toward perfection —the SPECIALIZED car

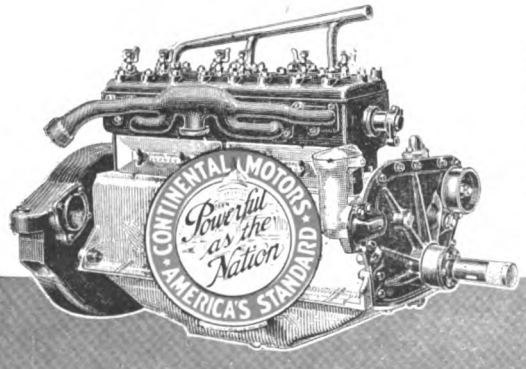
The exacting demands to be put upon the Roosevelt Dam necessitated its construction by co-ordinated efforts of many specialist organizations, each contributing an essential factor to the finished undertaking.

Equally exacting demands, in their field, upon present day cars counsel that each performing unit shall be the product of an organization of specialists.

The SPECIALIZED car meets the demands made upon it through the perfection of its major units. Motor, transmission, universal joints, axles, clutch, etc., are all products of the leading SPECIALIZED unit manufacturers of the automotive industry.

Identify your organization with a SPECIALIZED vehicle. You will have back of your car the multiplied reputations of all the unit manufacturers, convenience of parts-distributing stations throughout the world and the public's great and growing demand for SPECIALIZED vehicles.

The first assurance of importance to make in considering the SPECIALIZED vehicle is that upon the crankcase of the motor is the leading symbol of SPECIALIZATION—the Continental Red Seal.



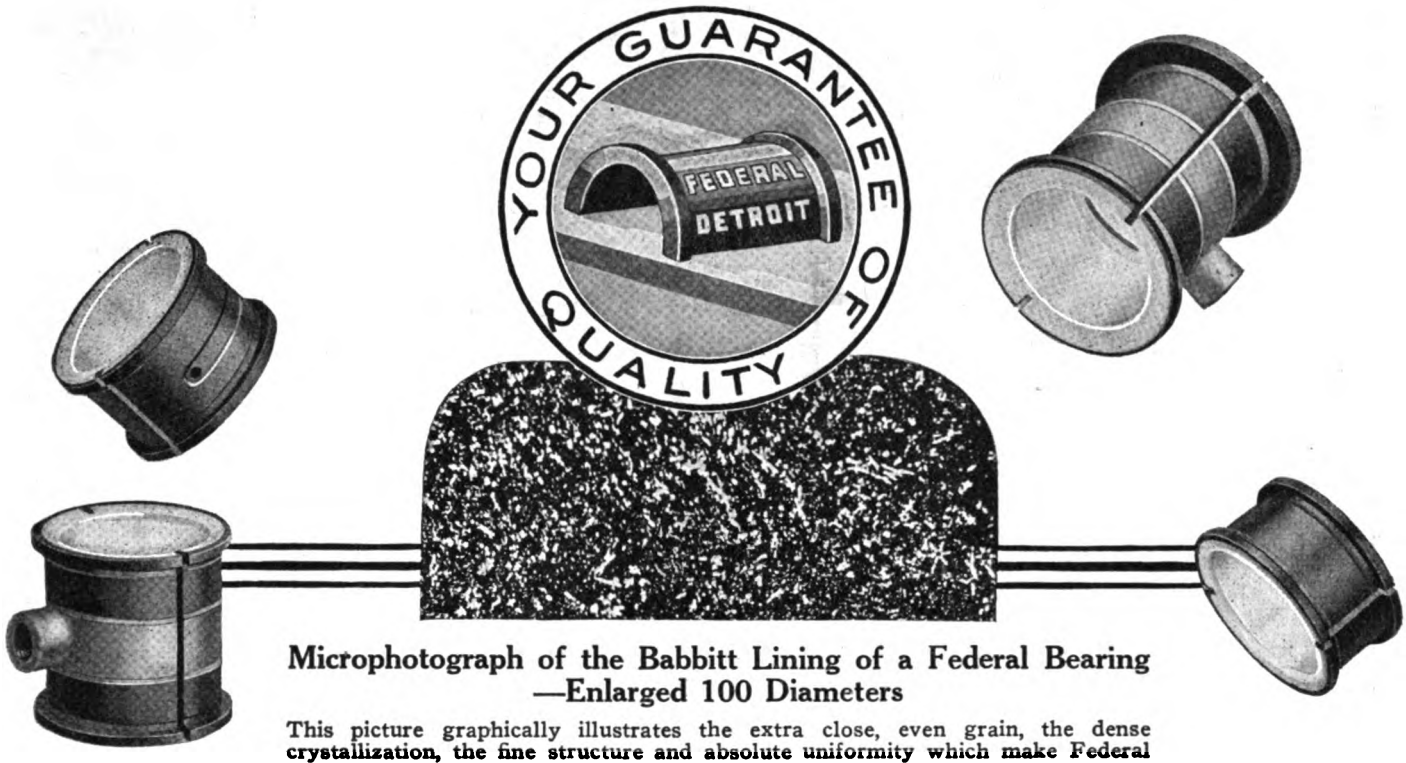
CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U. S. A. *Factories: Detroit and Muskegon*
Largest Exclusive Motor Manufacturers in the World

Continental Motors

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Federal Bearings



Microphotograph of the Babbitt Lining of a Federal Bearing —Enlarged 100 Diameters

This picture graphically illustrates the extra close, even grain, the dense crystallization, the fine structure and absolute uniformity which make Federal Bearings so superior in wearing quality and toughness.

This finer crystallization in the Babbitt Lining of Federal Bearings is due to the rapid rate of cooling—which prevents the large and uneven crystallization so noticeable in the bearing pictured below.

Microscope Reveals Outstanding Quality of Federal Bearings

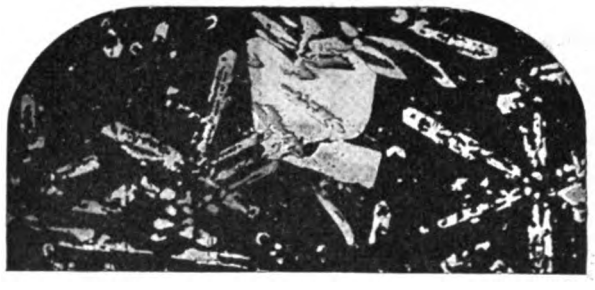
Look at the two microphotographs shown here. They tell a graphic story.

The picture at the top reveals the inherent, structural qualities of the Babbitt Linings of Federal Bearings. Notice the even, close grain, the fine structure and notice especially the absolute uniformity of grain and structure.

This picture shows conclusively *why* Federal Bearings outwear any other make of Bearing on the market—for the microphotograph shows the actual, physical superiority of Federal Bearings—which is due to the Federal Centrifugal Force Process.

The picture below shows an average bearing, used in a well-known make of automobile. Here is revealed the absence of uniformity, the coarseness of grain, the large, uneven crystallization which cause such bearings to break down long before they should.

Everywhere Federal Bearings are winning enthusiastic approval. Our engineers are at your service with reference to your requirements. Federal Bearings will give your motor unusual strength and stamina in the most wear subjected parts. Write for details.



Microphotograph of a Bearing Used by a Well-Known Automobile—enlarged 100 Diameters

Notice the large and uneven crystallization as compared with the Federal Bearing pictured above. This bearing is uneven in structure and diverse in texture—it will show wear quickly in spots—in other words, will flake off under frictional pull.

The structural and physical defects shown in this microphotograph are not visible to the naked eye—and while it looks like a good bearing upon casual inspection, a microscopic analysis shows that it is not.

FEDERAL BEARING & BUSHING CORPORATION

BABBITT-LINED BRONZE-BACK BEARINGS_BRONZE BUSHINGS_BRONZE CASTINGS

DETROIT — MICHIGAN

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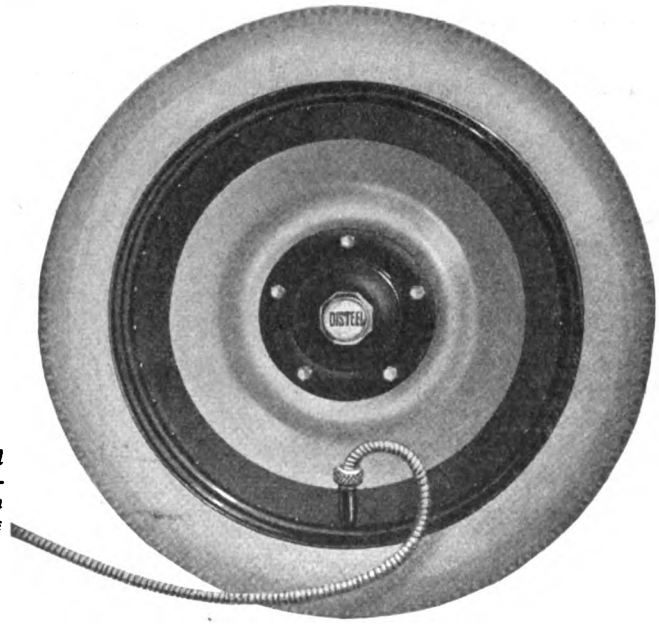
SIMPLICITY

Simplicity is as desirable in wheels as it is elsewhere.

A complete Disteel Wheel consists of only eight parts—a marked contrast to other wheels of steel, wood or wire, many of which contain from three to twenty times as many.

Such refinement has become possible, we know, only from the experience of this organization as the explorer and pioneer in the field of steel-disc wheels.

Simplicity—eleven parts to the complete wheel—has been one of many strong factors in establishing that generally accepted axiom, THERE IS NO ADEQUATE SUBSTITUTE FOR DISTEEL WHEELS.



You will need no special valve attachments or fittings for tire inflation with your new Disteels

Exclusive Manufac urers

DETROIT PRESSED STEEL COMPANY

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DISTRIBUTORS:

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732 So. Michigan Avenue, CHICAGO
682 Beacon Street, BOSTON
865 Post Street, SAN FRANCISCO

DISTEEL WHEELS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCT. 14, 1922 No. 9

TABLE OF CONTENTS

More Driveaways to Follow Rail Tie-Up 825
Outside Repair Man Viewed with Alarm 825
Findlater on Indefinite Leave to Regain Health 826
Martin Leaves Sheldon to Market Fageol Bus.. 826
duPont to Speak at S. A. E. Meeting 826
Thompson Now Heads Board of Overland 827
Chevrolet for 1923 Shows Refinements 827
Former Distributers of Stutz "Join Up" 827
Motor Buses Become Modern Magic Carpets ... 828
Bayerline Tells of Columbia's Success 829
Moon Continues to Better Peak Sales 829
Timken Swings Over to Nibless Bearing 830
AC Spark Plug Co. Takes Over Sphinx 830
Holley Carburetor Plans to Double Factory Space 830
Mack Now Producing 500 Trucks Monthly 831
Offer More Bids for New Process Gear Co. 831
Goodwin-Guilder Coach Chassis in Production .. 831
Report Shows Growth of General Tire Co. 832
Spicer Retires More Notes 832
Wickwire Spencer Stock Changed 832
Chalmers Adjustment Put Into Operation 833
Stromberg in Strong Financial Position 833
Radio Tells Nation "How to Buy a Car" 834
Automobile Exports to Argentina Grow 835
Gardner Expands Its Export Organization 835
U. S. Consul Advises on Selling British Plugs ... 835
August Tire Trade Maintains Balance 836
Big Motor Markets "Down on the Farm" 836
Hood Rubber Co. Reports Operation as Normal 836
Moon Official Finds Western Market Good 837
New England Winter Sales Promise Much 837
Railroads Urged to Aid Automobile Industries .. 837
Engines Run Well on Various Fuels 838
77,000,000 Gallons of Gasoline Vanish 838
Production Meeting of S. A. E. Big Event 839
Educators to Study Needs of Highways 839

FEATURES IN THIS ISSUE

Why Not Teach Boys About Motors? 843
Selling Goods at Retail 847
Showroom Salon Whets the Public Appetite ... 848
New Cars Are Sales Boosters 850
How About a Good Crop of Fall Business? ... 853
In the Field of Accessories 854
With the Wholesalers and Retailers 855
Calendar 862
Table of Passenger Car Selling Points (copyrighted) 867
Alphabetical Index to Advertisers 906

"NORMA"
PRECISION
BALL BEARINGS

Appearances may occasionally deceive. But performance will surely reveal, ultimately, the integrity—or otherwise—of every detail of a car, truck or tractor. Let your comparisons, therefore, lead you into an examination of the ultimate service capacity of every part comprising the complete unit.

The bearings of magneto and lighting generator are among the smallest and least conspicuous parts in an automotive unit. Yet their failure means a failure of the whole machine to function. "NORMA" serviceability has made "NORMA" Precision Bearings the standards in ignition apparatus and lighting generators of the better class.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Double-row, maximum type, radial bearing



Double-acting, self-aligning thrust bearing. 2100 Series



Double-acting, self-aligning thrust bearing with leveling washers. 2100-U Series



Single-acting, self-aligning thrust bearing, leveling washer. 1100-U Series



Double-acting, thrust bearing, flat seats. 2100-F Series



Double-row, deep-groove Conrad type, radial bearing

Strom BEARINGs

Meet Every Ball Bearing Requirement

STROM BEARINGS are made for the purpose of giving maximum ball bearing service under the most exacting conditions. Every step in their manufacture is directed toward this end.

They are correctly designed, made of the highest grade materials, and heat-treated by the most modern and approved methods.

They are conscientiously manufactured in a wide range of types and sizes by expert workmen, and are rigidly inspected after every operation.

A staff of Strom engineers will be glad to give you the benefit of their experience in the selection of the type and size of bearing for your particular installation.

U. S. BALL BEARING MFG. CO.

(Conrad Patent Licensee)

4538 Palmer Street CHICAGO, ILLINOIS



Single-row, deep-groove Conrad type, radial bearing

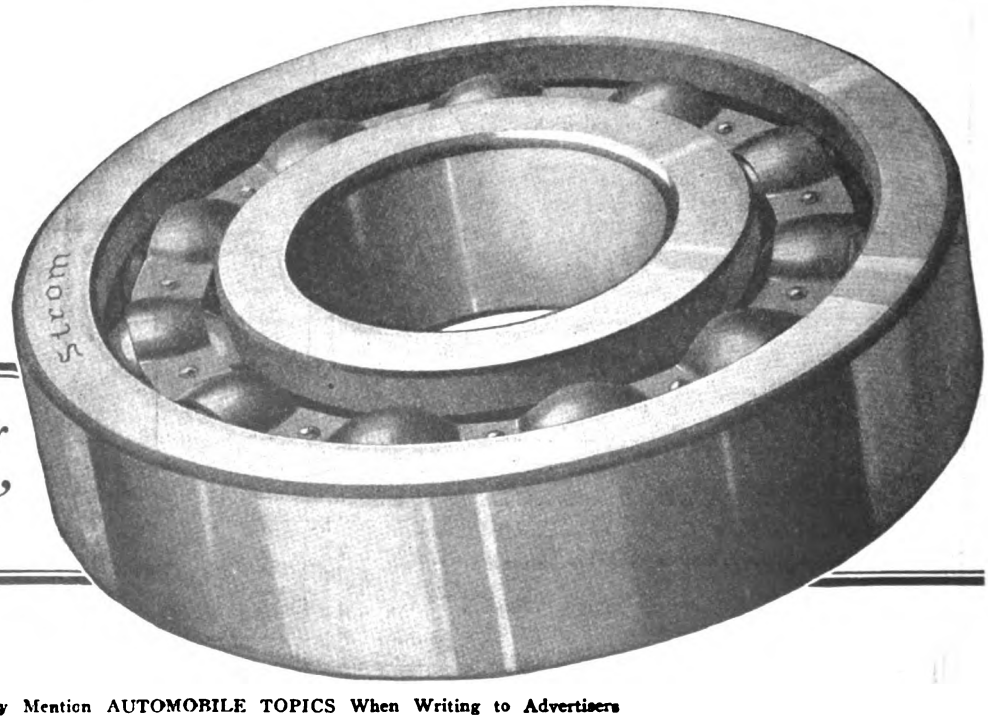


Angular contact bearing —combination radial and thrust



Single-row, maximum type, radial bearing

—used "Wherever a Shaft Turns"



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Quality — Quantity

Quantity and Quality

THERE is nothing inherent in quantity production methods that renders maximum quality impossible to attain. Efficient methods need have nothing in common with low quality. This is not always recognized in discussions about the relative merits of American and European cars. High production and lower quality are too commonly thought to go together, simply because some of America's cheap cars are not comparable in quality to the hand made—and high priced—European jobs.

Care in inspection and precision in operation will turn out in quantity a product equal in quality with any made in smaller lots. In fact, the repetition of the same precision operation many times over tends toward greater rather than less accuracy and quality.

Quality varies with precision of manufacture and care of inspection, but has no inherent relation to the quantity produced.

—Automotive Industries

These paragraphs go right to the root of Studebaker success.

By using only the finest materials, by employing great skill and precision and a rigidity of inspection unsurpassed in the automobile industry, Studebaker is able to build cars in quantity that are comparable in quality to the most costly the world produces.

Building products of honest quality in large volume and selling them at fair prices over a period of 70 years, has earned for Studebaker the right of leadership which has been awarded it by the public.

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Passenger, 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Passenger, 119" W. B., 50 H. P.*	BIG-SIX *7-Passenger, 126" W. B., 60 H. P.*
Touring ..... $ 975	Touring $1275	Touring $1650
Roadster (3-Pass.) 975	Roadster (2-Pass.) 1250	Speedster (4-Pass.) 1785
Coupe-Roadster (2-Pass.) 1225	Roadster (4-Pass.) 1275	Coupe (4-Pass.) 2275
Sedan 1550	Coupe (4-Pass.) 1875	Coupe (5-Pass.) 2375
	Sedan 2050	Sedan 2475
		Sedan (Special) 2650

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

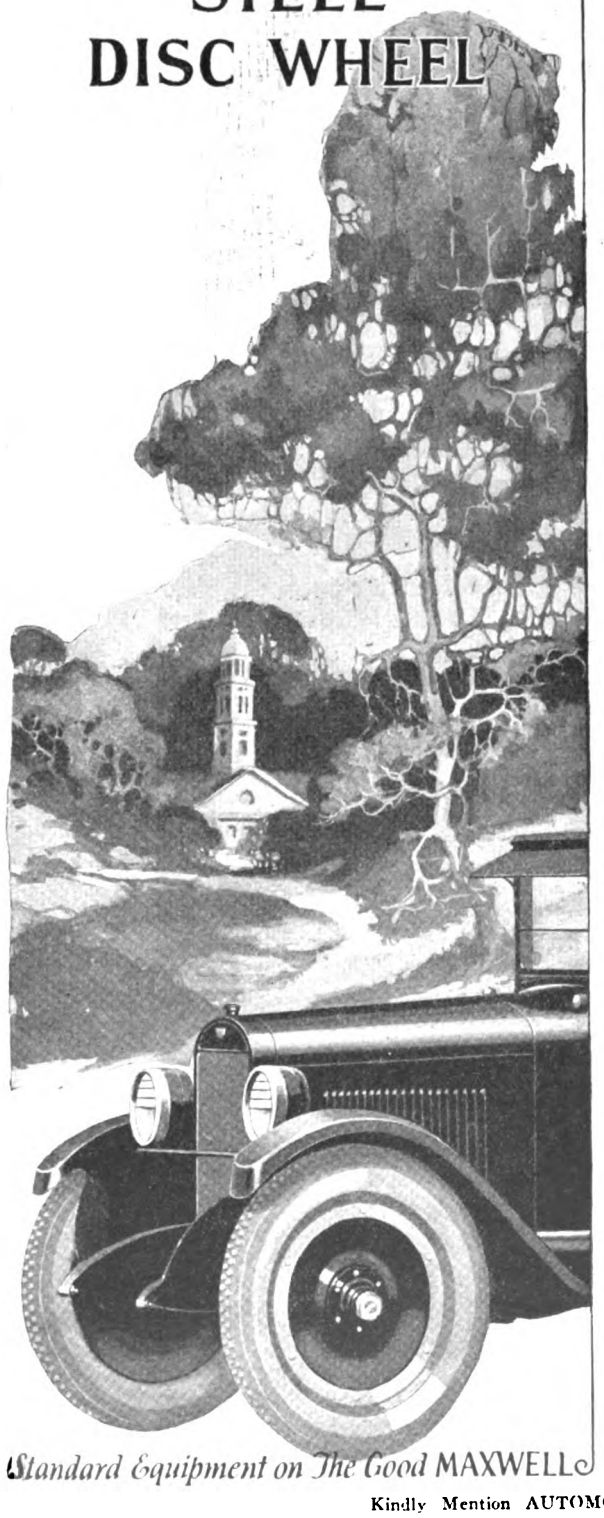
Studebaker

THIS IS A STUDEBAKER YEAR

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FORSYTH

*[DEMOUNTABLE RIM] STEEL DISC WHEEL



Standard Equipment on The Good MAXWELL

FORSYTH *D. R. Steel Disc Wheels have revolutionized all previous ideas of Steel Wheel design and construction.

The thought prevails that after all, FORSYTH was bound to follow the announcement of a New Steel Disc Wheel with a product that promises to eclipse all forerunners to this type of equipment.

The manufacturing practice of Forsyth Brothers Company is too well known, too well established, to permit any suggestion of uncertainty. Already, Automobile Manufacturers, Dealers and the Public, have shown a marked preference for FORSYTH *D. R. Steel Disc Wheels that is all out of proportion to the expectation of the designers.

When a new dollar is minted, its worth is definitely established the world over. So with products built by FORSYTH—it is universally known that the high standard of every FORSYTH product that has gone before, will be splendidly sustained.

That is why the FORSYTH (Harvey, Illinois) Plant is urged to twenty-four hour production. That is why your car will ultimately drive on FORSYTH Steel Disc Wheels.

Made at Harvey (Chicago suburb), Illinois, by
FORSYTH BROTHERS COMPANY
Established 1895

Reputable Organizations capable of handling the distribution of FORSYTH Steel Wheels are invited to make application for territory assignments not already granted



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Ground

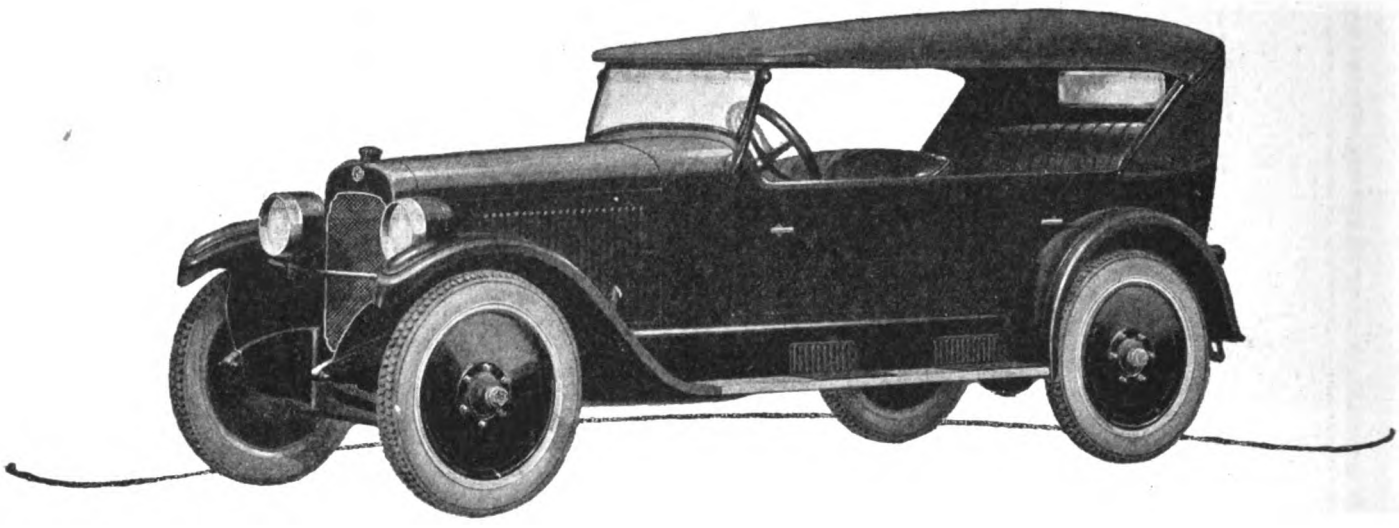
Because they are ground exceedingly fine, our Japan colors have remarkably good tone and flatting qualities of high excellence.

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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Chalmers engineers have accomplished more toward bringing out the possibilities of the six than can be found in any car within hundreds of the same price.

They have actually created a new and finer kind of six-cylinder performance.

Anyone who will make careful comparisons will satisfy himself that the Chalmers Six is distinctly superior.

Chalmers Six Prices

5-Pass. Touring Car - $1185 Roadster - - - - - $1185
7-Pass. Touring Car - 1345 Coupe - - - - - - 1595

Prices f. o. b. Detroit—Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada Limited, Windsor, Ontario

The
CHALMERS SIX

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Hite Sells Them—and Uses Them Himself

Here's a double-barreled boost for Red-Tops—Hite not only is sold on them for his trade, but he uses them on his own service car:—

THE HITE TIRE COMPANY

Russellville, Ky., July 6, 1922

The Fisk Tire Company, Inc.,
Nashville, Tenn.

Gentlemen:—

I have sold Fisk Red-Tops for four years; and think it is the best 30 x 3½ tire on the market regardless of price. I have four on my service car that have been in use for 19 months and it don't set around but very little.

Very truly yours,
HITE TIRE CO.

You build a substantial tire business only by selling tires which give sound, economical service, making customers out of buyers who will buy again where they get satisfaction.

The dealer who sells Red-Tops builds his business—the extra ply of fabric and the heavy red tread make good in longer life and greater mileage.

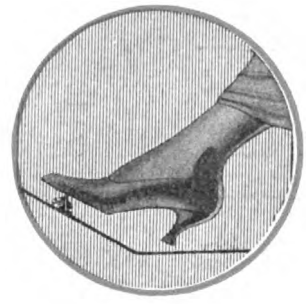
Brighten up your window with a Fisk Red-Top.

There's a Fisk Tire of extra value for every car, truck and speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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Built With Number

Auto

Starting, Lighting

THE ELECTRIC AUTO-LITE COMPANY

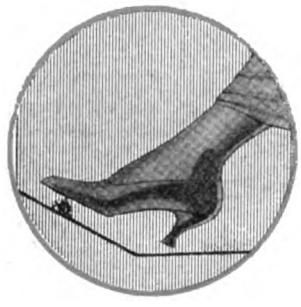
Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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Fewer Of Parts

-Lite

& Ignition

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

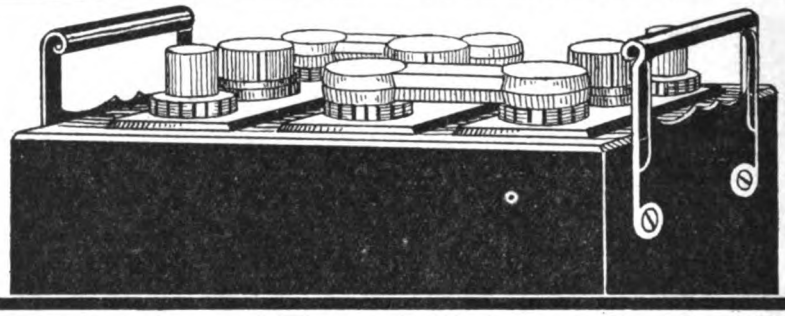
Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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YALE Super-Quality Storage Batteries



Successful Dealers and Satisfied Customers

BEFORE you take on the sales agency for any battery, ask these two vital questions: Are other dealers making money selling it? Are car owners fully satisfied with the service it gives?

Apply these tests to YALE Batteries and you'll discover why they offer you the biggest battery dealer-opportunity that ever came your way.

Dealers who sell YALE Batteries are successful: ***First,*** because the batteries rank high in quality, service and length of life. ***Second,*** because the YALE Line offers sizes for all cars, and includes types to meet competitive prices. ***Third,*** because the sales policy gives dealers ample profit margins. ***Fourth,*** the guarantee means just what it says: "They MUST satisfy". ***Fifth,*** because substantial distributors give dealers full co-operation. ***Sixth,*** because the factory stands back of dealers in every adjustment, enabling them to please every user without delay or "red tape".

YALE Batteries are highly popular with car owners, because they insure quick starts and brilliant lights, and are exceptionally free from common weaknesses that cause trouble, shorten battery life, and result in expensive repairs and dissatisfaction.

If you are interested in making more money in the battery business—get in touch with us today.

Built by Men Who KNOW the Battery Business

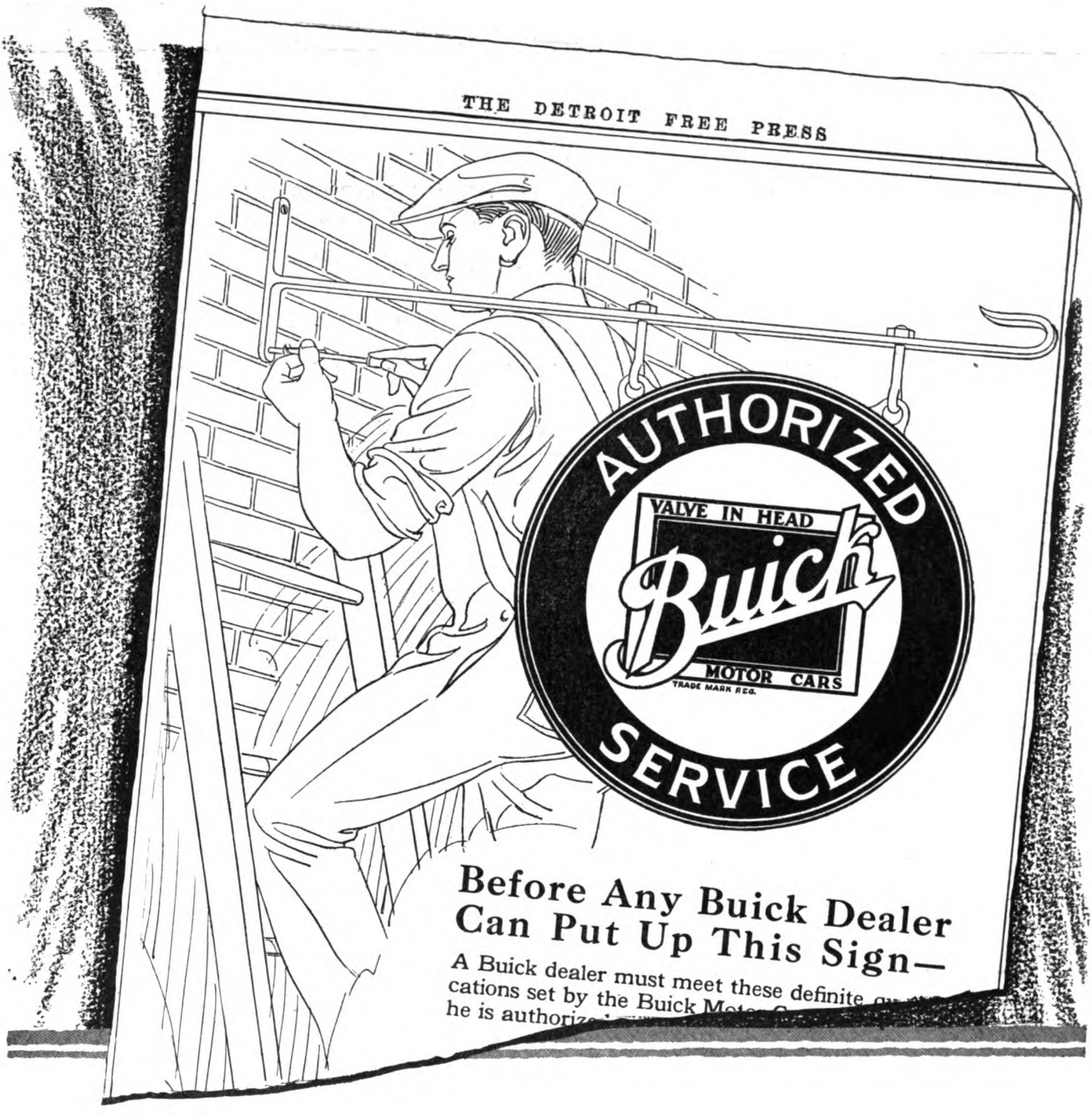
YALE Batteries are produced by some of America's leading automobile battery specialists—men who know the battery business, from every angle—men who know how to build a good battery, and sell it so that distributor and dealer get a fair profit and a square deal.

Yale Storage Battery Company

Indianapolis, Ind., U. S. A.

YALE STORAGE BATTERIES THEY MUST SATISFY

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Buick Helps Buick Dealers

Awarding a Buick contract is only the beginning of the continuous cooperation that is extended by the Buick Motor Company to every dealer. In advertising, in sales helps, in service facilities, in every way the Buick Motor Company is always promoting a better, bigger business for the holder of a Buick Franchise. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS SEDAN

With this car, Dodge Brothers have literally created a new type of sedan.

They have combined open car ruggedness with closed car protection and smartness.

They have demonstrated, once for all, that a sedan can be as practical and almost as inexpensive as an open touring car.

The Body is built of hand-welded steel because steel is sturdy, and will take a permanent, oven-baked finish, eliminating forever the cost of repainting.

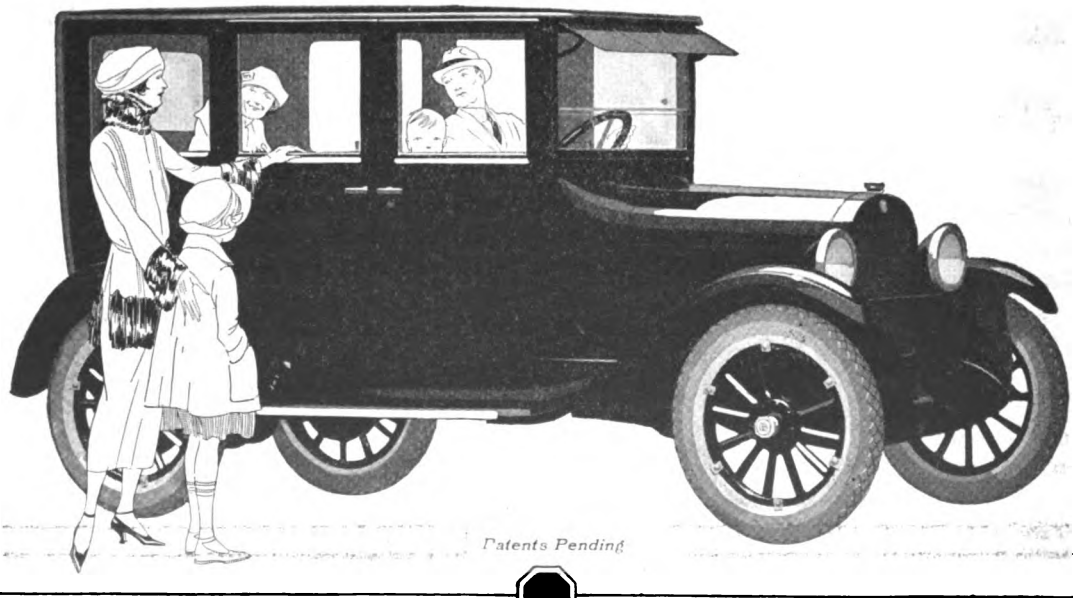
The seats are upholstered in attractive, genuine Spanish blue leather, because leather will wash and wear.

To further enlarge the car's usefulness, the rear seat, back and side cushions, seat frame and foot rest are quickly removable, giving sixty-four cubic feet of loading space in the rear compartment. The manifold uses made possible by this unique feature are readily imagined.

The top and rear quarters are of non-rumble, fabric construction, conforming with the present attractive vogue. From cord tires to curtain cords, the fittings, inside and out, are distinctive and complete.

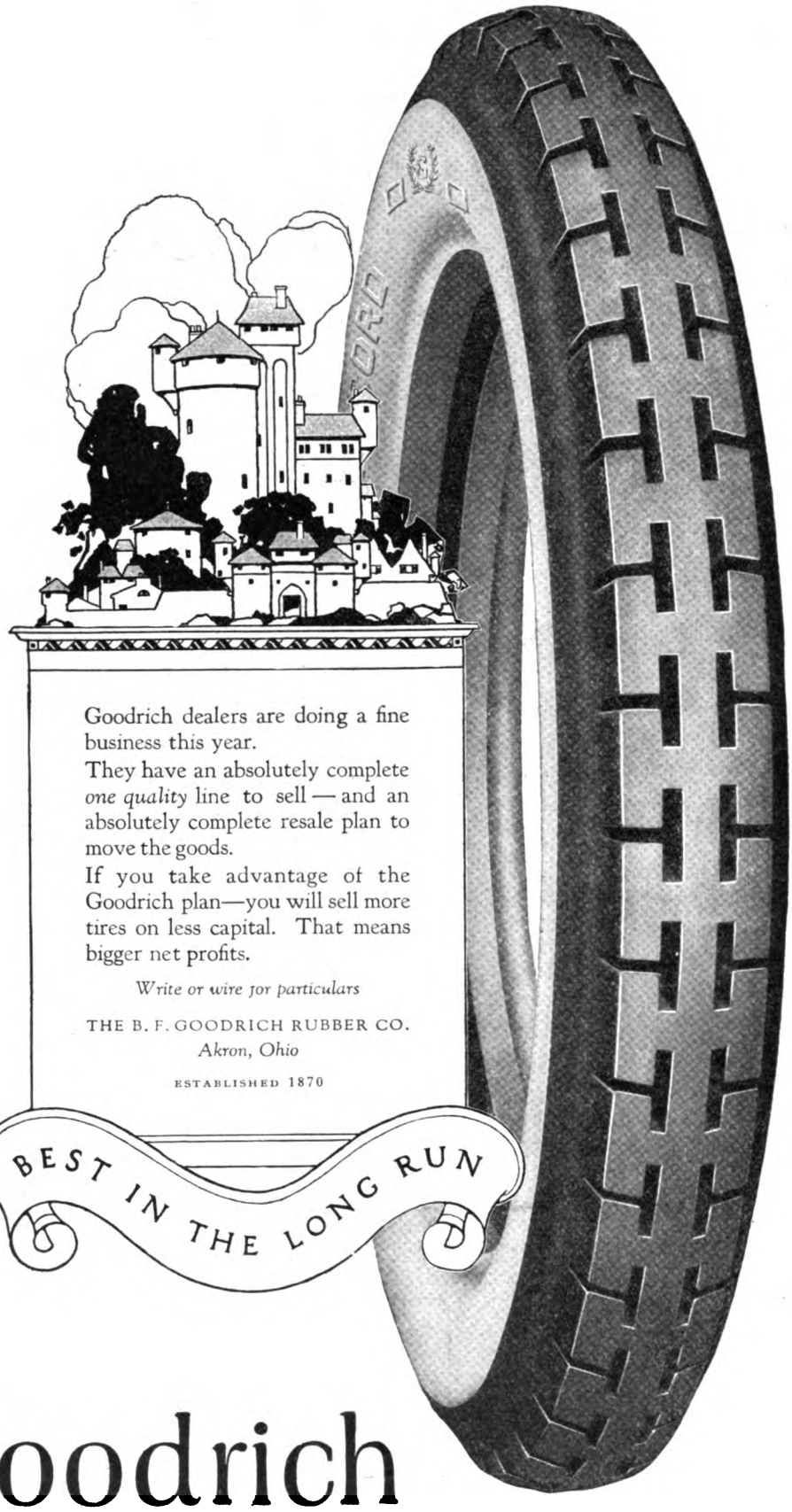
In fact, every detail of the car emphasizes its striking adaptability to business as well as social use.

The price is $1195 f. o. b. Detroit



Patents Pending

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Goodrich dealers are doing a fine business this year.

They have an absolutely complete *one quality* line to sell — and an absolutely complete resale plan to move the goods.

If you take advantage of the Goodrich plan—you will sell more tires on less capital. That means bigger net profits.

Write or wire for particulars

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

ESTABLISHED 1870

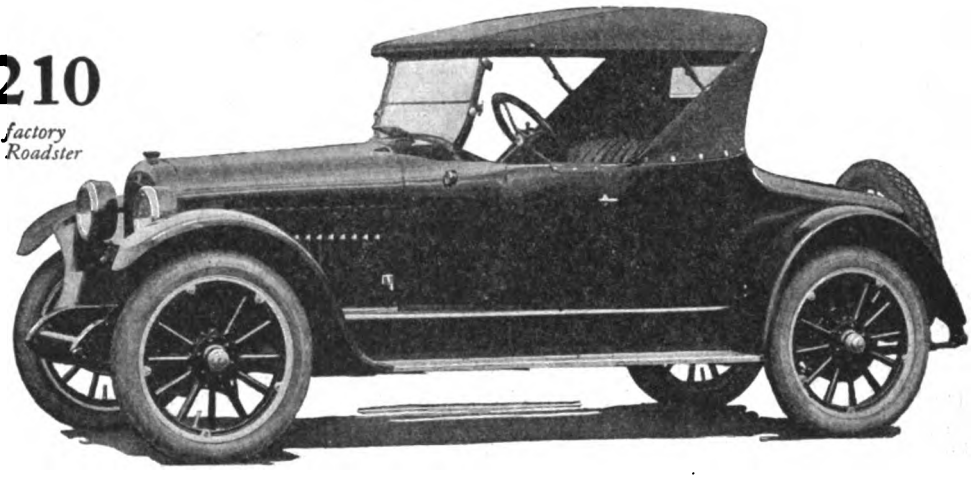
BEST IN THE LONG RUN

Goodrich SILVERTOWN CORD TIRE

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Nash Leads the World in Motor Car Value

$1210
f. o. b. factory
New Six Roadster



A New Nash Business Builder

The New Nash Roadster

Here's another addition to the Nash line that will help increase Nash sales.

It's a fascinating Six roadster with a spirit and briskness to its performance that is sure to make it a ready seller.

The body, swung deftly low to the road, is toned a rich maroon.

All wheels are finished in a bright vermilion and the top is done in ecru silk mohair of the finest grade.

Throughout the interior a dark grey Spanish leather trimming is used.

A new-type ventilator graces the cowl just forward of the windshield.

There's a new steering mechanism, and also oil kipp equipment has been added.

And the new barreled headlamps are equipped with an exclusive Nash device that permits light adjustment to any angle quickly.

Across the front of the chassis side-members is a stalwart bar that anchors the frame solidly against "weaving" or road "strain."

The announcement of this new roadster is part of the intensive Nash program for making the Nash dealer franchise increasingly valuable.

At this moment we are ready to award several very valuable dealer territories. But you'll have to get in touch with us at once.

FOURS *and* SIXES

Reduced Prices Range from $915 to $2190, f. o. b. Factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

(693)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCTOBER 14, 1922 No. 9

MORE DRIVEAWAYS TO FOLLOW RAIL TIE-UP

Serious Freight Congestion Points to Increased Overland Shipping — Steps Taken to Better Automobile Freight Car Supply—Shortage Grows.

Serious congestion on the railroads, pointing to more driveaways being necessary with continued heavy automobile production, is gleaned from latest reports of the traffic department of the National Automobile Chamber of Commerce. As a result of steps taken by the Chamber, railway officials are acting to improve the automobile car supply, especially in Michigan and adjacent territory where a critical shortage exists. Further progress has also been made with the snow removal plans recently outlined.

Following a presentation of automobile shipping requirements by the Chamber's traffic committee, headed by Chairman William E. Metzger, at Washington the early part of the month, the car service division of the American Railway Assn., through Chairman M. J. Gormley, immediately issued the following notice to all railroads to direct more automobile cars into the manufacturing territory:

> In spite of the continuance of remarkably heavy automotive production, there has been a decided decrease in the number of cars shipped by rail, and an increase in the number of automobiles driven. It is felt that this has been due in no small measure to the diversion of automobile cars to other classes of traffic, taking them into territory that has no automotive production.
>
> There is every reason to continue effective control and distribution of automobile cars. There are no restrictions on the use of these for any suitable commodity for loading into automobile producing territory. There would seem to be no probability that such service would interfere with the movement of commodities on the priority list.
>
> A very critical shortage now exists in Michigan and adjacent territory. It is not only important to keep this industry supplied, but it is also to the self interest of the railroads to do so.
>
> Will you please see that the proper instructions are in effect on your railroad to secure proper handling and prompt movement to the fullest practicable extent of automobile cars, particularly to prevent the failure to recognize the use for which they were constructed.

The Chamber's traffic committee is following up this situation with railroad officials and by daily contact with the car service division at Washington. J. S. Marvin, manager of the traffic department, this week supplemented the Chamber's bulletin containing the facts already mentioned and those following, with the information that railroad car shortage as of September 23, was 91,296 cars. This is a substantial gain over the car shortage as of September 15, which was reported as 57,461 cars.

(*Continued on page 834, second column*)

TOPICS' TOPICS

Tariff Board already finds eight applications for rate changes filed: asserts will only consider such complaints as are based on "changing conditions" and take own time about that. Apparently just another real slow growing political plum, all bound round with nice red tape.

* * *

Correspondence states future of Blank concern is "better than it ever has been in the past." Is this tantamount to saying its future has passed beyond the behind?

* * *

"Leonard," advertising in English automobile trade newspaper, wants position and declares he is "familiar with burning in a machine." Compares favorably as coworker with British "gentleman with brains to bore cylinders wanted."

* * *

Pity poor railroad presidents—automobile industry "says it with motors," government "says it with dumbbells" and labor "says it with bombs." About time public said it to politicians with ballots.

OUTSIDE REPAIR MAN VIEWED WITH ALARM

Said to Handle 60 Per Cent of Such Work at Present—Development of Enfranchised Dealers' Business Brings Matter to Focus of Attention.

A condition that in some quarters is "viewed with alarm" is the increasing competency of the so-called "outside" repairshop, which is said to handle upwards of sixty per cent of the total repairwork produced. This constitutes a phase of the service question, which many believe will soon create a broad line of demarkation between highly successful lines, especially in the low-priced fields, and those which approach, but cannot quite attain to superlative prosperity. Continued study of the dealer situation shows that the importance in the consumer's life of the unauthorized shop is increasing, and some of those who are able to view the industry by and large, apart from their own direct interest in it, are wondering what the outcome is destined to be.

Important developments in the way of increasing the volume of business done by the repairshops of enfranchised dealers in several of the leading lines seems to be bringing this question more and more into the open. The direct effect of flat rate systems, standardized job schedules and kindred methods of rendering service more profitable is directly beneficial to dealers handling the products of manufacturers who are taking the lead in this general movement. The immediate reaction from it, however, is to render it even more difficult for the dealer who lacks assistance of this sort to make his shop show a profit at the end of the year.

Moreover, dealers having these aids to greater profits, and who are not only giving their customers better service, are often

(*Continued on page 828, second column*)

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FINDLATER ON INDEFINITE LEAVE TO REGAIN HEALTH

Vice-President of Earl Motors Plans to Take Much-Needed Vacation

Friends of James R. Findlater, vice-president and Pacific Coast manager of Earl Motors, Inc., learn with regret that he has been compelled to take an indefinite leave of absence for the purpose of regaining his health. Not only has it been necessary that he take the much-needed vacation but he has decided to sever all connections with the business world for the time being.

Findlater's connection with the industry goes back many years. He helped organize the Briscoe Co., in 1915, acting as vice-president and sales manager. When the Earl company took over the Briscoe enterprise, Findlater became vice-president. He was made Pacific Coast manager and resides in California. The success he achieved in that region is well known to the trade.

Ritchie Joins Chicago Bus Co.

John A. Ritchie, president of the Fifth Avenue Coach Co., New York, will go to Chicago to become head of the recently reorganized Chicago Motor Bus Co., having resigned his old position. Ritchie will be associated with John Hertz, president of the Yellow Cab Co., Chicago, who, with his associates, has acquired control of the bus concern; Charles MacCullough, a banker of the Windy City, and William Wrigley, Jr., the chewing-gum manufacturer. Ritchie had been president of the Fifth avenue concern since April, 1918. Before that he was connected with the Interborough subway in New York.

Strickland Joins Cadillac

William R. Strickland, recently with the General Motors Research Laboratories and for a number of years chief engineer for the Peerless Motor Car Co., has joined the engineering staff of the Cadillac Motor Car Co., as assistant chief engineer. Strickland has had a long connection with the automotive industry, entering the business after serving as engineer in the United States navy.

Connolly Promoted by Wilson Body

Edward J. Connolly has been appointed production manager in charge of the body division of the C. R. Wilson Body Co. Connolly has been chief engineer of the factory for the past two years and will continue in charge of that work.

Dort Enlarges Sales Department

Increased business has necessitated an expansion in the sales department of the Dort Motor Car Co. Sam C. Mitchell, formerly branch manager of the Cleveland Tractor Co. at St. Louis, has become assistant sales manager of the Dort Company. William Hufstader has joined Dort from the Flint Chamber of Commerce with which organization he was publicity and convention bureau manager. W. Harold Kingsley has been placed in charge of Dort publicity.

duPont to Speak at S. A. E. Meeting

It was announced late this week that Pierre S. duPont, president of General Motors Corp., has accepted an invitation to be present and speak at the Society of Automotive Engineers' production meeting at Detroit, October 26 and 27. In addition, A. B. C. Hardy, president and general manager of Olds Motor Works and a director of the G. M. C., will address the gathering. The subjects of the addresses were not divulged. Harold H. Emmons, formerly in charge of all Liberty motor work for the Government and an attorney of wide reputation, has been obtained as toastmaster for the banquet on the evening of the 26th. As pointed out in another column in this issue, the "idea to be put across" at the meeting is the importance to the consumer of lowering production costs.

Rickenbacker Visits Berlin Show

Major Eddie V. Rickenbacker and his bride stole a few days from their honeymoon in France at the scenes of his air battles which brought him the distinction of America's Ace of Aces, to attend the German automobile show in Berlin. At the close of the exhibition, where he was the only American automobile manufacturer reported in attendance, he and Mrs. Rickenbacker flew back to Paris.

R. N. Barnum President of Mercer

Directors of Mercer Motors Co. on October 6 elected R. N. Barnum to the presidency, succeeding R. P. Smith, resigned. Barnum is elevated from the first vice-presidency and, in turn, is succeeded in that title by W. A. Smith, general sales manager. Chairmanship of the Mercer board is naturally retained by George P. Smith, who entered into the affairs of the Company last May, when new interests took it over.

Rugg Promoted By Westinghouse

W. S. Rugg has been appointed general manager of sales of the Westinghouse Electric and Manufacturing Co. with headquarters in New York city. Rugg has been assistant to Vice-President H. D. Shute. The position is a new one.

Wright Heads Akron Dealers Body

Warren Wright, manager of the Akron, Ohio, branch of the Cleveland Cadillac Co., is now president of the Akron Auto Deal- Assn. He succeeds F. E. McClure.

L. A. Bell Joins Courier

L. A. Bell, Jr., formerly of the Lexington Motor Co. of Connersville, Ind., has joined the sales force of the Courier Motors Co. of Sandusky, O. He will travel in the South.

MARTIN LEAVES SHELDON TO MARKET FAGEOL BUS

Spring and Axle Man Quits Old Post to Enter New Field in East

Fred L. Martin, sales manager of the Sheldon Axle & Spring Co., has resigned, effective December 31, to become eastern district representative for the Fageol Motors Co., of Oakland, Cal. The Fageol inter-city safety coaches and buses, which have been developed along original lines, are to be sold direct through zone managers. Martin's new work, therefore, embraces a wide territory and is rich in possibilities, on which Martin, a staunch believer in the future of the motor bus, is himself thoroughly "sold."

Martin's connection with the Sheldon organization, and consequent identification with its products, dates back to 1911, even before the introduction of the worm geared axle. He has witnessed many transitions in the industry, and incidentally has done his part in raising the sales of his concern from $20,000 a month to several hundred thousand a month. The development of the bus business promises much for the builders of components, he believes, but his investigations into it brought forth even more alluring personal prospects in the handling of the finished product.

Lewis Now a Cadillac Manager

William W. Lewis has been appointed central district manager for the Cadillac Motor Car Co. For five years he was assistant general sales manager of the Peerless Motor Car Co.

Miller Corp. Head Europe-Bound

F. Alden Miller, president of the Miller Oil Products Corp., manufacturer of all kinds of carriage and motor car dressing specialties, polish and lubricating oils will sail for London soon. He plans to establish a foreign branch of the leather dressing division of the Corporation, now merged into the Interstate Corp., where all products will be made under one roof and disposed of through a single distributing organization.

Paul, of Venezuela, Here

Gustavo J. Paul, senior partner of the company bearing his name with headquarters in Caracas and branches in Maracaibo and other important Venezuelan cities, is in this Country. He is distributer for General Motors Corp., Studebaker, International Harvester, and other products, including Miller tires. Paul asserts he expects to double his tire sales the coming year by adopting American business methods.

Albert R. Coughlin

Albert R. Coughlin, assistant sales manager of the Durant Motor Co. of Michigan, died October 7 at Hurley Hospital, Lansing, Mich. Coughlin had been ill for two months.

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CHEVROLET FOR 1923 SHOWS REFINEMENTS

New "Superior" Models with Numerous Body and Chassis Improvements Are Offered at Same Price—Sedanette Is New Four-Passenger Type.

Many improvements, contributing toward a refined appearance and better performance, are offered in the 1923 Chevrolet "Superior" models. As being disclosed this week, the Chevrolet Motor Co., Detroit, is offering five body styles in its new line. Of these, the touring, roadster, Utility coupe and sedan are continued at the same prices as the corresponding models of the former series. Of particular interest is the new four-passenger sedanette, priced at $850, which takes the place of the former standard coupe.

The 1923 models were displayed this week in the General Motors building in Detroit and in the New York branch showrooms, where an attractive window setting, one for each of the four models, gained considerable attention. The Detroit showing is worthy of special mention by virtue of the great crowds that squeezed their way in to inspect the offerings.

The new sedanette is a two-door type with a considerably larger body than that of the coupe it replaces. It is equipped with a trunk on the rear and protecting upright body bars.

The new streamline body design of the 1923 models is enhanced by a higher radiator and higher straight-line hood, new crown fenders of heavier material, and drum-type headlights with legal lenses. The entire body is deeper, rear seat is wider, and in the tonneau of the touring and sedan three inches more room has been provided. Longer and more resilient springs have improved seat cushions. Upholstery in all models is of a better quality.

Door opening curtains have been adopted for the open cars and an oblong glass rear light installed. Other body refinements include heavier materials throughout, non-rattle hood fasteners, windshield thoroughly anchored at body, front driving compartment absolutely watertight, new type shifting lever, and pressed panel on splash guards over running boards to do away with rattle and vibration.

Gasoline tank is now mounted on the rear of all models and the G. & G. vacuum system used. Other chassis changes are such as heavier and longer frame, heavier cross-members, new cross-member at rear of engine, improved worm-type steering gear, larger wheel hubs and hub caps, and new steel springs giving improved riding qualities.

All three closed models have Fisher bodies. Gold striping has been introduced in the exterior finish. On the Utility coupe pockets have been added to the doors. Closed bodies are fitted with plate glass Ternstedt-regulated windows, straight-side cord tires, sun and rain visor, windshield wiper and a dash light.

Kelly-Springfield Prices Lower

Effective October 2, prices on Kelly-Springfield tires were reduced. The average reduction on cords was 10 per cent, and on fabrics, 20 per cent. Representative of the changes are the following:

	Cord		Fabric	
	New	Old	New	Old
30x3½	$14.65	$18.95	$11.90	$14.90
32x4	29.10	32.75	22.00	27.50
32x4½	37.80	42.40	....	....

TABLE WEEKLY FEATURE

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted) appears on pages 867-9 of this issue. It is revised to October 9.

With this week's edition, the Table has appeared in eleven consecutive issues. It is a regularly weekly feature and will continue to appear each week.

Not only is the Table appearing weekly—it is *revised* weekly. This keeps the selling information therein contained right up to the minute.

Its accuracy is assured by systematic periodical checking by car manufacturers. Its legibility—a much-commented-upon feature—is insured by the use of fresh plates for every issue.

FORMER DISTRIBUTERS OF STUTZ "JOIN UP" AGAIN

Company Reports Pacific Coast Men Return to Line Once Represented

Stutz Motor Car Co. of America finds its roster of distributers and dealers on the Pacific Coast growing through the addition of several who used to represent the Stutz in the West but later took on other lines, only to drop them now to return to their "first love." This is the assertion of the management which reports three such shifts in the last sixty days. These are the Walter M. Brown Co., Los Angeles; Bert Latham, Inc., San Francisco and Oakland; and the Stutz-Oregon Co., formerly the Autocrest Motor Sales Co., Portland. In addition, the Parsons Motor Car Co., continues to serve as distributer for Seattle territory.

"We feel we are making progress under our new program of development," Fred Wilson, general sales manager, declares. "We are moving ahead in a constructive way, building cars on a basis that absolutely precludes the overloading of a single distributer or dealer connection. Our retail sales and our production have not been at a variance of more than one per cent at any time since March 1. August was the biggest month in our entire history and September was very satisfactory."

THOMPSON NOW HEADS BOARD OF OVERLAND

Toledo Hardware Man Succeeds Chas. B. Wilson—Business Earns Four and a Quarter Millions in Three Months—Car "Eminently Satisfactory."

Henry L. Thompson has been elected chairman of directors and chairman of the executive committee of the Willys-Overland Co., following the resignation of Charles B. Wilson, briefly recorded by AUTOMOBILE TOPICS last week. Thompson is a prominent Toledo business man, a member of the firm of Bostwick & Braun, and is prominent in hardware, as well as local business circles. He became an Overland director last February, and has not only lent his close attention to the business since that time, but has the entire support of the Willys-Overland interests.

Thompson, it may be recalled, was elected to the Board, together with W. L. Milner, George M. Jones and Gordon B. Mather, all of Toledo, at the time when Walter P. Chrysler and three other non-resident directors retired. These men have since taken an active part in the re-establishment of the Overland business. This has had an impressive effect upon the status of the concern among the industry's leaders.

Concrete evidence of the present position of the business was offered by Wilson, who said, following his resignation, "Overland has been re-established and has just come through a period of gratifying earnings, $4,283,000 net for June, July and August, thanks to good organization and a product that is eminently satisfactory. My deep interest remains with Willys-Overland," he added. "There is no reason why the Company should not continue a dominant factor in the automobile industry."

When, in 1920, Wilson was urged to assume the larger responsibilities of the business in Toledo, he pointed out, it was the dominating thought that he would ask to be relieved after the Company had been brought back to a satisfactory earning basis. Feeling a deep sense of gratitude and personal friendship for John N. Willys, and sensible of the obligation existing because of the relationship of the Wilson Foundry & Machine Co. to the business, he went in. In somewhat the same way he had left the foundry company to take over the management of the Curtis Aeroplane and Machine Co. during the late war, it will be recalled.

His resignation, accepted at his own insistence, leaves him free to return to his more intimate responsibilities in his home city of Pontiac. Wilson, however, not only remains an Overland director, but is president and director of the Willys-Morrow Co., director of Willys-Overland, Inc., as well as president and director of the Wilson Foundry & Machine Co.

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MOTOR BUSES BECOME MODERN MAGIC RUGS

Department of Commerce Looks for Trip Around the Earth in Them Before Long—Reports of Foreign Agents Disclose Growth of Industry.

Rivaling the magic carpet of ancient days is the modern motor bus, according to the Department of Commerce. At the rate motor transportation is spreading throughout the world, the Department professes to believe that the trip "'round the globe" will soon be possible. The assertions are based on the increasing number of reports reaching the automotive section of the Department concerning the developing markets for and widening use of buses.

Summarized, the information relayed to American business from Uncle Sam's commercial headquarters, is as follows:

Syria: Bus passenger transportation in the Damascus region has increased very much in importance during the past six months. The Beirut-Damascus railroad, was up to a short time ago charging $5 for a third-class railway ticket to Beirut, 86 miles, and as the same trip could be made in about half the time in an auto bus for $3.30, the business of the railway company fell off alarmingly and did not improve when the price of a third-class ticket was decreased to $3.45. As a result the railway company inaugurated a motor bus service of its own, the price of a ticket on which is $2.05.

Switzerland: Consul Haskall reports that Geneva is the first Swiss city to carry extensive plans for the adoption of auto buses. A company has been formed for the purpose of operating three lines, the concession for which, it is anticipated, will be granted shortly. The cars for the new bus lines will be similar to those in use in Paris, only somewhat smaller, with a total capacity, including that of the rear platform, of thirty-five passengers. The buses, which will be equipped with pneumatic tires, will be furnished by the Saucer Company of Arbon. The introduction of bus lines is apparently not so much in response to a need for more extensive transportation facilities, but rather a venture in underselling the tram lines, 15 of which constitute the present system, embracing a length of 119 kilometers. The rates announced by the bus company are appreciably lower than those of the trams.

Arabia: Consul Raymond Davis, Aden, reports the conversion of taxicabs into buses as an unusual development caused by a ruling recently passed compelling taxi drivers to assemble their cars in certain prescribed taxi stations, and to wait there for passengers, leaving in order of priority instead of running up and down the streets soliciting business as has been their custom heretofore. To make matters worse for taxi drivers there were several automobile trucks following a more or less fixed schedule and route to which the above ruling does not apply. These buses carry three to four times as many passengers at about one-half the rate of the taxis and are very popular since most of the natives in Aden are of limited means. After an unsuccessful appeal to the authorities taxicab drivers started about one month ago to change their cars into buses, of which there are now six in running order and several more in the course of construction. The bodies to fit the buses are made locally and at a comparatively low price.

OUTSIDE REPAIR MAN VIEWED WITH ALARM

(*Continued from page 825, third column*)

distressed to discover that in order to make the shop pay its way they must fix their own prices regardless of competition. This means that the outside shop often underbids them, though not invariably.

If, in addition, the outside shop comes to the dealer for replacements and is given a trade discount, the dealer may make some profit on his parts sales, but finds himself competing as far as his labor and overhead are concerned, with a shop which, he is often tempted to think, has no moral right to exist. But if he refuses to supply him, the outside repairman may buy substitute parts—as he is often very apt to do anyway—in which case the owner gets less than his money's worth and the local reputation of the car may suffer in consequence. This is distinctly a bad thing.

All this, of course is "old stuff" to men who have grown up with the business, but prejudice against the unauthorized shop is growing more violent as competition becomes keener in the selling end of the industry. It creates a real stumbling block to some of those who are striving to develop service on broad lines, because a great many dealers, and some men attached to the factories, have a feeling that the outsider should be excluded from all benefits accruing to the enfranchised dealer, including the benefit of systematic education.

On one side of the dividing line of opinion therefore are those who are convinced that the industry will benefit most by educational efforts, sales helps and distributive facilities projected and developed solely with an eye to the satisfaction of the consumers' needs without regard to whether such facilities are linked with the car builders. On the side of the line are those who believe that such a development should apply solely to local organizations which are directly affiliated with the manufacturers.

Dealers clamor for protection against the outside shops, and factory men in a good many instances, but not all, hold that it is right they should be protected. A tightening up of agreements to the exclusion of the outsider, no matter who he is, and the concentration of the dealer's service and repair work on cars for which he holds selling rights, therefore, are earnestly advocated in many quarters.

This goes so far that in some instances where service association work is progressing nicely up to a certain point, the time comes when it is proposed to limit its benefits to dealers. This is sometimes carried even to the length of seeking to exclude from service meetings, representatives of unattached shops.

Over against this trend is the marked, and ever growing influence of the outside shops themselves, many of which are well conducted establishments, some of which even go so far as to specialize in work on certain brands of cars. Added thereto is the influence of the specialty service station, taking care of work on electrical equipment, tires, bodies, tops, carbureters and sometimes springs. There are many cases where even the enfranchised dealer prefers to send out work on units so serviced, rather than to carry the equipment and specially trained help necessary to take care of it himself. In fact there are a number of lines, of which, of course, tires constitute the outstanding example, which many dealers simply will not bother with.

Another factor, and one of no mean importance, is the parts station, such as is found in every important automobile center, where parts and supplies for all makes of cars are carried. These establishments are of varying reputation, just as are the outside repairshops, and range all the way from the bearings and gear supply houses, connected with reputable manufacturers, down to the "orphan" parts dealers and those known as "pirates."

These forces make it easier for the outside shop to get along, both by supplying it and by keeping down the cost of supplies. Thus, the outside repair man, being bound by no factory ties, has no compunctions about slipping into a job any parts that will fit in or fall in, but stands or falls on his own reputation.

The enfranchised dealer, by contrast, has the advantage of being the logical source of repairs and supplies for the lines he represents, but often is inclined to concentrate his own efforts on new car sales, to the exclusion of everything else. In some instances he is so strongly urged in that direction by the factory that he cannot well do otherwise.

Thus where the outsider lives by his shop, the regular dealer is apt to neglect it. In some instances such neglect is found, after a few years to have practically sounded the deathknell of his prospects as a dealer, since, for no other reason, the car he sells has come to have the reputation of being a "bad actor."

The problem, as a whole, is recognized as being one of the most serious that has ever faced the industry, not even excepting the used-car problem. Furthermore, as automobile retailing becomes increasingly difficult, the general tendency is to divert attention from it.

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BAYERLINE TELLS OF COLUMBIA'S SUCCESS

Informs Stockholders of Increases in Business—More Than 2,000 Cars Shipped During July and August—Officials Acquiring More Stock.

Columbia Motors Co. continues to enjoy increases in business and to earn a substantial profit, according to J. G. Bayerline, president, who this week despatched to all stockholders a resumé of the condition of the concern. Since last Spring, when high priced inventory was worked off, the Company has been making money, Bayerline declares.

"We are making a profit on our light six touring car and are in a position to increase our profits from now on with greater volume of incoming closed car orders, on which the profit is larger," Bayerline reports. "The officials and heads of the Columbia company are not selling any portion of their holdings but on the other hand, have been purchasing stock for the past few months.

"We have increased the number of our dealers and are adding them daily. Our new model is performing even better than we had hoped and the service expense on our part is less than we expected. We shipped 1,004 cars in July and 1,010 in August. The cash discount earned in August was $11,000 and our earnings for that month on an annual basis were 52 per cent on the present market value of the stock."

Jordan Sales Emphatically Good

Jordan sales prospects in the Metropolitan area are "emphatically good," according to Edward H. Sherwood, the New York distributer for the Jordan Motor Car Co. By the end of this month, Sherwood says, he will have placed 1,000 October sales to the credit of the local establishment.

Duesenberg Getting Into Action

Duesenberg Automobile & Motors Co., Inc., is rapidly getting into action after the long period of incubation necessary in going into production with a high-grade car of exclusive design. Starting two years and a half ago with little more than the brains and experience of Fred S. Duesenberg as a nucleus, the business has been put together painstakingly, no limit being placed upon either the time or expense necessary to develop a superlative car. With provision of needed factory space this Summer it has been possible to arrange definite production schedules and bring the cars through in proper sequence. General Manager Chester S. Ricker reports that this phase of the work is now well in hand and that the plant will soon be in shape to handle capacity orders. In the meantime General Sales Manager J. E. Roberts has been making careful selections in the dealer field, and already has most of the more important points satisfactorily covered.

ENGINEERS REPORT STATUS OF AUTOMOTIVE STANDARDS

Headlight Specifications and Colors for Traffic Signals Included

Third quarterly report for 1922 of the activities of the American Engineering Standards Committee, New York city, which is handling 106 standardization projects applying to various branches of industry, shows the present status of three subjects under the automotive classification. These are automobile headlighting specifications, colors for traffic signals, and safety code for aeronautics.

The headlighting specifications have been approved in general consonance with the practices approved by the automobile industry and submitted for final adoption. Work on the aeronautic code, however, is in the stage of being drafted for publication, while the question of colors for traffic signals is still in committee. This committee, it will be recalled, is the present repository for the suggestion of yellow taillights for all vehicles.

Dort Names New Representatives

A. F. Jenkins and A. J. Shaw have been named district sales representatives by the Dort Motor Car Co. Jenkins has been factory superintendent for several years past and Shaw recently was in charge of the car order department.

Peterson Motors Appoints Surrell

W. W. Surrell has been appointed wholesale manager of Peterson Motors, Inc., Philadelphia, and Peterson Motors, Inc., Baltimore, Jordan distributer. Surrell, whose office will be at Philadelphia, has been assistant sales manager of the Jordan Motor Car Co. for five years past.

New Durant Distributer

Incorporated for $100,000, an automobile sales company has been formed in New Haven, Conn., for the distribution of Durant and Star cars. William F. O'Brien, New York; Orlando Pelliccia, New Haven; Peter Trenchi, New Haven, and Solomon A. Campbell, Newton, Mass., are the incorporators.

Smith Promoted by Briggs & Stratton

Lee H. Smith, formerly in charge of appointment of service stations and sale of equipment to the regular trade in the Cleveland district for the Briggs & Stratton Co., has been made assistant to H. V. Rohm, sales manager of the Company. Smith's new headquarters will be established at Milwaukee.

MOON CONTINUES TO BETTER PEAK SALES

One Month's Output Now Equal to Six Months' Two Years Ago—Over 1,000 Cars Shipped in August—Increase Uniform Throughout Country.

Sales of the Moon company continue to shatter records, one month's production now being equal to a half-year's output in 1920, the former banner year. In August, for example, the peak of over 1,000 cars produced and shipped was reached, this being 500 per cent better than a year ago. The increase in sales is spread uniformly throughout the Country.

William J. Coghlan, New York, Moon's oldest and largest distributer, for example, sold 1,000 cars in the first eight months of this year, a 260-percent increase over the same period last year. September sales were ahead of July, Coghlan's previous record month, and he is now getting his cars in by express to catch up with demand.

Jack Quinlan, Chicago, in the first eight months increased his sales 300 per cent over last year's same period, taking 200 cars in August alone. Mackin Motors, Inc., Philadelphia, which only took the Moon distributership at show time, has sold 400 cars since January. Igou Motor Co., one of eight sub-dealers in St. Louis, has averaged better than a car a day; Mexico City, Mexico, is taking 25 cars a month. Over 50 cars a month are reported for Portland, Me., Cincinnati, Boston and Pittsburgh.

Several dealers are selling over 25 a month, among the places being Austin, Tex., Harrisburg, Pa., Richmond, Va., Pawtucket, R. I., New Orleans, La., Lincoln, Neb., Denver, Col., Rochester, N. Y., Houston, Tex., and so on. In Quincy, Mass., with less than 50,000 population, sales are going better than 40 cars a month; Metz & Hart, Evanston, Ill., averages 35 a month.

Heinemann Joins Engineering Firm

W. E. Heinemann has severed connection with the Templar Motors Co., as eastern representative. He is now with the Matthews Engineering Co., Sandusky, O.

Cushing Rejoins Winningham

George W. Cushing has returned to Detroit to the advertising and merchandising staff of C. C. Winningham, having resigned from the Buffalo office of Barton, Durstin and Osborn. The connection is new but its associations old. Cushing was Winningham's assistant at the Hudson Motor Car Co., for several years, while the latter was director of sales and advertising, succeeding him when Winningham opened his agency, which handles the Hudson account.

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TIMKEN SWINGS OVER TO NIBLESS BEARINGS

Program Calls for Conversion of Entire Line—Five Years' Experience Justifies Change—Maximum Capacity Gained with Minimum Weight.

Timken roller bearings hereafter are to be of the nibless type with plain one-piece cages. Bearings of this type have been built in constantly increasing quantities for a number of years, although the characteristic nibbed roller types have also been continued, and are still being produced. That the ultimate plan is to supplant the nibbed pattern of roller, therefore, is unexpected intelligence. It is made public through the announcement of Manager of Sales Harry J. Porter in a letter to the trade.

"The original Timken bearing used rollers with a head or nib on each end. Small pins or pilots integral with the roller heads, entering holes in the cage end rings, served to preserve roll alignment. The cage and rings were tied together by posts or rods riveted in place," the trade letter explains.

"Although satisfactory, this type was, after much experimentation, superseded by a one-piece cage made from sheet steel by a series of press operations. . . . To reduce bearing width, it was found desirable to make a bearing with a single nib on the rollers, the same type of pressed steel cage still being employed.

"Throughout the many intervening years constant attention was given to the improvement of the bearing as a whole and of the cage in particular. After many exhaustive and thorough tests, during which time no less than six new cages were designed and produced, the newer, improved, one-piece type 'E' cage, was evolved and put in production during the late war, in 1917. This cage allowed the use of from 25 to 40 per cent more rollers, capacity being increased in proportion.

"Almost simultaneously, with the evolution of the type 'E' cage, it was found desirable in some sizes to take both nibs from the rollers. At this time we began our program slowly to convert our entire line to this new type of bearing, employing the type 'E' cage with the headless or nibless rollers. This new ultimate bearing is the type 'V' bearing.

"The type 'V' cage is made of much heavier stock than the 'A' type and combines rigidity with simplicity and reasonable weight, due to the careful distribution of metal. The bridges which separate and align the rollers are accurately cold forged at the proper contour. The combination of this sturdy cage with the nibless roller has, during the past five years, given our customers a Timken tapered roller bearing of maximum capacity with the minimum amount of weight and space occupied. Since 1917 millions of these bearings have been produced and are giving satisfactory service.

"Our program is to convert completely our entire line to this new 'V' type bearing. It has required a long time to change our tooling equipment due to the heavy, insistent demands from our customers, so that while millions of these bearings have been produced and are in service, considerable time will still be required to complete the program. Many sizes of 'V' type bearings are now in production, and as fast as the necessary tools and equipment can be made, other sizes are being added to the list."

Ford to Make Four-Door Sedan

Production by the Ford Motor Co. of a four-door sedan is reported as being well under way. This new model will sell at a slightly higher price than the present two-door model, it is understood. The old type will be continued for the time being, but ultimately will be replaced by the newer design. No changes will be made in the Ford chassis.

HOLLEY CARBURETOR PLANS TO DOUBLE FACTORY SPACE

Company Finds Need for More Room as Its Business Increases

Holley Carburetor Co., Detroit, plans further expansion of its factory floor space. Construction of an addition has already begun which, when completed, will furnish practically double the room, 33,600 square feet, provided at present. It will be of saw-tooth construction, with an "all-glass" roof and one story in height.

The new expansion indicates the increase in business enjoyed by the Company in the past two years and officials assert that production will be 100 per cent greater this year than in 1919, when the present factory was started. One of the features of the Holley plant is that nearly every machine is driven by a separate motor, the layout and much of the special equipment being designed by officials of the concern.

Packard to Celebrate 23rd Anniversary

Preparations are being made by the Packard Motor Car Co. to celebrate the twenty-third anniversary of the production of its first automobile. November 6, 1899, saw the first Packard completed at Warren, Ohio. The Company's factory was moved to Detroit in the Fall of 1903.

S. O. of Indiana Cuts Gas Price

Reduction of two cents a gallon in the price of gasoline has been made public by the Standard Oil Co. of Indiana. This cut makes the Chicago base price 19 cents a gallon at the tank wagon, and 21 cents at the service station. It means a saving of $2,500,000 a month for automobile owners, according to estimates.

AC SPARK PLUG CO. TAKES OVER SPHINX

Acquires English Concern Along with French Maker of Oleo Plugs—Champion, Back in America, Reports Good Will Toward American Products.

Albert Champion, returning to America after a five-months' visit to his native land, France, and other European countries—a visit that might be termed a honeymoon since his marriage took place but a few days before he and his bride sailed late in February—brings back the news that the AC Spark Plug Co., of which he is president, has taken control of the Sphinx Mfg. Co. of England. Furthermore, the French concern making Oleo plugs has been acquired by the AC company.

The consolidations of these foreign houses with the AC concern, a subsidiary of the General Motors Corp., brings home to Americans that they need no longer look to Europe for any equipment for motor cars. For Champion found that the Sphinx and Oleo plug makers, in joining forces with AC, admitted the American product's superiority.

"For years, the Sphinx company had believed their plugs to be as good as they could make them," Champion explains. "But when they came to examine our American AC's they were quick to acknowledge the superiority and as a result we have taken control of their plant in England for British and Colonial markets. These plugs will continue to be known as the AC-Sphinx. The same is true of the French concern making Oleo plugs."

For several years the AC-Sphinx has found a ready sale abroad. The product has been marketed in the past under a working agreement with the G. M. C. subsidiary.

Champion also points out that Europe no longer considers American-built automobiles inferior to the products of her own factories. During his stay abroad, he talked with the representative automotive men of the Continent and found this flattering opinion general.

"The best informed automobile men of Europe," he says, "are ready to admit the fine quality of American automobiles and equipment. The fine service of American automotive equipment during the war undoubtedly helped to awaken this appreciation. The victory of an American car in the Grand Prix last year, also had its effect."

Public Service Official Favors Buses

Motor vehicles as common carriers have come to stay, according to Charles G. Blakeslee of the Public Service Commission, New York. This opinion was expressed in an opinion in which he favored the granting of an application for the operation of a bus line between Norwich and Syracuse.

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MACK NOW PRODUCING 500 TRUCKS MONTHLY

Full Year's Output Expected to Reach 6,000—Earnings of Third Quarter Not Far Behind June Period—Costs of Gasoline Rail Cars Compared.

Mack Trucks, Inc., New York, is running at a production of over 500 trucks a month. According to schedule for the balance of the year, the full twelve months' output will approximate 6,000 trucks. This is to be compared with 7,020 trucks turned out in 1920, the Company's best year.

For the three months ended September 30, earnings of the Company are understood to be not far below net profits of the June quarter, which after charges and taxes were $1,315,633. For the nine months ended September 30, net profits after charges and taxes will approach $2,700,000. Outlook for the last quarter indicates no slackening in business.

Mack's two new rail cars, the smaller one selling at $8,500 and larger "AC" model at $16,000, are opening up a new source of profit. In connection with these rail cars, operating results from Narragansett Pier are illuminating as to the advantage of gasoline-propelled equipment of short-haul lines.

On the Narragansett railroad, connecting with the New Haven line at Kingston, R. I., the average daily operating cost of steam trains was $143, compared with $37.71 for gasoline rail cars. Two-car steam trains, operating 150 miles daily, carried a crew of five with wages aggregating $46 a day, whereas the gasoline car has a crew of two with total wages $17.50. Fuel cost, figuring gasoline at 28 cents a gallon, is $5.25 as against $41.25 spent for coal. Daily supply, roundhouse and repair expenses for the gasoline car averaged but $6.96 against $23 for steam trains.

Two-car steam trains seated 120 passengers, making average cost per seat per mile $.0079, whereas with the 36-passenger gasoline car it is $.0058. A better and fairer comparison, however, is the total cost per train mile, due to the fact that traffic was rarely heavy enough to fill the steam trains whereas the gasoline cars generally operate close to capacity, making gross revenue about the same for each. This was 95 cents for steam and 21 cents for the gasoline rail car.

Hupp Votes to Retire Some Stock

Hupp Motor Car Corp., Detroit, will retire 4,000 shares of preferred acquired by purchase, 1,921 preferred shares acquired by conversion into common, and 130,790 common shares held in reserve for preferred stock conversion. Proposal to do this, reported in these columns under date of September 9 was ratified by stockholders at their annual meeting. Capital stock is now 9,079 shares of $100-par preferred and 519,210 shares $10-par common, valued at $6,100,000.

Stoughton Speed Truck Now $1,095

Stoughton Wagon Co., Stoughton, Wis., has reduced its model "C" light speed truck from $1,240 to $1,095. This is a 131-inch wheelbase job with bevel-gear rear axle, and equipped with electric lights and starter, among other items.

McCord Plant at 70 Per Cent

President McCord of the manufacturing company bearing his name, reports this week that factory operations are at about 70 per cent of capacity and increasing as prospects improve. The axle works are running low but the radiator and gasket departments are above normal. Body output is about 60 per cent. Net earnings for the first eight months of 1922 approximated $500,000 and are now at the rate of $1,000,000 yearly.

GOODWIN-GUILDER COACH CHASSIS IN PRODUCTION

Walter C. Guilder and Arthur C. Brady Identified with New Project

A 25-30 passenger bus chassis has been put into production at the Poughkeepsie, N. Y., plant of the Goodwin Car & Mfg. Co., Inc., builder of the Gilman-Taylor and Goodwin steel freight cars. The chassis is known as the Goodwin-Guilder passenger motor coach, so named for Walter C. Guilder, designer and engineer in charge of production. Guilder was connected with engineering and production of Mack Bros., Allentown, Pa., later with International Motor Truck Co., maker of the Mack truck, and in 1915 joined the Kelly-Springfield Motor Truck Co. in a like capacity. Sales are being directed by Arthur C. Brady from executive offices at 17 Battery place, New York. Brady claims the distinction of

The Goodwin-Guilder bus has already proved itself in service on the 96th street municipal bus line in New York and in Paterson, N. J. While tentative schedule only calls for 100 buses, both the Poughkeepsie and Clearing, Ill., plants can easily expand on production with demand. Salient features in the chassis design are: one step, the floor being only 18 inches from the curb line; wide rear tread to prevent overturning and minimize skidding; low center of gravity; and long flexible riding springs. Chassis frame, 35 inches in front, is 51 inches wide at the rear. List price of the chassis alone is quoted at $5,000.

OFFER MORE BIDS FOR NEW PROCESS GEAR CO.

Representatives of Two Groups of Capitalists Present Proffers for Works—Judge Decides to Permit Further Action Despite Protest.

Despite the protest of United States Attorney Hiram C. Todd, council for T. W. Warner, vice-president of Durant Motors, Inc., Judge Cooper at Syracuse, N. Y., has decided to permit further bidding for the New Process Gear Co., last remaining unsold property of the Willys Corp., it is declared. Warner was successful in bidding $1,904,000 for the plant but the Court failed to confirm the sale after, it was understood, other interests had represented to him that although they had deposited the necessary amount to qualify as bidders they were unable to be present at the sale.

S. Standwood Mencken, representing the Charles A. Dana interests, and Henry W. Williams, representing a group of Baltimore capitalists, are the two new bidders for the property. Both have told the judge they will bid higher than Warner's present offer when the matter comes up officially on October 23.

Dana, it is understood, has posted $50,000 as evidence of good faith, as is customary. Williams declined to disclose the names of the men he represents or to give any information as to the purposes for which they desire to use the plant. Todd's protest was based on the fact that the plant had been sold to Warner last August and that there had already been one adjournment for the purpose of allowing other bidders to appear.

Elgin Cuts Prices $50 to $260

Elgin Motor Car Corp., Argo, Ill., has reduced the price of its touring model $170 to the new level of $1,125, at the same time reducing other "K-1" 1922 models from $50 to $260. New and old lists compare:

Model	Old	New	Change
Touring	$1,295	$1,125	$170
Scout	1,345	1,125	220
Special sport	1,425	1,165	260
Sedan	1,695	1,645	50

Ford Plans Zinc Oxide Plant

Engineers in the employ of Henry Ford have been surveying the Wisconsin and Kickapoo rivers to ascertain their possibilities for waterpower. The object is to develop hydro-electric power with the view of establishing a zinc oxide plant for the manufacture of zinc to be used in the making of automobile tires. Ford representatives are also inspecting the zinc-producing mines around Platteville, Wis.

For the next seven days consult the Table on pages 867-9. Remember—it appears, and is revised weekly.

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BIG GROWTH SHOWN BY GENERAL TIRE CO.

August Financial Statement Gives Big Increase in Cash and Profits—Surplus Raised from $200,000 to $892,000—Notes Now Entirely Paid Off.

Examination of the August 31 balance sheet of the General Tire & Rubber Co. shows immediately the large growth in assets and the satisfactory condition of the concern. The statement speaks for itself showing increases in cash from $192,000 to more than $365,700 and in surplus from $200,000 to $892,000.

In addition to the facts set up in the tabulation of assets and liabilities, it is asserted by General Manager O'Neil that "General owes nobody," the $100,000 notes payable listed in the liabilities having been paid off. Furthermore he declares the concern is now turning over its inventory figure about once in twenty days.

"Any high priced raw material we may have had, was manufactured, sold and the money collected fully a year and a half ago," O'Neil states. "This will easily be our greatest year of growth,—and our activities are confined strictly to manufacturing and selling, not to stock promotion. We are now planning to double our plant capacity. We can do this at remarkably low cost and with very little building because of the compactness and arrangement of the plant and because of some specialized machinery that we ourselves have developed."

GENERAL TIRE & RUBBER CO.

Condensed Balance Sheet, Aug. 31, 1922

ASSETS	
Cash	$365,769
Liberty bonds and treasury certificates	200,000
Accounts receivable	1,154,682
Notes receivable	581,692
Stock in other companies	13,150
Inventories	511,885
Land and buildings	271,859
Machinery	223,747
Furniture and fixtures	7,102
Patents	1
Deferred charges	9,777
Total assets	**$3,339,667**

LIABILITIES	
Accounts payable	$115,363
Notes payable	100,000
Reserve for taxes, etc	74,477
Capital stock	2,157,700
Surplus	892,126
Total liabilities	**$3,339,667**

Spicer Retires More Notes

Spicer Manufacturing Co. has retired another $600,000 of its six per cent serial gold notes, dated October 1, 1922, bringing the total of this issue paid off up to $1,800,000 and leaving only $1,200,000 to be met in 1923 and 1924. The Company is paying off July 1 of each year slightly more than $71,000 of its ten-year bonds. Business is going ahead at a remarkable rate, the management reports, and net results are expected to be high.

Wickwire Spencer Stock Changed

New York Stock Exchange has stricken from its list Wickwire Spencer Steel Corp. common stock, par value $5, and has admitted in its stead common stock without par value. The announcement was made this week and follows lines projected in the proposed reorganization of the Corporation's structure.

Birmingham Stock Salesmen Indicted

Samuel A. Carlson, mayor of Jamestown, N. Y., Guy F. Allen, former acting treasurer of the United States; James B. Mansfield, engineer, and twenty-four others have been indicted by the Federal Grand Jury at Washington on charges of conspiracy to use the mails to defraud. The charges grew out of the sale of stock in the Birmingham Motors Corp.

Templar Plant to Reopen Soon

Templar Motors Co. plant at Cleveland is to reopen within a few days, according to T. L. Hausmann, who is in charge of the business, following its petitioning into receivership. The factory was closed on October 9 for inventory, but is to resume upon completion of the checking process. Meanwhile, President M. F. Bramley is developing plans for reorganization.

DIVIDENDS DECLARED

General Motors Corp.—Regular, quarterly dividend of $1.50 on the preferred stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.50 on the 6 per cent debenture stock; payable November 1. 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.75 on the 7 per cent debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

Fisher Body Corp.—Dividend of 1¾ per cent on the preferred stock; payable November 1, 1922, to stockholders of record October 21, 1922.

Fisher Body Corp.—Dividend of $2.50 on the no par common stock; payable November 1, 1922, to stockholders of record October 21, 1922.

Hupp Motor Car Co.—Regular, quarterly dividend of 2½ per cent on the common stock; payable November 1, 1922, to stockholders of record October 14, 1922.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8 per cent preferred stock; payable November 15, to stockholders of record November 1, 1922.

Miller Rubber Co.—Regular, quarterly dividend of 2 per cent on the preferred stock; payable December 1, 1922, to stockholders of record November 10. 1922.

Moon Motor Car Co.—Regular, quarterly dividend of 25 cents; payable November 1, 1922, to stockholders of record October 16, 1922.

Motor Products Corp.—Regular, quarterly dividend of $1.25; payable November 1, 1922, to stockholders of record October 20, 1922.

Mullins Body Corp.—Regular, quarterly dividend of $2 on the preferred stock; payable November 1, 1922, to stockholders of record October 16, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922 to stockholders of record October 20, 1922.

United States Rubber Co.—Regular, quarterly dividend of 2 per cent on the first preferred stock; payable October 31, to stockholders of record October 16, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automobile securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended October 11. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	19½	19¼
†Advance Rumely, preferred	56	55
Ajax Rubber	16⅜	15¾
Allis-Chalmers	58⅜	56¼
Allis-Chalmers, preferred	103	103
American Bosch Magneto	43⅞	42½
Case (J. I.) Plow	5¾	5½
Chandler Motor	64¼	61¾
Chicago Pneumatic Tool	83½	82
Continental Motors, common	11⅜	10¼
Durant Motors	53	47½
Durant Motors of Indiana	14¼	13¾
Fisher Body	140	125
Fisher Ohio Body, preferred	95½	94½
Fisk Rubber, common	13½	12⅞
General Motors, common	15¼	14⅜
General Motors, preferred	85½	84½
General Motors, 6% deb	85½	84½
General Motors, 7% deb	99	98
Glidden Co.	15	13⅝
B. F. Goodrich, common	35¼	33¾
B. F. Goodrich, preferred	83⅞	81½
Goodyear, common	10½	9¾
Goodyear, preferred	29½	28⅞
Gray & Davis	13¼	12
Hayes Wheel, w. i.	33⅞	33¾
Hudson Motors	21⅞	21
Hupp Motor Car, common	23	22
International Harvester, new (5)	112½	108¼
International Harvester, pf., new (7)	119	118⅞
*Kelly-Springfield Tire, common	43⅝	41⅝
Kelly-Springfield Tire, pf. (6)	85	85
Kelly-Springfield, pf. (8)	103	103
Kelsey Wheel (6)	104½	101
Kelsey Wheel, pf. (7)	104	102
Keystone Tire	8½	7⅝
Lincoln Motors	2¼	2
Mack Trucks, Inc	59⅞	58¾
Martin-Parry	31⅜	29⅞
Maxwell Motors, Class A	58½	55¾
Maxwell Motors, Class B	19	17
Mercer Motors	3	2¾
Moon Motors	17¾	16½
Packard Motors, common	17⅜	15¼
Packard Motors, preferred	92	89
Parish & Bingham	11½	11¼
Pierce-Arrow, common	15¼	13¾
Pierce-Arrow, preferred	36¾	34
Reo Motors	13⅞	13½
Republic Motor Truck	3	2¾
Saxon Motors	5	4½
Stewart-Warner Speedometer	53	51¼
Stromberg Carburetor	58¾	55½
Studebaker, common	137	128⅝
Studebaker, preferred	115	115
U. S. Light & Heat	1⅛	1⅛
U. S. Rubber, common	55¼	52¼
U. S. Rubber, 1st preferred	100⅝	99
Westinghouse Air Brake	100½	99½
Westinghouse Electric & Mfg	63⅞	62⅛
Willys-Overland, common	7½	6⅞
Willys-Overland, preferred	44⅜	41½

†Par $50. *$25.

Prices for automobile securities quoted in Detroit during the week ended October 10 are as follows:

	High	Low
Auto Body	4½	3⅞
Charcoal Iron, common	2	1
Charcoal Iron, preferred	2½	2
Columbia Motors	3¼	2⅛
Commerce Motor	3	3
Continental Motor	11⅛	10⅜
Edmund & Jones, common	25½	24
Federal Truck	20	19½
Ford of Canada	423	413
General Al. & Brass	9½	9¼
Motor Products	91	88
Motor Wheel, common	13	12
Packard Motor, common	16⅞	15½
Packard Motor, preferred	91	88
Paige-Detroit Motor Car, common	25¼	23½
Reo Motor (new)	14	13¾
Timken Axle, common	29	27½
Timken Axle, preferred	89	88
Truscon Steel common	19½	16
Truscon Steel, preferred	9¾	9¾

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CHALMERS ADJUSTMENT PUT INTO OPERATION

Plan Declared in Effect as 90 Per Cent of Note Holders Agree—Maxwell to Issue Securities on or Before November, Under Present Schedule.

Chalmers Motor Corp. readjustment plan was declared operative on October 10, the necessary 90 per cent of the $3,150,000 notes of the concern having been deposited with the Chalmers Noteholders' Committee for exchange for Maxwell Motor Corp. securities. Thus another step in the Chalmers-Maxwell agreement of readjustment, dated August 31, 1922, has been taken. The failure to meet interest payments on the first mortgage notes involved, due April 1 last, was, as was pointed out in AUTOMOBILE TOPICS under date of April 8, solely a means taken to get a point of contact with the noteholders before the actual maturity of the notes themselves should make their refunding a matter of more immediate concern.

It is understood that more than $1,500,000 of the notes have signified willingness to take 10 shares of Maxwell "A," 10 shares of Maxwell "B" stocks and $60 in cash for each $1,000 note instead of the $800 cash settlement, the alternative offered. The small minority of undeposited notes will be given until November 6 to assent to the plan by handing their certificates to the New York Trust Co., depository. The note deposit certificates stamped as assenting to the plan are likewise given an extension until November 9 to be turned in.

The exchanged certificates are deliverable by the Maxwell corporation on or before November 19. It is figured by those interested that if only the minimum of $1,500,000 of notes accept the exchange-for-stock basis, a total cash outlay of less than $1,400,000 will be required of the Maxwell corporation to effect the transaction.

Further steps contemplated in the readjustment of Chalmers affairs were not made public this week but, under the plan, title to the properties is vested in the Maxwell company. It is stated in an announcement sent stockholders on the 10th that "Certificate holders not availing of said offer (to exchange securities) may ultimately receive but a distributive portion of the proceeds of the sale."

Griffin Wheel Cancels Some Stock

At a meeting last week of the stockholders of the Griffin Wheel Co., it was voted to cancel 16,900 shares of preferred stock of a par value of $100 each held in the treasury. This reduces the preferred from $9,000,000 to $7,310,000.

Harroun in Bankruptcy

Harroun Motor Car Co., Wayne, Mich., was formally declared bankrupt by the Detroit Federal courts on October 10. The petition of the creditors to have the concern so declared was made several years ago, but the directors thought they might be able to put the business back on its feet. The plant has been idle since the Armistice, as far as car manufacture goes, as was pointed out in these columns on July 1, and the efforts of the directors to keep the firm afloat for four years by utilizing the property in other ways constituted a difficult and surprisingly successful task.

White Denies Merger Rumor

Constantly recurring rumors of a proposed consolidation of the White Motor Co. with one or more other companies are without foundation in fact, declares that Company. The "present judgment of the directors is that a consolidation would not benefit this company."

Grand Rapids Tire Pays Dividend

Directors of the Grand Rapids Tire & Rubber Corp. have authorized the payment of the regular quarterly two per cent dividend on the outstanding preferred stock. Payment will be made to stockholders of record September 20.

Receiver Named for Atlas Battery

Demands of creditors and over-production are given as causes for a receivership appointed for the Atlas Electric Storage Battery Co., Greenville, Mich. The Company was organized in 1917 by H. L. Baker, H. P. Belknap, Roy C. Esker, and C. F. Nostgen. Dissolution proceedings will be started October 31.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended October 10 are as follows:

	High	Low
Firestone	79	73
Fisher, Ohio	50	45
Goodyear	10¾	9
Goodyear, preferred	30	26½
Grant	½	¼
Grant, preferred	5¾	3
Jordan, common	235	210
Jordan, preferred	85	82
Peerless	60	59
Standard Parts	4	3
Standard Parts, preferred	21	19
F. B. Stearns	24¼	20
Torbensen Axle	26	24½
W-S-M, common	40	34
W-S-M, preferred	73	65
Winton, preferred	35	28

Prices for rubber securities quoted in Akron during the week ended October 9 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	78	74
Firestone, 6% preferred	91½	88¾
Firestone, 7% preferred	88	84
General Tire, common	300	250
General Tire, preferred	97	95
B. F. Goodrich, common	35½	34
B. F. Goodrich, 6½% preferred	102½	101¼
B. F. Goodrich, 7% preferred	83½	81
Goodyear, common	10½	9¼
Goodyear, preferred	30	28
India, common	100	80
Marathon, common	3	2¼
Mason, common	10	8
Mason, preferred	50	45
Miller Rubber, common	75	70
Miller Rubber, preferred	100½	98
Mohawk Rubber	15	10
Mohawk Rubber, preferred	80	75

STROMBERG IN STRONG FINANCIAL POSITION

Estimates $3,000,000 Net Sales This Year with Net Profits of $500,000—Balance Sheet Shows Unusually Liquid Condition with High Cash Item.

Stromberg Carbureter Co., in presenting figures covering its financial position this week, reveals itself to be in the best situation of its history. Affording thus a typical example of the rapid recovery of such concerns from the 1921 depression, the Company expects to make net profits of more than five hundred thousand dollars this year from an estimated net sales total of $3,000,000. The profits item may be compared with $81,670 in 1921, and $340,102 in 1920.

Though Stromberg suffered less perhaps than most others in allied trades, its sales last year declined upwards of a million dollars. Increased cost of operations and the necessity for taking some inventory losses accounted for the small net profits of the year's business. The following table shows the conditions at the end of the past four years:

	Net Sales	Net Profits
1922*	$3,000,000	$500,000
1921	1,762,014	81,670
1920	2,939,624	340,102
1919	2,502,128	401,329
1918	2,160,373	362,589

*Estimated.

The balance sheet of the Company shows an unusually liquid condition. Current assets aggregated on June 30 this year $1,412,491 of which nearly a third, $466,000, was in cash and Liberty bonds. Current accounts reached $109,606 while net working capital was $1,268,301.

Wyman-Gordon Reduces Capital

Five hundred shares of first preferred stock of the Wyman-Gordon Co., Worcester, Mass., have been retired. This reduces Company's authorized capital from $3,800,000 to $3,750,000.

Supreme Motors Schedules Assets

Supreme Motors Corp., Warren, O., in bankruptcy as noted in these columns heretofore, has scheduled its liabilities and assets. The former total $1,067,099 while assets are $238,653. Of the assets $101 is in cash, $1,870 is deposited in banks and the balance is in such items as real estate, machinery and other personal property. Of the claims, $567,727 are secured and $451,865 unsecured.

American Tire Pays Dividend

Earnings of the American Rubber & Tire Co., during the readjustment period, have been sufficient to cover all requirements for dividends, the management reports. The preferred stock was given a quarterly dividend, on an 8 per cent yearly basis, on October 2.

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RADIO TELLS NATION "HOW TO BUY A CAR"

N. A. D. A. Speech Broadcast from More Than 100 Stations Simultaneously—W. J. Brace, President of Association, Prepares Message.

Radio broadcast from more than 100 stations throughout the United States on the night of October 12, was used by the National Automobile Dealers' Assn. to tell radio fans who are also motorists or prospective motorists "How to Buy an Automobile." This was the first time in the history of radio that practically every broadcasting station of any importance carried the same message at the same time.

The public was told just what the automobile industry is doing to make the ownership and operation of a motor car more pleasant and profitable and what the factors are that should be borne most strongly in mind in determining the purchase of a new automobile. Particular stress was laid in the address, a portion of which appears elsewhere in this issue, upon the importance of buying the right kind of car from the right kind of dealer.

Especial attention was called to the intimate relation between dealer and owner in the matter of the proper maintenance of a vehicle and advising the public to consider carefully the time in which the dealer has been in business, his financial strength and his reputation for honesty and fair dealing with his customers and fellow dealers.

MORE DRIVEAWAYS TO FOLLOW RAIL TIE-UP

(Continued from page 825, second column)

Reports of general railroad operating conditions continue unfavorable. With continued heavy automobile production, driveaways will undoubtedly be necessary and manufacturers are organizing for them. Marvin states that driveaways at the present time are about as they have been recently considering percentage driven away as compared with total output. Usually at this time of the year, however, driveaways in proportion to production fall off. The situation is spotty, some factories according to location being harder hit by the railroad car shortage than others.

Revenue car loadings for the week ended September 30 totaled 973,000, exceeding the record week of 1921 (October 22—962,292) and approaching the record of 1920 (October 15—1,018,539). Accumulation of loaded cars for the week of September 15, was reported as 71,258, of which 57,948 were held on account of disability of reporting roads. Of the balance, 1,430 were on account of inability of consignees to accept; 2,847 for export and coastwise; and the rest because of embargoes, reconsignment and the like.

Locomotives requiring repairs of over 24 hours were 25.3 per cent as of September 1; repairs of less than 24 hours, 5.6 per cent. The Chamber says it is felt that this is about double what it should be to have motive power at normal efficiency. Bad order freight cars on September 15, were 13.4 per cent; on July 1, 14.3 per cent; on August 1, 15.3 per cent.

Further progress was made with the snow removal plans, outlined in these columns a week ago, at a conference between representatives of the N. A. C. C. and officials of the Bureau of Public Roads at Washington. Urgent necessity of highway transport to the public, manufacturing and commercial interests, as a further adjunct to transportation facilities was emphasized. Fully appreciating this presentation, the bureau is assembling facts through its district engineering organization for use by State highway departments in their snow removal work.

"Your Car and Your Dealer"

MOTOR car owners of America and those of you who will some day be motor car owners are undoubtedly very much interested in what the motor car dealers are doing to make it more pleasant and profitable to own a motor car.

In every large city and in every state there is a small number of automobile merchants who have had a long life in this business. Through this long period of usefulness to the automobile owners they have demonstrated their personal integrity, honesty and ability. The standards by which they have been measured by their customers, are the standards which have been set up as the measurement which the motoring public can apply in choosing an automobile merchant, who should be as carefully chosen as your banker, your stock broker, your real estate agent and your insurance agent.

Few motor car owners realize the great number of men who have come into the automobile business, stay long enough to sell a few cars and skim off some of the cream, and go out of business, leaving a burden of debts and orphan cars. Every time this has happened it has cost a lot of money to motor car owners. Anyone who has owned an orphan car knows what it means. The automobile owners who have been customers of companies which have gone out of business know what those changes have cost them. The fact that a man has been in the automobile business for a number of years, that he is successful and conducting his business on successful methods, and is equipped to stay in business through a long period of years is worth a lot of money to the customers of those men. And by the same measure it is worth a lot of money to those persons who have been and are now customers of the other kind of dealers.

The first prime essential in the purchase of a motor vehicle is to choose the dealer with whom you are going to spend your money. The average selling price of an automobile is somewhere around one thousand dollars. Comparatively few persons spend one thousand dollars very many times in the span of life. The man with whom it is to be spent should be carefully chosen. There is a standard of measurement by which you can be guided in the buying of life insurance, in buying stocks, in buying real estate, in choosing a bank. And there is now a standard of measurement by which you can choose your automobile merchant. You can now make sure that the automobile merchant with whom you are going to deal, is a business man; that he reflects his personal integrity in every transaction; that he has personal ability and capacity; that he has credit and financial strength; that he is one with whom you enjoy dealing because he inspires confidence by his methods; that he handles only merchandise of proved merit; that he is courteous and that he demands courtesy of his employes for his customers; he does not knock his competitors; he advertises truthfully; he is building for permanence; he specializes for his own benefit and economizes for your benefit; he is clear thinking and aggressive; he knows how to conduct his business and does it; he believes in the Golden Rule for himself and for his customers; he demands courtesy of his employes toward his customers; he is ONE OF A THOUSAND.—*Excerpt from Radio Broadcast on "How to Buy an Automobile," sent out on October 12 by the National Automobile Dealers' Association.*

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AUTOMOBILE EXPORTS TO ARGENTINA GROW

Department of Commerce Finds Large Increases Made in Year—Danish Markets Good for Cheaper Cars—Summarizes Other Information.

Reviewing the most recent advices from its various agencies, the Automotive Division of the Department of Commerce this week finds the high spots to have been increased exports to Argentina, a large growth in sales to Ceylon resulting in American cars now being in first place, and the conclusion that medium-priced cars form the best selling automotive products in Denmark. American cars shipped to Argentina during the first seven months of this year totaled 1,974 as against only 375 in the same period of 1921.

Regarding the Danish market, the Department points out that improved parts service would undoubtedly make for increased sales of American motor vehicles in that country. At present while one low-priced car made in the United States is selling well, the very small cars of German and French make enjoy considerably the most popularity because of their low cost of operation. This appears to be true of all European countries at this time. Low price and low upkeep are almost slogans with the bulk of Continental, Scandinavian and British buyers.

Other information relayed by the Department may be summarized as follows:

Ceylon: Automotive products manufactured in the United States have gained a firm foothold in the Ceylon market. American passenger cars, which formed only about 25 per cent of the total motor car imports into Ceylon before the war, now hold the first rank, although during 1921 they did not supply as large a percentage as during the three or four previous years. In spite of the fact that a new tariff favoring goods manufactured within the British Empire which was agitated during 1920 and 1921, was turned down by the Legislative Council in Ceylon, American cars manufactured in Canada have been imported in increasing number since 1920. As is the case for passenger cars, the United States is the leading supplier of motor trucks and accessories.

Peru: There are still considerable stocks on hand in Peru and sales are slow. Although dealers usually place their orders late in the year, conditions are so abnormal in this line that at present no forecast can be made. An outstanding development consists in the continued increase in busses, of which there are now about fifty in service in Lima and the vicinity.

Australia: The prestige of American cars is reported to have increased to such an extent in Australia that the offer of any American motor car agency receives favorable consideration immediately whereas it is almost impossible to find an agent willing to take over the representation of an English or Continental car unless it has been long and favorably known.

Africa: Trade Commissioner Stevenson, Johannesburg, reports that imports of motor cars into the Union of South Africa during May amounted to 387 cars, valued at £67,719, which represents an increase of 48 per cent in quantity and 40 per cent in value over the month of April. Cars imported from the United States totaled 186 valued at £40,524 in May as compared to 56 cars valued at £14,107 during April.

Haiti: Vice-Consul Longyear, Port au Prince, estimates that there are 541 passenger cars, 81 trucks, and 28 motorcycles in Haiti. No official statistics are available, but after January 1 next, all cars will have to take out a license from the central Government.

U. S. CONSUL ADVISES ON SELLING BRITISH PLUGS

Americans Must Compete with Metric Thread and Big Discounts

Vice-Consul Donovan, London, through the U. S. Department of Commerce, this week issued a number of valuable hints to American manufacturers of spark plugs who have an eye on the British market. From his canvass of the market, Donovan finds the points of most competition include greater discounts offered by British makers, the wide use of metric thread machining and more attractive packages. Practically all automobiles manufactured in the United Kingdom use metric thread spark plugs, says Donovan, but there is, of course, a market for inch thread spark plugs due to the large number of American cars in the country. The 18 millimeter thread plug is the size in most general use in Britain.

While there is a duty of 33 1/3 per cent on these articles imported into the United Kingdom, practically all plugs, both American and British, sold there, retail at five shillings, or about $1.10 at the prevailing rate of exchange. In the case of wholesale prices, however, British manufacturers give a larger discount than American manufacturers. A jobber, or factor receives a 50 per cent discount and a dealer receives 40 per cent discount from British manufacturers, on all orders of one-half gross or larger, American manufacturers give a discount of 40 per cent and 30 per cent, respectively, with no stipulation as to the size of the order. The American plug is regarded as fully the equal of the British, but it is said that the British is more attractively put up, being wrapped in paraffin paper and packed in a tin box sealed with a lead seal, which appeals to the buying public.

Lomar Names Cleveland Representatives

Lomar Mfg. Co., Middletown, Ohio, maker of shock absorbers, has appointed W. M. Renick and Blair Pyle as distributers for the Cleveland territory. They will operate as the Lomar Cleveland Sales Co. at 2009 Euclid avenue.

GARDNER EXPANDS ITS EXPORT ORGANIZATION

Eight Companies in as Many Lands Take Distributership — Two-Carload Shipment Ordered from New Zealand—Cars Sent to Many Parts.

Gardner Motor Co., Inc., is rounding out its organization in foreign lands. Eight acquisitions of dealers in other parts of the world are recorded this week by the Company, including Winnipeg, Can., Mexico City, Mex., London, Madrid, Copenhagen, Sydney, Aus., Christchurch, N. Z., and Brussels, Bel.

Sir Rodman Roblin, former premier of Manitoba, and guiding spirit of the Consolidated Motors, Ltd., Winnipeg, has taken the Gardner distribution after driving one of the cars to the Rocky Mountains and back. General Gustavo Salinas, nephew of the late President Carranza of Mexico, is erecting a new building at Mexico City for Gardner distribution.

John Burns, Ltd., Christchurch, cabled an order for two carloads of Gardner machines. Other shipments have been made recently to Christiana, Norway; Hong Kong, Tokio, Brazil and Argentina.

Canadian Show Benefits Americans

"Big business" for American automobile manufacturers is reported to have resulted from their participation in the Canadian National Exhibition at Toronto, recently held. According to D. B. McCoy, manager of the Canadian business for the Reo Motor Car Co., the 75 Reo dealers he met at the fair reported conditions satisfactory throughout the Dominion and prospects for future trade excellent.

A. E. A. Admits Monogram Cap Makers

General Automotive Corp., Chicago, has been admitted to membership in the Automotive Equipment Assn. The Corporation manufactures the "Monogram" self-locking radiator cap.

Signal Truck Opens Indiana Branch

Signal Truck Corp., Detroit, announces the opening of a direct factory branch at Indianapolis. The management has been placed in the hands of J. T. Grossland who has been district representative. Offices and salesrooms are at 431 North Capitol avenue.

Lienhart Gets Chevrolet Distribution

C. J. Lienhart has been appointed Chevrolet distributer for Adams and adjacent counties in Nebraska. He has taken a long term lease on a building in Hastings. E. E. Bredenberg, formerly with the Grand Island (Neb.) Buick Co., has been named sales manager by Lienhart.

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AUGUST TIRE TRADE MAINTAINS BALANCE

Rubber Association Statistics Reveal Inventory, Production and Shipments About Equal to July—Ship More Products Than Are Produced.

Inventory, production and shipment of pneumatic casings during August remained at about the level attained in June and July, according to the monthly report of the Rubber Assn. of America, issued this week. The same comparison holds true in the field of tubes and solid tires. It is also apparent, in comparing the figures with those of a year ago, that the increase in all three divisions of the business continues to be about 25 per cent. Thus, in August, 1922, 4,629,392 is the inventory figure of pneumatic casings which total is about a million in excess of August last year.

Shipments of casings, tubes and solid tires likewise showed increases, both as compared with August, 1921, and with July, 1922. There were 4,220,055 tubes and 69,435 solid tires shipped during August this year as against 3,804,060 tubes and 66,866 solid tires in August, 1921.

TIRE BUSINESS IN AUGUST

PNEUMATIC CASINGS

	August 1922	August 1921
Number reporting	63	66
Inventory	4,629,392	3,934,853
Production	2,905,209	3,043,187
Shipments	3,029,823	2,894,442
INNER TUBES		
Number reporting	63	64
Inventory	5,207,228	3,649,319
Production	3,808,224	4,430,152
Shipments	4,220,055	3,804,060
SOLID TIRES		
Number reporting	11	11
Inventory	189,698	216,367
Production	84,313	55,694
Shipments	69,435	66,866

Dayton Rubber Sales Set Record

Sales of the Dayton Rubber Manufacturing Co. for August broke all past records of the concern. Gross sales reached $400,000 for the month which resulted in approximately $2,500,000 for the first eight months of 1922. This is as much business as was handled by the Company in the entire year of 1921.

Star Rubber Reports Record Business

July and August production and sales resulted in the largest 60-day period to date, advises the Star Rubber Co., Inc., Akron. The company reports a particularly heavy demand during the past 60 days for its straight-side Meteor cords.

"Baby" Rolls for Europe Only

Though still in the trial and experimental stages, a "baby" Rolls-Royce is about to be placed on the market, as noted in AUTOMOBILE TOPICS under date of October 7. The car will be a 10-20 horsepower, six-cylinder chassis, approximately 20 inches shorter than the larger car which is 143½. The Company does not expect to sell the "little Rolls" in this Country to any extent as it is built to meet the English market, suffering from high maintenance costs. Furthermore, in America it would have to be sold at about the price of the larger car now being put out at Springfield, Mass.

Expect Huge Tire Output

Production of American tire factories will exceed 36,000,000 this year, according to the Miller Tire and Rubber Co. statisticians. Though this is 3,000,000 more than earlier estimates, trade experience in the better lines justifies some revision.

Firestone Sales At High Rate

Firestone Tire & Rubber Co., announcing its regular quarterly dividend of $1.50, asserts its production and sales records show September to have held its own, being as good as any Summer month. The management expects October to equal September. Past Summer business was the largest in the Company's history, production being maintained at 26,000 tires daily, it is declared.

HOOD RUBBER CO. REPORTS OPERATION AS NORMAL

All Post-War Deflation Problems Well Behind, Management Finds

Hood Rubber Co. is now operating on a thoroughly normal basis with all post-war deflation problems well behind, the management reports this week. The only concern of the officials is still further to improve the already very satisfactory level of plant efficiency. No plans for expansion or financing are contemplated at present.

The process of whittling down bank loans continues, although, as one director expresses it, "liquidation was over so long ago that we have ceased to talk about it." Sales of both tires and footwear are running well ahead of last year and for the first nine months of 1922 sales were practically $18,100,000 compared with $17,218,416 in the corresponding period of 1921. Tires have gained a little over footwear in tonnage in the last two years but drastic price cuts have resulted in a relative loss in value compared with the other products.

Oakland Recommends Shop Equipment

To promote use of efficient tool and shop equipment by its dealers, Oakland Motor Car Co., Pontiac, is sending out a catalogue of tools and shop equipment recommended for use in Oakland service stations. The ideal equipment is given for a small dealer, large dealer, and distributer. This step is in line with the Oakland policy of putting into effect throughout the Country a flat-rate system of repair charges.

BIG MOTOR MARKETS "DOWN ON THE FARM"

Review Shows Farmers Buying Automobiles in Constantly Growing Volume—Classes Product with Necessities—Will Hang Up Sales Record.

Representatives of Chicago mail order houses, perhaps the closest in touch with the rural population of any business men, report the outlook for purchases of automobiles "down on the farm" and in small towns as "undiminished." Farmers previously without motor cars are not only coming into the market in ever mounting numbers but those owning cars are trading and exchanging for new ones as rapidly as possible.

A feature of the reports, bearing out the belief of manufacturers and dealers that the automobile is no longer a luxury but a necessity, is that while the farmer has quit buying such articles as phonographs and pianos and is confining his purchasing to essentials, such as fencing, roofing and wearing materials, he "must have his automobile." Continued strong farm purchasing is undoubtedly one of the most buoyant factors in automobile sales, it is pointed out, and this year will see the 1920 sales record beaten.

Farm conditions in the Middle West in general are good. Observers at various State fairs found much complaint over wheat prices but as this crop comprises but 10 per cent of the value of farm products the Country over not much importance is given the matter in surveying possible markets for merchandise. There is also an increasing interest in tractors.

Haynes Issues New Weekly

Designed to establish a closer contact between the sales division of the Haynes Automobile Co. and the entire selling organization, a weekly publication has made its bow. *Haynes Successful Selling* aims to bring the latest advance news from the factory to every distributer, dealer and salesman, so that every member of the organization will be informed as to its product and policies.

Durant's Standard Makes Its Bow

Dedicated to "the better way in automotive transportation," Durant Motors, Inc., is issuing *Durant's Standard* for the benefit of its many friends. The first issue of this very attractive monthly carries an October date line and bears every promise of increasing public interest in the car, the Company, and the man who made both possible.

N. Y. Chevrolet Leases Building

Chevrolet Motor Co., New York, has leased a building at 217 West 58th street, for a sales office for used cars. The location is thought particularly good for the disposal of this type of automobile.

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MOON OFFICIAL FINDS WESTERN MARKET GOOD

McDarby, Back from Tour, Reports Most Territories as Having Bright Prospects—Nebraska Exception Because of Rail Strike's Effects.

N. E. McDarby, advertising manager for the Moon Motor Car Co., returning from a western and southern swing through the Country, reports conditions in the retail market such as to warrant enthusiasm. Nebraska and Tennessee seem to present the only dark spots on the map of the territory he covered. His observations are both specific and to the point.

"In Kansas City conditions are fairly good," McDarby finds. "For some lines they are exceptionally good, and the outlook for business through the Kansas territory was never better. Crop conditions are excellent and the dealers in the small towns should enjoy wonderful business this Fall.

"In Omaha proper, things were not any too good. One or two lines are enjoying good business, but things, as a whole, were a bit slow. This was before the railroad or coal trouble had been settled. Our dealers reported a few days ago that the outlook is much brighter.

"Conditions at Lincoln are exceptionally good. Eastern Nebraska, from all appearances, is in for wonderful business this Fall. Crops are fine. The farmers are going to make some money and they are going to buy automobiles. They certainly need them—they haven't had a new automobile for practically two or three years, and if they don't secure new transportation equipment soon, they will have to go back to walking.

"At Hastings, Neb., conditions were not good at all. Corn is practically out and the farmers are not going to have a large surplus of cash. In a few isolated cases such as in the bottom lands, crops are good, but the percentage is so small that it will not play an important part in the prosperity of this section taken as a whole.

"Bankers believe it is going to be hard selling in western Nebraska this year. They state further that if this year's bad crops had been the only one, they could have weathered it very easily, but it happens to be one of many they have had in the last few years and every one feels it keenly.

"Business is going along very nicely in Denver. The mad rush is over with, but dealers handling a good product who have an organization and ample finances are doing a good business. The demand for closed cars is very heavy, and it is the consensus of opinion that the demand will be brisk up until Winter.

"In Dallas, Austin, Waco and Houston, Tex., business conditions were never better. The majority of dealers are clamoring for cars and in a great many instances, are far behind on deliveries. Business this Fall should be the best in Texas history. To a certain extent this is to be expected since the weather makes it possible to sell cars all year round. The demand for closed cars in the majority of cases has not kept pace with the demand from the North, and this can also be laid to the extremely hot weather in the Summer.

"Business is good in New Orleans for those dealers handling the right car and properly organized and financed. Of course, this holds good in practically every center, but was especially noticeable in New Orleans. Business will keep up very nicely through the Fall.

"Memphis was pretty hard hit during 1920 and 1921 and really hasn't gotten over it yet. Six weeks ago every one was very enthusiastic over the outlook, but since that time the price of cotton has been falling and things do not look as bright now as they did a month ago in this district."

McDowell Finds Outlook Good

Roy C. McDowell, service manager of the Stephens Motor Works, touring the western and southern States, finds the business outlook "impressively good." McDowell is visiting distributers and dealers in the territory he traverses, seeking to get the factory into personal contact with the individual car owner.

RAILROADS URGED TO AID AUTOMOBILE INDUSTRIES

President Alfred of Pere Marquette Would Give Makers More Cars

Frank H. Alfred, president of the Pere Marquette railroad, in a communication addressed to the Interstate Commerce Commission, Washington, strongly urges that the railroads of the Country use box cars to the fullest extent so that any surplus will be in the shape of automobile cars which can be used by the industry in moving its products. At the present time, he declared, there are few cars available at Detroit.

It was also suggested by Alfred that the carriers use, so far as possible, automobile cars for loading shipments destined for Michigan so that they would be available for automobile makers. The industry, he pointed out, is the mainspring of prosperity in the district he is interested in, and therefore should be accorded every consideration that can be given without injustice to others.

NEW ENGLAND WINTER SALES PROMISE MUCH

Dealers Find Increases in Fall Trade Continue Large—Slow Shipments Put Damper on Some Business—Used Car Stocks Held at Low Figure.

Retail business in preferred lines continues to expand in New England, according to reports reaching AUTOMOBILE TOPICS this week from dealers and distributers in that section of the Country. Sales are recorded as being far in excess of this time last year and the turnover to date for the year, tremendous in volume and gratifying in financial results.

Thus the Henshaw Motor Co., Boston, had, on October 10, 65 carloads—248 automobiles—en route from Dodge Brothers factory, some of which had been shipped early in September, to fill orders on its books. Retail orders continue to flow in, it is asserted, and only the freight embargoes and railroad traffic congestion restrict them. Whereas it formerly took from six to eight days for a shipment of cars from Detroit to Boston, it now consumes from 12 to 14 days. The Company reports the new all-steel sedan and coupe types now approximate 60 per cent of the business done in Boston as against 20 per cent for all closed cars in 1919.

The L. & H. Motor Co., Hupmobile distributer for northern Connecticut, with headquarters at Hartford, finds September increase of business reached the enormous percentage of 1,100. Rate of increase in sales for the year up to October 1 has been better than 175 per cent.

"The trend of business in our locality is, first, towards the standard makes of automobiles of long established reputation, and secondly to the dealer who has an established reputation for good service and fair treatment," Thomas W. Campbell, president, declares. "Our stock of unsold cars is unusually low, amounting to two cars only; over a like period of last year we had 32. Used cars are now five as against 12 last year. We consider that this has been a wonderful year."

Detroit Liberty Showrooms Moved

Miller-Judd Co., Detroit distributer of Liberty cars, has opened new salesrooms at Woodward and Palmer avenues. The quarters were formerly occupied by the Lincoln distributer.

Ford Plant for Czecho-Slovakia

Advices from Vienna state that Ford is building an automobile factory in Czecho-Slovakia. It is asserted he can build cars in that country at 6,000 kronen less than the price of Czecho motor cars.

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points appears on pages 867 to 869 of this issue.

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ENGINES RUN WELL ON VARIOUS FUELS

Research Project Reveals Proficiency of Present Power Plants—Further Tests to Show Effects of Winter Service—Program, as Planned, Is Elaborate.

Automobiles of present-day construction are less sensitive to variations in composition of the fuel than is generally supposed. This, at least, is the tentative conclusion reached after months of painstaking investigation by picked experts of the automobile and petroleum industries and the United States Bureau of Standards, at Washington. Further research, however, especially during the Winter months, may show variations which will render the ultimate conclusion less sweeping than this would indicate.

The studies involved are a part of the general program of fuel research undertaken by various interests, but now consolidated under a general conference at Washington. In this conference the Society of Automotive Engineers, as the technical authority of the automobile industry, the American Petroleum Institute, representing the petroleum industry, and the Bureau of Standards are cooperating. The National Automobile Chamber of Commerce is, of course, back of the plan in a substantial way.

To avoid duplication of effort it is purposed to develop, as far as possible, a single campaign of action. This was the subject of a meeting of representative interests at Washington, recently, at which results already accomplished were discussed and the tentative conclusion already expressed arrived at in substance.

The special project which this conference met to discuss was one of three, springing from as many sources. One of these has been carried out jointly by ten automobile manufacturers in conjunction with the Research Department of the S. A. E.; another has been conducted by different government departments in cooperation with the Bureau of Standards. The third, which was specifically considered, is a joint project of the automotive and petroleum industries and the Bureau.

All of these projects have been framed with a view to determining scientifically an answer to the question, "What is good gasoline?" The best index of quality of motor fuel is volatility, which signifies the ease with which it may be vaporized in the engine. Fuels differ in the volatility of their lighter constituents and also their heavier constituents. The lighter constituents affect principally starting, and the heavier, power.

For research purposes, four special test fuels were selected, having nearly the same starting characteristics, but differing in the volatility of their heavier constituents. The lightest was more volatile than ordinary commercial gasoline, the heaviest was much less readily vaporized than any fuel now on the market. The other two were intermediate.

Starting with the test fuels, four types of cars were selected, representing nearly seventy-five per cent of all cars on the road. A special schedule of road tests was laid out to cover all ordinary conditions of automobile operation and special instruments devised for observing the behavior of the cars and measuring their fuel consumption at each stage.

Finally, a number of automobile manufacturers and petroleum refiners contributed the services of their own engineers to supplement the staff of the government bureau. Up to the time of the conference comparative tests with the four grades of fuel had been completed on two of the four models of cars and was nearly complete on the third. Work on the fourth was well under way.

The results of the research as reported to date showed rather unexpectedly that all four makes of cars were capable of using even the least volatile of the four fuels without serious inconvenience and with substantially the same number of miles per gallon. This might, at first thought, lead to the conclusion that the public can use fuels even less volatile than those which are being sold at present. But, as the conference pointed out, it is not safe to adopt this conclusion.

In the first place, the tests of crankcase dilution, though only partly completed, showed that more trouble from this cause is to be expected from the less volatile fuel. Even more important is the fact that the tests had all been run in Summer weather, when the volatility of the fuel is of less importance than it is in cold weather.

Accordingly the conference recommended that after completion of the initial part of the program a second series of tests should be made. These will be similar to the preceding, but will be run in the coldest practicable weather next Winter, and will include various other tests, such as those of starting, idling, carbureter setting, etc., with special reference to what happens under conditions then prevailing.

Oil Products Firms Merge

Of far reaching importance in the chemical industry, a merger of the Miller Oil Products Corp., the Lynn Ink Co., and three other concerns has been brought about, the new consolidation to be known as the Interstate Chemical Interests, forming a part of the leather dressing division of the Interstate Corp. The five companies involved cover the entire leather dressing field from automobiles, the specialty of the Miller concern, to shoes. All the plants will continue operations as hitherto although the new headquarters will be in New York city.

72,000,000 GALLONS OF GASOLINE VANISH

Evaporation Costs Enough Fuel Yearly to Take a Ford to the Sun and Back Seven Times—Engineers Find Proper Insulation Would End Huge Losses.

Enough gasoline is being wasted annually in the United States, through preventable evaporation in storage tanks, to run a Ford 1,440,000,000 miles, equivalent to more than seven round trips between the earth and the sun. This is the startling conclusion reached by engineers of Johns-Manville, Inc., and the United States Bureau of Mines, after a survey on conservation. The daily wastage is 200,000 gallons, or 72,000,000 yearly.

It is further computed that the 775 uninsulated storage tanks in this Country holding gasoline and crude oil, each with a capacity of 55,000 barrels, are losing by evaporation more than 6,000,000 gallons per month, and that these losses are largely controllable by the application of proper insulation. The tests were conducted at Bigheart, Okla.

"The surface temperature of the fluid in an uninsulated storage tank, whether it be crude oil or gasoline, is governed by the temperature of the outside air, and direct radiant heat of the sun," explains J. S. Carroll, general manager of the oil industry department of the Johns-Manville company. "When this surface temperature increases, the rate of evaporation increases, and the air in the space at the top of the tank becomes saturated with gasoline vapor and other volatile fractions of liquid in tank.

"This saturated air, due to expansion, is then carried off into the outside atmosphere through 'breathers,' which are simply the safety valves of the tank, to allow for changes in pressure. At night, when the temperature of the outside air drops, the temperature inside the tank also drops and fresh air enters through the 'breathers,' becomes saturated and the absorbed gasoline is lost the following day by the continuation of the same cycle. A great quantity of this saturated air escapes through leaky joints of roof plates and eaves.

"The rate at which these losses take place has now been closely calculated. A 55,000-barrel storage tank, holding gasoline, will lose about six per cent of its contents in one year. A similar tank, holding crude oil, will lose about three per cent, and the loss will be almost entirely pure gasoline."

Piqua Favors Hudson and Essex

As an instance of the fast increasing popularity of closed cars, the N. R. Rench Motor Sales Co., Hudson-Essex dealers at Piqua, Ohio, reports that of 47 new cars sold this year up to September 15, all but one were closed models. Forty-three of them were Hudson and Essex Coaches, and three the Super-Six Sedan.

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PRODUCTION MEETING OF S. A. E. BIG EVENT

Program to Present Many Interesting Speakers on Troublous Problems—Machine-Tool Men Expected to Attend—Subjects to Be Varied.

First to be national in scope, the meeting of the production executives and factory men of the Society of Automotive Engineers, scheduled for Detroit on October 26 and 27, promises to be one of great interest to the entire industry. The convention will be known as the Production Meeting and thereby establishes another red letter event on the calendar of the S. A. E. which already includes among others, the meetings of the automotive sales, the service, engineering and administrative men.

The discussions scheduled for the program are expected to attract production and machine-tool men from all of the important centers of the industry. The two morning sessions will include papers and discussions covering a diversified group of production subjects, all of which canot help but be of value to practical work. Little of the theoretical nature will be presented, as a study of the program discloses.

Those so far scheduled to read papers Thursday morning, October 26, are the following:

E. Karl Winnerlund, of General Motors Advisory Council—"The Group-Bonus and Its Application," being a discussion of modern bonus payments, not to the individual but to the group and subgroups.

P. E. Haglund and I. B. Scofield, both of the Ford River Rouge plant—"Cylinders from the Ore to Finished Part," being an exposition of how such work is done in the Ford plants, following the metal from the mine to the finished engine.

F. A. Mance and J. A. Ford, both of Studebaker. Manee's subject will be "Tool Allotment and Costs," while Ford will speak on "New Methods of Processing Splined Shafts." Ford's talk, it is pointed out, will likely bring about considerable discussion as he will tell how Studebaker has worked out methods of turning out splined shafts without recourse to machinery, which latter process, as is well known, is largely controlled at present by closely held patents.

The men and papers on Friday morning's program, are these:

William Dunk, of Franklin, whose subject, "The Problems Met in the Production of Air-Cooled Engines," is self-explanatory.

H. J. Crain and J. Brodie, of Packard, will consider the subject of gear noise under the heading "Some Experience from a Production Note-Book."

K. L. Herrmann, of Studebaker, will also deal with gear noise, asserting, after careful study, that all present gear-making machines are inaccurate.

A. J. Baker, of Willys-Overland, and R. K. Mitchell, of Maxwell, have chosen to speak on machine tools, the former on "Selection of Machine Tools" and the latter on "Machine Tool Efficiency."

Particular interest is expected to attach to Baker's and Mitchell's discussions. It is understood both will speak of the growing tendency in the industry to discard the "elephants" of the tool equipment, the multiple drill and other similar machines whose work is highly specialized, which turn out tremendous numbers of units and are consequently idle during much of the year.

Manufacturers are coming more and more to look with disfavor on these huge machines, it is pointed out. Those who make the regulation one-operation machines declare that if they might get into larger production through greater sales, costs of their products would be less to the buyer. Then, too, it is said that nonchange of design means changing all machines in that particular department when multiple-operation equipment is used whereas with single operation units, interchangeability is established and less capital is tied up in equipment.

N. M. A. to Launch Capital Branch

National Motorists' Assn. is to launch a Washington branch, to be known as the National Capitol division, under the leadership of William Ullman, for eight years an executive of the American Automobile Assn. All services will be maintained at the Capitol.

JOBBERS PREPARING FOR FOURTH ANNUAL SHOW

Chicago Exhibition in November Closed to All But Members

Preparations for the fourth annual show of the Automotive Equipment Association are going forward smoothly and the management looks for 100 per cent attendance and a successful line of business. To date 265 spaces have been allotted by the show committee for the use of 212 exhibitors. The show is to be held at the Coliseum, Chicago, November 13 to 18, inclusive.

This year, for the first time, the show will be for the benefit of members only. That is to say, exhibitors will be exclusively manufacturers who are members of the Association, while no visitors other than members will be admitted. The affair thus becomes a trade show pure and simple, from which the public is excluded in order that there may be nothing to distract the wholesalers from the main business of concentrating on their purchases for the coming year.

EDUCATORS TO STUDY NEEDS OF HIGHWAYS

Washington Board's Congress to Learn of Demand for Trained Construction Engineers—Subject Taught Indifferently in 130 Colleges, Review Shows.

Demand for trained men far in excess of properly qualified applicants has resulted from the rapid growth of the newest of the engineering arts, highway construction, according to the Highway Education Board. The Board's findings of conditions in the new industry, together with a statement showing the needs of the future, are to be placed before the forthcoming national conference, to which the Board has invited government and State highway officials, engineers, educators, executives of automotive industries and other interested persons. The conference will be held at Washington, D. C., October 26 to 28, inclusive, as noted in AUTOMOBILE TOPICS heretofore.

Highway engineering is taught, a survey by the Board disclosed, in approximately 130 educational institutions in the United States. In many of these, however, the course is admittedly inadequate. It is the purpose of the Board to bring these educational institutions into touch with the latest developments of the art, and through methods to be devised at the forthcoming conference, to keep highway engineering courses abreast of approved and modern practices.

Demand for highway engineers comes from State and federal organizations and bureaus, from municipalities — latest figures show that there are approximately 80,000 town and city engineers and officials whose duties are similar to those of such engineers—from highway contractors and industries making road building materials. The Board hopes, through cooperation with colleges, to bring about an adequate supply of men for the several branches of the work.

More highway engineers will be wanted to meet the demands of the roadbuilding program within the next fifteen or twenty years than the colleges at present are turning out. There will be a much heavier demand than there will be for engineers trained in railroad work. The entire structure of the American highway system, with the exception of the roads constructed or commenced during the past six years, is yet to be built. Opportunities for men of right training, in the Board's opinion, will continue for many years as numerous as they are today.

Craig Leaves Forsyth Brothers

T. C. Craig, who has been assistant manager for Forsyth Brothers Co., has resigned. The resignation was effective October 1. No intimation is given as to Craig's plans.

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Standard of the World

Not only has this been Cadillac's most successful year, but the continued demand for Type 61 foreshadows an expansion and extension of Cadillac leadership in ensuing months which make the Cadillac franchise valuable beyond any high point in the past.

CADILLAC MOTOR CAR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

CADILLAC

A new booklet entitled "Cadillac—A Fine Mechanism" will be mailed you upon request



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Automobile Topics
THE TRADE AUTHORITY

Established 1900

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Achievement

News that two army lieutenants last week established records by attaining thirty-five hours of continuous flying in an airplane at San Diego lies not in the fact itself but rather in the mute testimonial to an achievement in engine building probably without precedent in the world's history. That so relatively cumbrous a machine as an internal combustion engine can be built with literally the exactness and delicacy of a watch is really a cause for wonder. Airplanes are so adjusted that they will conceivably stand any strain in the air and will only descend to earth when the engine stops running. And when an engine will run at the tremendous speeds necessary to operate a 'plane for thirty-five hours on end—only the entire commonplaceness of the automobile is to be cited as cause why the news should not be played up as international in interest.

Undismayed

That business in general is undismayed, is positively buoyantly confident of the future, should astonish the thinker. Two great strikes, Europe sinking to the depths from which she but gradually emerges again, the tariff law's passage and elections—these happenings presumed to be deterrents to business progress have hardly jarred American commercial men. Manifestly this is a year of theories set at naught.

Corsets and Feet

Automobile drivers are now in a position to know what's the matter with them. Pedestrians have discussed and cussed them, declaiming on the alleged evidence of vacancies aloft in the anatomical specimens at the wheels of motor cars and the sterling nature of the candidacy for the home for the feeble-minded. Policemen have surmised many drivers suffer from a complex —that modern word meaning nothing in itself—causing them, the drivers, to seek constant emulation of Barney Oldfield or Eddie Rickenbacker. Motorists even have gone so far as to cast aspersions on fellow motorists' cranial and physical condition.

But now come two authorities, each bringing a diagnosis, prognosis and prescription. Say the physical therapeutists, "You suffer of automobile foot." This, be it known, is a "lesion in the second toe caused by holding the foot for prolonged periods on the accelerator." It makes 'em nervous. The cure is broad-toed shoes and no accelerator.

Out on the Pacific Coast a Galahad discovers automobile drivers are deforming their backs and stomachs in operating cars, cars with stiff clutches. "Wear our corsets" is the slogan of this personage "out of the West."

Automobile Foot and Motorists' Musclemisery. Too bad, too bad!

A Kingdom Still Left?

Despite the automobile truck's rightful usurpation of many of the principalities of the horse, that animal still has left a kingdom of an extent surprising to the uninitiated. Thousands of the heavy draft types are in use in large cities and on farms and the market seems to grow instead of wither. It should appear that old Dobbin is still firmly entrenched between the shafts of the dray. Perhaps to the man of small business the horse will continue to be of greatest service, through lower investment costs, though not for long.

Pay More But Serve Better

At a recent meeting of garagemen and owners in New York, one employer complained of making no profit on a job of repairing that took eight hours of his men's time. Another promptly described a way he had thought out whereby, with the help of an excellent workman he had been able to do the same work in three hours and reap a fair output. The answer is plain. Excellent workmen cost the second man more in wages, but by using his own as well as their brain, more than their brawn, he had accomplished three things—got the job through sooner, pleased his customer and made money. The plan of doing something in one certain way simply because others have always done it that way, is a mighty poor one. Nearly every garage owner will agree, but agreement does not mean real progress. By discovering short-cuts even requiring experts to traverse, it is safe to say any garage owner will greatly increase his shop efficiency and thereby reach ultimately the place where he must turn customers away.

There is a great deal of grumbling among motor car owners concerning high garage charges. Ignorance of how to run their machines is largely responsible for the trouble but the public will not admit it and it behooves the trade to educate its markets. That is good business.

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All Branches Play Part in News of Week

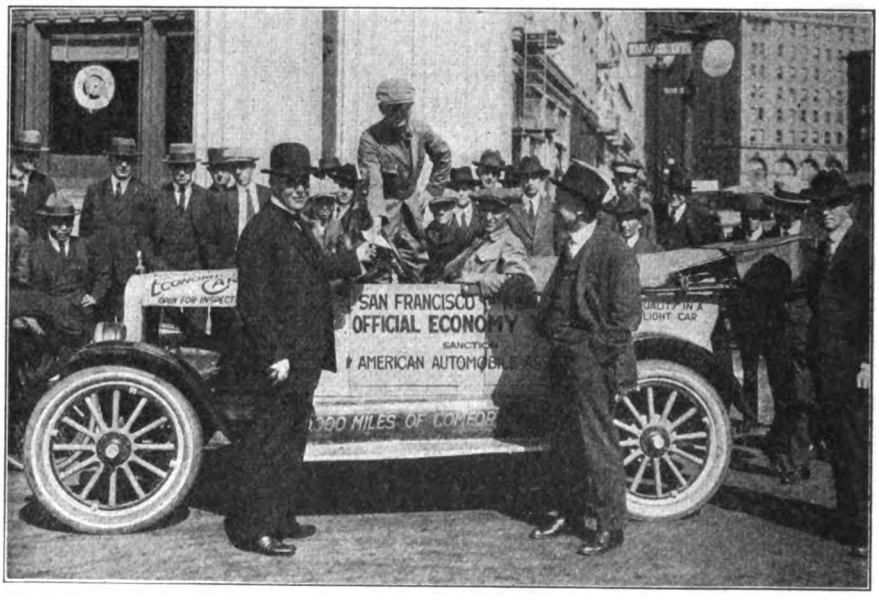
Both Buick and Gray on Tours

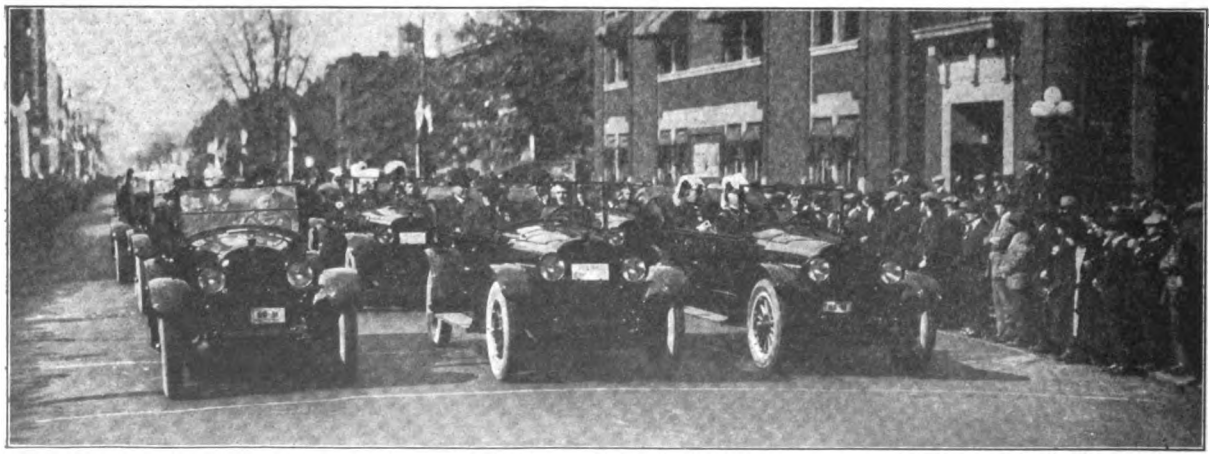


WITH their cooking accommodations and sleeping quarters, the tourists seem very comfortable

***PROBABLY** one of the longest motor trips ever undertaken by a private party has been started by R. J. Jeffries and his wife, who left early in June on their way around the world in a Buick-four sedan*

***MOTOR** and car perfect," wires the driver of the Gray Economy Test car upon completing the first leg of the run from San Francisco to New York to determine exactly the operating costs of the Gray touring car under all driving conditions. The run is being conducted with the sanction of the American Automobile Assn., which has appointed Capt. A. B. Walton its official observer. With equipment and supplies the car carries the equivalent of a five-passenger load*





In the parade of 40,000 Detroit Masons prior to the laying of the cornerstone of the new five-million-dollar temple, transportation was provided in the form of twenty-five new seven-passenger Cadillac touring cars selected for the occasion

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Why Not Teach Boys About Motors!

Time Is at Hand for Inculcating a Needful Knowledge of Internal Combustion Engine—Safety Demands It

WIRELESS telegraphy was among the first-born of the great and numerous band of inventions of the 20th century, having reached successful demonstration in 1900. The wireless telephone—the radio—did not become so perfected as to warrant any but experimental use until 1915 and 1916 when the United States Government inaugurated wireless airplane communication. Yet today, in so short a time since this marvel of man's ingenuity emerged from the plaything age to commercial majority, even the children have at least a smattering of its practical application and frequently the boys of this day know quite a bit about its principles.

The trolley car, product of the genius of Van Depoele and Sprague, first startled the "natives" of New England during the experimental stages from 1884 to 1887. Few men out of the millions coming to maturity every decade in the United States will ever operate a trolley car or need to know anything about how it "runs." Nevertheless, hardly a grammar school pupil, or at least a high school student, but has been instructed concerning the broader principles of the "street car."

It is only in the last score of years that the telephone has become so enormously valuable to us. And every school child is told of the wonders of Alexander Graham Bell's invention, yet has absolutely no need to know, considering the subject from an operative end, for the various telephone companies provide the service completely: no one need know how to "work" a switch-board in order to speak over the wires.

And so might be listed the air brake, Westinghouse's innovation of 1869; celluloid, Hyatt's contribution to utility made in 1870 and still largely controlled by one concern; block signals for railways, Robinson's "life saver" of 1872; Sholes "folly" of 1878, the typewriter; Edison's talking and moving picture machines, neither a half-century old— all these are now part of nearly every child's school books. But, aside from the score of general knowledge, how relatively few of these thousands upon thousands of our youth ever will need to know how these necessities of modern life are made, what their constituent parts are, how to operate the machines, and how to care for them?

However, educators, with commendable foresight, have included in their curricula the study of these things that the future men and women of the United States shall not go through life in ignorance of the general principles of the inventions that make their lives so much easier, so much better and of so much greater utility than the lives of their forefathers. It therefore seems almost a colossal blunder, an unthinkable oversight to have failed to include the study of the internal combustion engine—the gasoline driven automobile—in the program of the school days of our youth.

More astounding does the failure to include the study of tl.e automobile in grammar school days become when a few facts are considered. Motor vehicles in use in America today probably exceed 12,000,000. The population is well over 105,000,000. That means, in fact, that one of every ten persons, to be conservative, owns or operates a passenger car or truck. It means that, speaking in generalities, every man, woman and child in this Country has had at least one "ride" in an automobile or truck when that "ride" was a necessity, when the failure of the machine to function would have entailed loss of something — health, business or even life itself.

One hundred and thirty-five thousand homes in sixty cities in the United States depend on motor transportation. And this does not include the hundreds of thousands of homes in suburban towns throughout the Nation, the residents of which depend on the automobile plus the railroads to "get down to business."

Three million motor vehicles is considered a conservative total for the number in use on farms today. And that does not include the internal combustion engines used in tractors, tree-sprayers, water pumps, potato and post-hole diggers, saw-mills, milking machines, and the numerous other forms the ubiquitous gasoline engine takes in use on the farm.

On only one main road in New England last Fall 479,000,000 pound-miles represents the truck haulage in two weeks! The imagination is staggered as it dwells on the total mileage and the tremendous tonnage of absolute necessities carried by truck throughout the United States every day.

To continue with this sort of comparative figuring is not necessary. To any thinking person it is apparent that the passenger car and its brother-in-working-clothes, the truck,

THE BOY AND THE AUTOMOBILE

WHEN AUTOMOBILE TOPICS published its sketch and outline of a grammar school course in the study of the internal combustion engine in its columns under date of September 2, it hardly expected so ready and wide a response to its appeal. It would seem as if the industry only awaited the epitomizing of the idea to assume a warmly cooperative attitude towards it.

Aside from those who have expressed a willingness to help after noting the matter in these columns, were those who have responded to the suggestion, though themselves not particularly interested in the automobile industry as such. Among these have been an official of the Smithsonian Institute, another of the National Institute of Progressive Farming, members of school boards in various cities and individuals in other lines of business.

Little can be accomplished, however, without the cooperation of many. AUTOMOBILE TOPICS believes this cooperation only awaits the invitation to participate. And as it has done heretofore, it now extends the use of its columns, in so far as practicable, to discussion of the subject. Those who enter the lists are assured the proposition will be carried to such lengths as judgment will warrant

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is as essential to modern living—even bare subsistence—as the telephone, the typewriter, the talking machine, the "movie," the air-brake and the hundred-and-one other "eight wonders" of the twentieth century. In fact, the automobile is a substitute for any or all of these things but —the automobile itself has no substitute!

Having no substitute, being so all-important, why is it that not one person in a hundred, nay, a thousand, knows anything about the internal combustion engine, its construction, operation and maintenance? Even the name means nothing to most persons, not barring those who use it daily and hourly.

It is hard to teach an old dog new tricks. To try to educate the grown man in the matter here under discussion, is assuredly possible but will not have results commensurate with the outlay of energy necessary. The adult has little time to devote to the study of mechanisms. It takes too much time to make a living. To ask a business man to attend classes in the study of the internal combustion engine or to sit down in the privacy of his home and concentrate on a text book, is to invite derision and failure. The modern automobile is so designed as to resist a surprising amount of misuse at the hands of the ignorant and when it does succumb to the abuse of the driver who knows nothing about its workings, the garage man and mechanic is always handy.

The farmer, too, has little leisure to devote to the study of the engine that has turned the farm from a place of incessant, heart-breaking manual toil, into a reasonable place of work. When the time comes to use the various implements once laboriously operated by hand or real horse power, the farmer expects the machine to function. Yet what has he done to care for it, to assure himself of its services? He knows little about the internal combustion engine. What little he knows is what he has picked up through necessity: the principles are mysterious to him.

No thinking man denies that as the use of automotive vehicles increases, as it is by prodigious leaps and bounds, the margin of safety in operation, both from the standpoint of accident prevention and assured functioning, decreases just so long as the users do not become more proficient in driving them. Proficiency comes only through education, acquired either through experience or instruction.

Throughout the Nation the grave question of safety grows more widely discussed. The people are beginning to bestir themselves to find out the way in which they may save their lives and property from traffic's toll. Can safety come to the highways of the land while still Ignorance sits at the steering wheel of most of the constantly growing number of automobiles? Can safety campaigns have much effect while those at whom the slogans are launched are incapable of properly operating their vehicles? Can these things be accomplished while the ratio of uninstructed drivers increases at an astounding rate, only commensurate with the growth in the use of the automobile and the truck?

Assuredly not. There can be no safety worthy the name so long as a powerful engine functions in the hands of one who cannot appreciate the potential energy just now amenable to mechanical control.

AUTOMOBILE TOPICS, in its issue of September 2, presented its plan to "Teach The Boy About Motors!" The idea was one not hastily conceived. For several years the problem, now grown to such alarming stature, had been contemplated and studied. Already having full cognizance of the part the industry must play in solving so intricate a puzzle, educators were consulted. That some such plan as eventuated and was outlined in these columns was not only desirable but probably essential was the consensus of opinions.

In the interim, since the presentation, discussion of the enigma of traffic is growing nation-wide. Newspapers, periodicals, men of affairs, municipal, State and Federal authorities have come to devote more and more of their thought to safety on the highways. And with it has spread the gospel preached here that the public must be educated in at least the general principles of construction, operation and maintenance of the internal combustion gasoline engine.

Not only have manufacturers expressed a willingness to help, but dealers, associations and clubs of automobile men, school teachers and even government officials have promised aid in inculcating the need and propagating the theory on which was based the plan, expanded or amended as suiting the mind of the one concerned, advanced in these pages.

Some of these expressions were recorded, in part, under date of September 23. More have since been received by AUTOMOBILE TOPICS and contain suggestions and amendments to, and expansions of the plan worthy of extended discussion and ultimate adoption. These will be taken up at a later time for more ample consideration.

Among these it has been advanced by the National Institute of Progressive Farming, Guy H. Hall, director, that the popularity of such a course in agricultural and rural districts could be heightened by the addition of the study of the tractor in the local schools. That is an idea of great merit. For while the farmer and the farmer's boy have undoubted interest in the passenger automobile, their largest use of the gasoline engine must be in the guise of the tractor and the truck, not to mention the many other manifestations of the applied power of the internal combustion machine.

Hall points the way to making such a course popular beyond even the natural interest aroused in the average boy's breast by the subject. The farmer's boy must have greater incentive to study the internal combustion engine since so much of his life is ruled by the peaceful or troublesome functioning of gasoline motors. To a greater extent than the city boy, he finds himself dependent on internal combustion engines for his food, his water supply, and many of his other wants. And, as Hall calls to the attention, the farmer boy may be reached through a further channel than the school room—the agricultural clubs. As Hall declares in setting out the obvious advantages of training the boy "where he lives," at home:

"We are blind if we overlook the farm boy and girl. They are the farmers of tomorrow, and if we are so shortsighted as not to look ahead ten years, we deserve no place in modern farm progress. It may be surprising to know that there are now 600,000 boys and girls in America organized in the Government's boys' and girls' agricultural clubs—

A FAIR PROPOSITION

AUTOMOBILE TOPICS lays before its readers and the public at large its suggestion that:

The study of the internal combustion engine and its application to the automotive vehicle be made a part of the curriculum of grammar schools—particularly, if not exclusively, for boy scholars

TEACH THE BOY ABOUT MOTORS

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calf, pig, corn, garden, poultry and so on. It is the most inspiring movement in modern agriculture, practically every State being organized. It started down South a few years ago to rejuvenate the run-down and worn-out agriculture of a tenant-ridden, darkey-and-a-mule power system: it has already worked wonders and reopened a farm empire. The best of the farm youth are being turned back to the farm instead of being drained out to town and city. A drive is on to bring the club membership up to the million mark as quickly as possible.

"These young fellows, ranging from below their 'teens' to 18 in age, are ambitious, progressive and absorbing all the new farm ideas. Their directors and leaders here are anxious to have our cooperation. We would be overlooking the best bet on tomorrow if we did not give a prominent place in the institute to them and their activities. The old idea is that there is no tomorrow, but these chaps in the clubs are bringing their dreams of tomorrow down to the actualities of today. Educators and farm propagandists admit there is nothing like these clubs for bringing progressive ideas home to the elders as well as planting them in the minds of the youngsters for their business in the immediate future.

"The proper service on the tractor by the youth of the country will advance the tractor industry many years. Every one of the home comforts that are used on the farm and in the farm homes would be benefited. We have urged that local dealers cooperate with the schools in listing with the principals and superintendents those farms where tractors are being used successfully. Perhaps an essay contest could then be put on. The cry of the day is for visual education of the farm boys and here is a place for the local dealer to establish contact and spread modern methods which will be advertised by enthusiastic word of mouth to the elders of the community.

"There are many of the big men of the industry who should allow some of their time to be scheduled for talks and lectures. The schools would gladly turn over their auditoriums for a capacity turnout of students to hear men of national reputation in this field."

Farmer Boy Interested

Thus through the farm clubs another avenue of approach is opened. It may not be just to assert that the farmer boy has greater interest in utilitarian invention, but it is a natural assumption. He has few of the ready-to-hand conveniences of the city youth, he has fewer distractions to prevent proper study and his boyish interests lie more closely to the mundane things of life. Then, too, the rural youth is and, indeed, he must be, of inventive turn of thought.

In this connection is recalled a contrivance run upon during a drive of exploration through the "backwoods" of Long Island. On a narrow road, a large farm wagon obstructed progress. At the rear of the "bed" of the vehicle reposed an ancient gasoline engine, apparently being hauled somewhither. Closer inspection revealed no horses attached to the front of the wagon. Two country boys were fussing around the back of the vehicle, apparently trying to push it up the slight grade ahead. Suddenly an alarming report was followed by the chugging of the engine. The boys leaped to the driver's seat, the strange contrivance on wheels began to move. Jumping from his seat, the spectator climbed to the rear of the wagon and for the succeeding few moments participated in a wild and exhiliarating ride until the engine "died" once more. Investigation disclosed a belt running from the fly-wheel to the rear wheel of the wagon—the invention of the youthful drivers.

As an illustration of the natural desire of two farm boys to "tinker" with automotivation, the example was enlightening. As disclosing a woeful lack of understanding on the part of adults in charge of giving these boys adequate instruction in machines providing the necessities of their daily life, the "wagon-mobile" was enlightening and a sad commentary on the times.

Give a child a watch to play with and nine chances to one the works will be reduced to a pile of units in jig-time. Give a boy mechanical toys and nine chances to one he will find out what makes them "go" and why without assistance from you. Give a grammar school student manual training and generally he will make something and try to make that something automatic in its functions.

Why Not "Teach The Boy About Motors!"

Why not, then, "Teach The Boy About Motors!" From a utilitarian standpoint it will prove of inestimable value to him when he becomes a youth, when he grows to manhood and when he owns an automobile. And the chances are that if he does not own an automobile ten years from the boyhood of now, he will drive one. What a tremendous impetus to sales is thus revealed to the manufacturer! To know how to drive an automobile, to know what makes it go and why, is to foster the desire to put into practice what one knows—to own a motor car or truck.

How immensely valuable to the next generation will the knowledge this generation failed to get through a grave oversight! With thousands of competent operators of internal combustion engines coming of age constantly, safety on the highway increases, use of motor cars and trucks spreads, roads develop to care for the growing commerce over the highways, living becomes a greater happiness through the wider distribution of articles of commerce due to the use of both trucks and passenger-business cars.

In short, benefits to be derived by manufacturers from establishment of instruction in internal combustion engine mechanics, great as they will be, are small when seen beside the benefits to be derived by the American people considered as a whole.

The time is ripe to erect the banner of progress in educating of the youth of the Land in the principles of the Nation's greatest servant, the internal combustion engine. The traffic problem daily grows in importance throughout the Country and is beginning to get its meed of attention. Traffic cannot be safe so long as Ignorance drives the car.

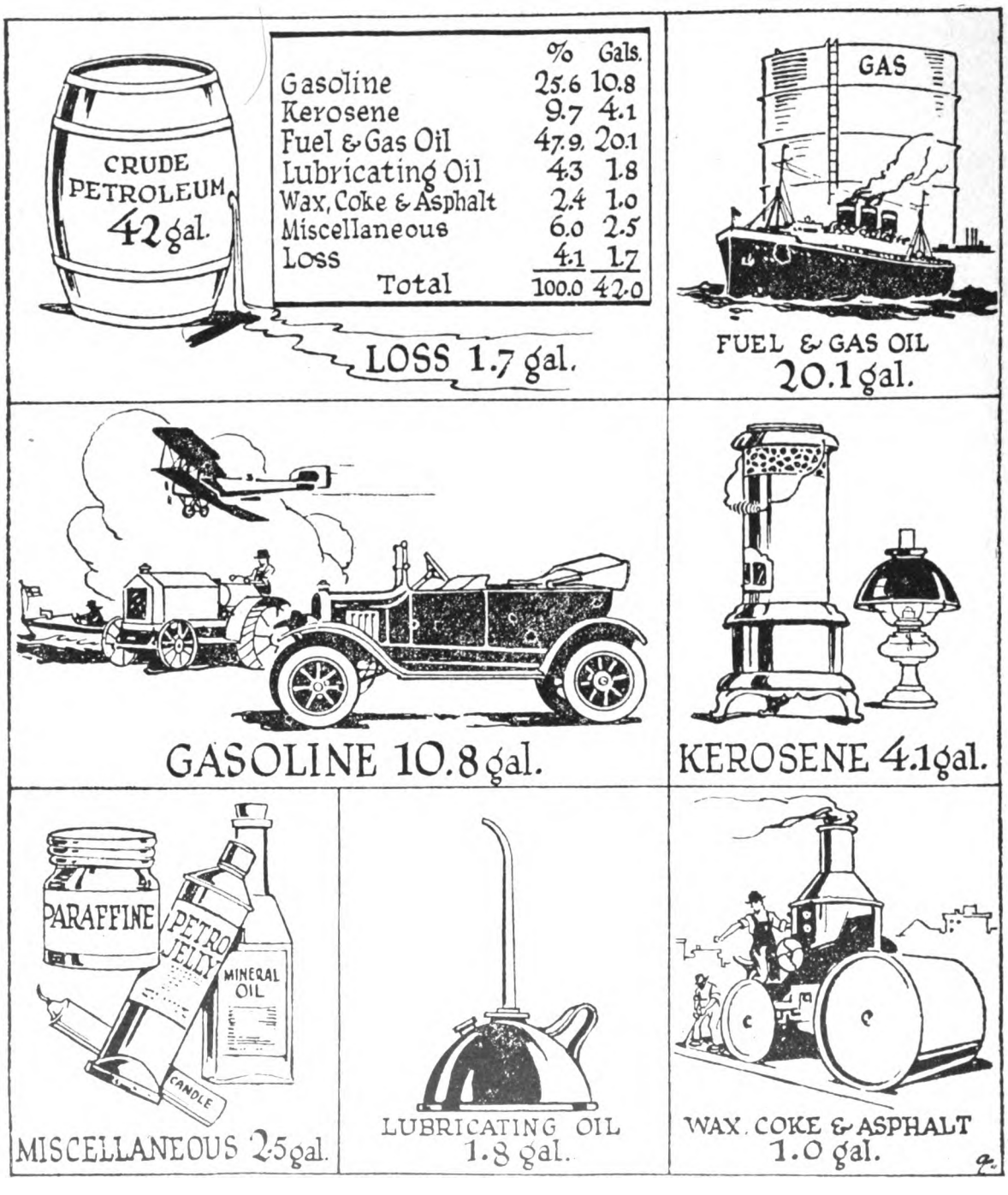
Automobiles nowadays, thanks to unremitting and tremendously expensive research and care in manufacture, are nearly fool-proof as far as the machinery is concerned. But—and a petty example will suffice—the inquisitive owner will always attempt to tamper with mechanism he knows nothing about. He succeeds—in getting it out of order. The car runs poorly in consequence. The make is then in for disparaging comparisons, the critic entirely overlooking his own culpability.

How better it would be if the owner had learned the principles, the construction, the functioning of the internal combustion engine during the days of his youth when time meant nothing, when the mind was constantly acquiring something new, when interests were at white heat and hands willing to undertake any task!

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It's All in the Life of One Barrel of Oil

Survey Shows Distribution of a Barrel of Crude Oil



FOR every five gallons of gasoline used in a car someone has pumped a half barrel of crude oil out of the ground. Although the crude oil of the United States and Mexico is produced primarily for gasoline, examination of recent figures show that from over half a billion barrels produced for use in America last year, only 123 barrels of gasoline were made. This develops the fact that it takes nearly four barrels of oil to make one barrel of gasoline. A digest of oil figures compiled by the American Petroleum Institute for 1921 shows that 405,000,000 barrels of oil were used in the form of petroleum products other than gasoline

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SELLING GOODS AT RETAIL

A GOOD doctor never prescribes until he has satisfied himself that his diagnosis is correct. But how about the shopman who acts as doctor to all motor ills? Is he as careful in his efforts to locate the root of the trouble?

Indications point to the fact that he is by no means as particular in this respect. Too many times he succumbs to the temptation to jump at conclusions—to glance over the machine, and jot down instructions for this repair and that—only to find after actual work has been started that the trouble lies elsewhere.

Careful diagnosis is something to which the greatest amount of care should be given. When the physician offers the wrong remedy he subjects himself to prosecution for criminal negligence. Unfortunately, perhaps, the shop proprietor works under no such responsibility.

* * *

WHAT can be accomplished by the automobile merchandiser in drawing attention to his line is revealed in an article on the following pages which tells of the success of the Enclosed Car Salon staged by Cadillac organizations throughout the Country during the week of September 17-23.

Showrooms handsomely decorated with Fall foliage acted as effective settings for various de luxe editions of the Cadillac line, executed in special colorings and luxurious upholsterings. Urgent invitations and effective announcements in the local papers drew crowds greater than ever before.

For the Cadillac Motor Car Co. was making no experiment this year in urging its representatives to observe such a week. Quite to the contrary, the motoring public has come to look forward to this annual event as marking the beginning of the Winter season.

AS "SID" SNYDER SAYS

NOW and then you run across the feller that sort of plumes himself 'fore he starts to sell you something, as if to say: "Watch me get this guy." An' if you've any red blood, you put up a fight.

* * *

He's a lot like the mosquito that was buzzin' around me the other night. I'd hear him singin' away as if he was sayin': "The old feller's off; watch me nip him." But his song spoiled it. I was ready with a swat that gave him the ether for good

* * *

SLOGANS, in the opinion of many, are overworked. Too much time is spent in pasting them conspicuously about, and too little time and effort expended in living up to them.

This feeling notwithstanding, a new one is being added to the list of those which every salesman might well keep in mind, if not before his eyes.

This latest addition has been launched by the sales organization of C. H. Wills & Co.

"Prize winners in the sales delivery contest," states General Sales Manager E. C. Morse, will be those who:

1—Work.
2—Know the car thoroughly.
3—Have enthusiasm.
4—Believe in the product, the policies of the Company and their own ability to win.

A pretty good slogan for everyone to live up to, whether it be used in a special contest or in the daily work.

* * *

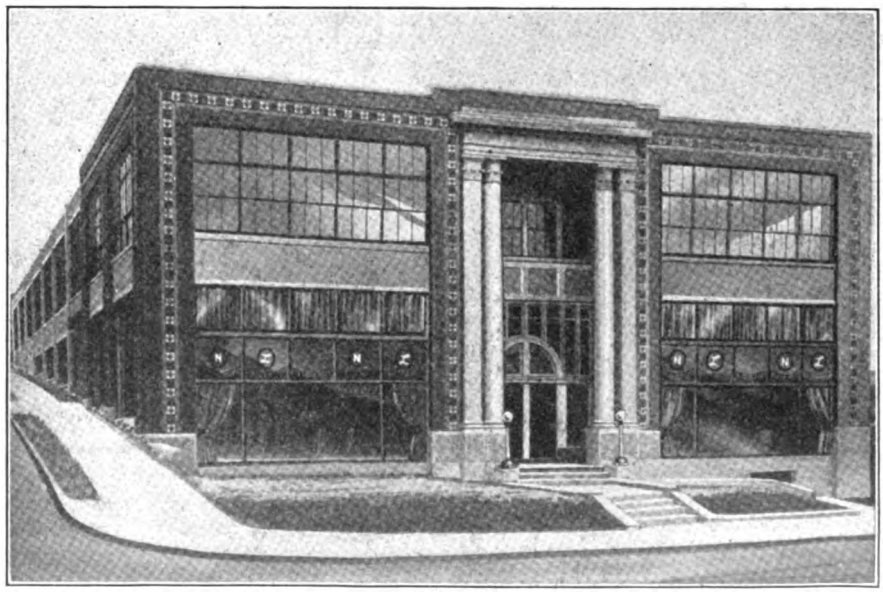
IS December 25th marked with a red circle on your calendar? If not, it's a good hunch to do so right now. For in the pressure of other things that come up from day to day it is apt to be forgotten.

After the red pencil has been generously used on the 25th, don't put it back in the drawer. Keep it out and circle October 30.

If the reason has not already, been guessed, here it is—it's a good one too.

Christmas is just eight weeks removed from October 30. This means that beginning with the latter date serious consideration should be given by every automotive merchandiser to ways whereby he may effectively "Ask 'em to Buy for Christmas."

Where Cincinnati Learns of Nash



Home of the Nash-Cincinnati Motors Co. stands on Reading Road at Morgan

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Showroom Salon Whets the Public Appetite

Cadillac Enclosed Car Week Reveals the Possibilities of Seasonal Exhibits — Gets 'em Over the Threshold

THE goal of every merchandiser is to get the crowd over his threshold—to arouse interest in his line.

It is for this precise reason that the department store executive keeps his bargain tables filled with all sorts of tempting bait; that clothing establishments catering to feminine wants send out handsomely engraved invitations to attend Spring and Fall openings. It is for this very reason, too, that more and more automobile merchandisers are making their showrooms the scenes of seasonal exhibits.

It is in every respect a perfectly logical development and one which promises to become more generally recognized, as the results obtained are more widely heralded. Just as the clothing establishment makes a feature of its Summer and Winter lines, why should not the automobile man lay emphasis on those of his models that are particularly adapted to the approaching season?

With what great effect he can do this is well illustrated in the activities of various Cadillac selling organizations throughout the Country in observing a National Enclosed Car Week. This took place the week of September 17-23, although in many instances this time was extended, due to the great amount of public interest displayed.

Lest it be inferred that this is something of an experiment the Cadillac organization is conducting, it may be said that for many years certain members of the Company's distributing organization have been holding such an exhibit each Fall. Boston, for example, this year saw the eleventh display of its kind. Thus the Cadillac Autumn Salon is regarded as a fixture and marks the formal opening of the Winter season.

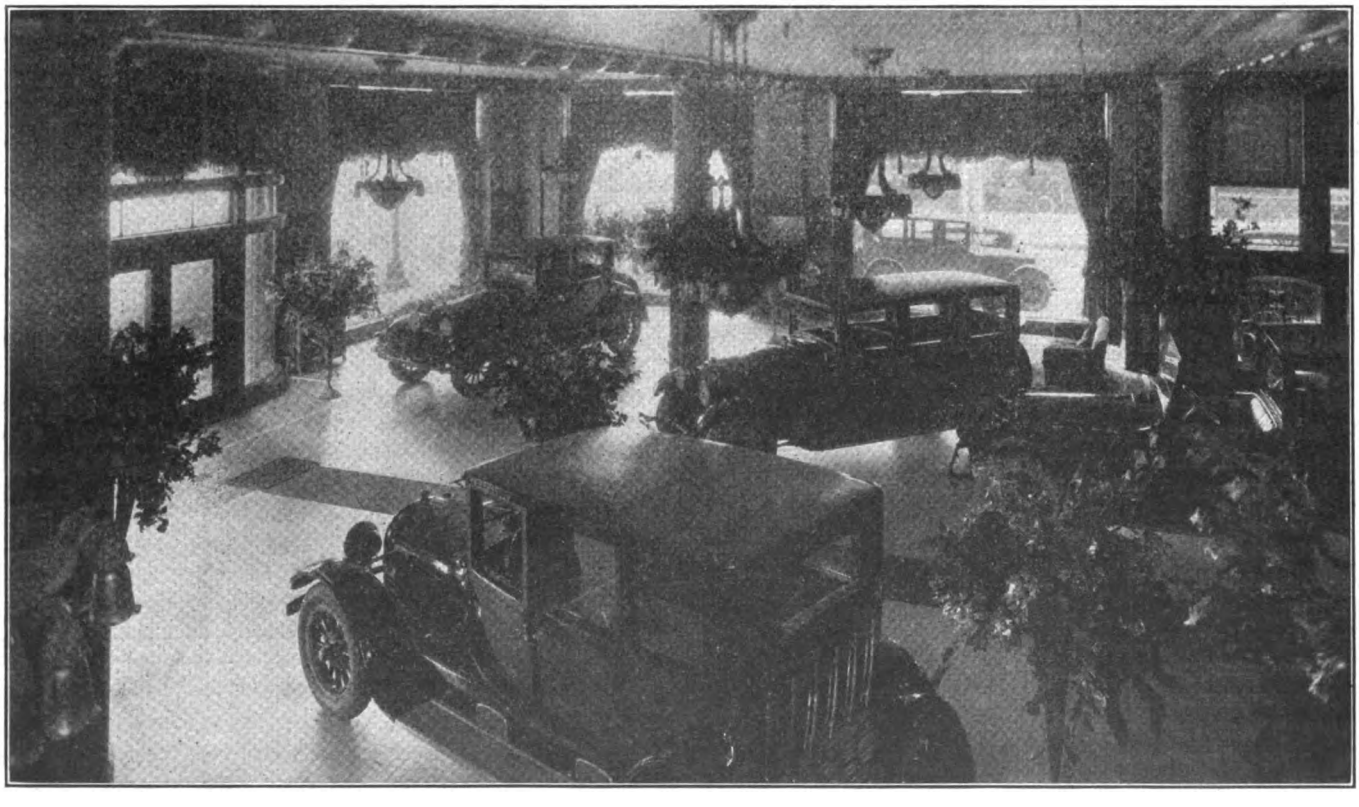
Certain details attendant upon this event will serve to show how it is brought to the motorist's attention and how it is made to whet the public appetite for cars of the enclosed type.

To secure proper patronage for this year's exhibition the Cadillac Automobile Co. of Boston mailed out approximately twenty thousand announcements to a selected list of Cadillac owners and prospects. These were supplemented by an extended advertising campaign in the daily and Sunday papers.

Large display advertisements attracted the eye of the reader. In connection with these, news items appeared which added still further interest.

Nor did the Company rest there in its attempt to secure wide publicity. Through the main streets of the city it sent an old 1902 "One-Lunger" Cadillac. This was driven by Joe Bush, of the New York Yankees with a big sign announcing: "Old, but still going strong."

Inside the Cadillac building a scene of real beauty was staged. Autumn foliage was used profusely on ceilings and side walls. Rare rugs and tapestries also contributed much to the handsome setting against which the



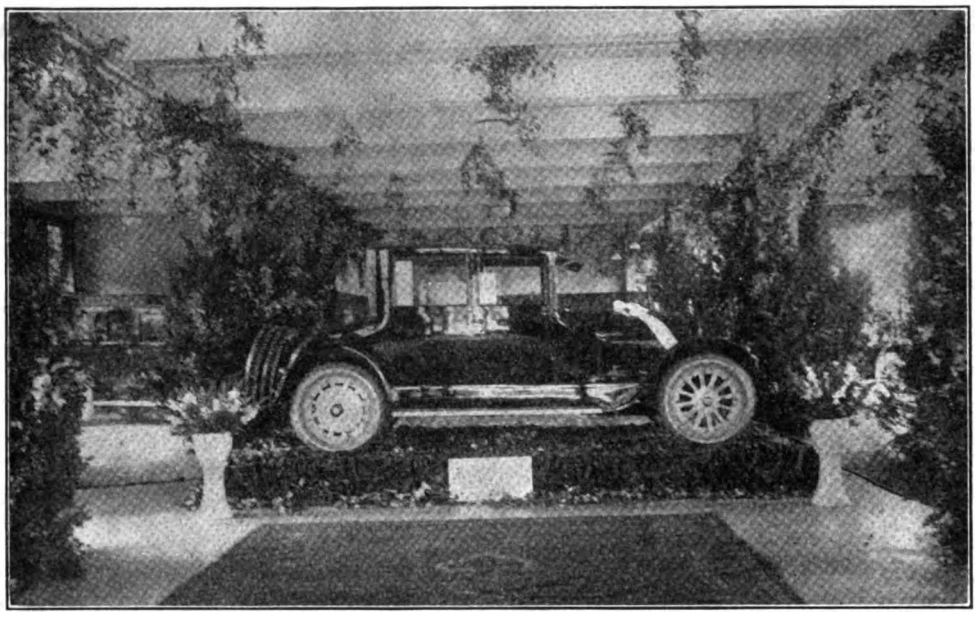
Autumn foliage formed an effective background for the Salon held in the showroom of the Cadillac company's Chicago branch

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Company's line of enclosed vehicles showed to advantage. A raised dais in the center of the floor was used to display the graceful lines of the new four-passenger Victoria and the five-passenger coupe. These occupied the position of honor alternate weeks.

And now for results, which, after all, are what tell the story. "It was very successful, both from the sales and interest standpoints," according to one close observer. "Particularly noticeable was a strong buying spirit in evidence among the visitors, the percentage being much greater than any previous year of the Salon."

While all of Boston was paying homage to Cadillac efficiency and beauty, similar scenes were taking place in Chicago, where the Chicago branch of the Cadillac Motor Car Co. was the center of much interest. In fact so great was the attention it attracted that the one week was extended to two, making the Autumn Salon run from September 17 to 30.



Boston paid homage to the Cadillac amidst settings resplendent with Fall coloring. A raised dais displayed the newest additions to the line of enclosed models

Notice was drawn to this event through large displays in the daily papers in which emphasis was laid upon the showing of a film each evening in the Company's showroom in connection with the car show.

"Main Street, the World Over" the advertisement was headed, under which appeared the following:

"A feature film picturing the main streets of all the principal cities in the world is being shown every evening at the Autumn Salon now being held at the Cadillac Building, Twenty-third and Michigan avenue. The world's traffic—foot, horse and motor—flows before you in its most interesting and varied forms. Close-ups of celebrated boulevards, world-famous cafes, shops, buildings and monuments form a background which emphasizes vividly the universal development of motor transportation."

The sight of Cadillac cars on world-famous boulevards as shown in the picture added further interest to those models on view in the salesroom. As an added feature of the evening's entertainment an official German war picture was also exhibited. This was taken from aboard a submarine and showed the sinking of Allied vessels.

The decorative scheme introduced the brilliant hues of Fall coloring, forming a vivid background for the cars. Luxurious upholsterings, special colors, and a limited selection of custom bodies were displayed for exhibition along with the complete enclosed car line.

But again, results are what count. A report from the Company states: "The Salon, which was open from 8.30 in the morning until 10 in the evening, was visited by a large number of people, the interest and attendance of the first week having been such that it was found necessary to continue it through the second week."

Taking these two exhibits as typical examples of what may be accomplished by the retail merchandiser along the line of arousing seasonal interest in his products, it is possible to draw certain conclusions which may prove helpful to the automobile man who has not yet made use of this idea.

Granted that some such special effort is necessary to get the public over his threshold, the question remains of how to go about it. In the first place let it be said that the plan of holding a salon in the showroom may be worked out on as simple or elaborate a scale as conditions may warrant.

The matter of decoration need not trouble the merchandiser who is desirous of using this method of attracting attention, but who hesitates because of the expense involved. Let him take a couple of machines, ride out into the open country and bring back with him a generous supply of autumn foliage. If it happens to be a Spring exhibit he is staging, early buds and blossoms may be procured in the same way.

A simple printed announcement or invitation mailed to his list of customers and prospective buyers will advertise the event. In connection with such a mailing piece, as much space in the newspapers may be utilized as is considered advisable.

There also comes up for discussion the question of when to stage such displays. The Fall Salon fills a real need in boosting closed car sales. This has been demonstrated.

That a similar exhibit staged during the early Spring may also be made productive has been revealed in doings of the Boston trade. For many years back it has been the custom of dealers in that city to observe Washington's Birthday as an "at home" day. Even though he wind his way along a "row" blanketed with snow drifts, the motor "fan" is assured real Spring atmosphere once he steps inside the showrooms.

Perhaps the greatest advantage of all in the individual automobile salon lies in the fact that it brings the merchandiser nearer to his public. Through thus acting as host at least twice during the year, he is enabled to cement old friendships and also make new.

Still another advantage is that it gets the public in the habit of dropping in the salesroom. Thus, the prospective purchaser feels perfectly at home.

Clearly there is much to be said in favor of this method of arousing public interest, as is evidenced by the growing number of merchandisers who are employing it. For, after all, the big thing is to get the public over the threshold.

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NEW CAR MODELS ARE SALES BOOSTERS

Studebaker Closed-Car Line Has Six Models

Seven-Passenger Special Sedan on Big-Six Chassis in Show Debut

MAKING its first show appearance at the New York exhibit of closed cars was the seven-passenger special sedan of the Studebaker big-six series. This together with the four-passenger coupe on the big-six chassis, the special-six five-passenger sedan and four-passenger coupe, and the light-six five-passenger sedan and two-passenger coupe-roadster makes six closed models that the Studebaker Corporation is now offering.

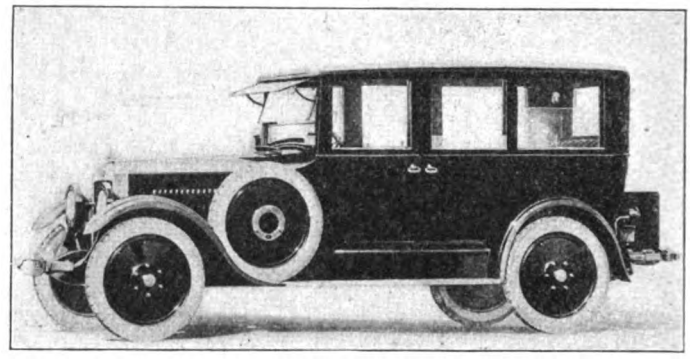
In addition to the high standards of quality and skill in workmanship maintained in all Studebaker bodies, the big-six special sedan is distinctive by reason of its equipment. This model is listed at $2,650.

A spacious trunk with dust-proof cover is carried at the rear. Two extra disc wheels, disc wheels being standard, complete with extra tires and tubes, are carried one on either side of the car at the front fender.

Nickel-plated bumpers front and rear, automatic windshield cleaner, nickeled radiator shell, and rear view mirror are other items furnished. All that has been mentioned is, of course, in addition to those items regularly furnished on all big-six closed models—exhaust heater, theft-proof transmission lock, cowl ventilator, massive headlights and side coach lamps, courtesy light; corner reading lights and, in the sedan, a dome light besides; silk roller curtains, three-piece rain vision windshield with rain visor and windshield cleaner, jeweled eight-day clock, door locks and door pockets.

The sedan of the special-six series, as it was shown, is enhanced by a double panel around the sides and back of the body at the belt line, and a courtesy light on the lower part of the left cowl. Appointments on this model include theft-proof transmission lock, heater, cowl ventilator, eight-day jeweled clock, corner lights, coach lamps on the sides, windshield wiper, rain visor, and silk roller curtains at the windows.

EXTRA equipment is furnished with the seven-passenger special sedan of the Studebaker big-six line, including trunk, six disc wheels with extras mounted on the sides, and nickel trim



Nash Adds Much Equipment to Sport Model

Disc Wheels, Trunk and Bumpers Among Items Included at $1,645

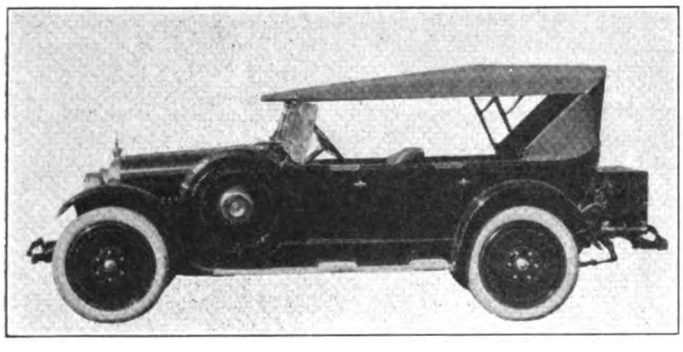
CONSIDERABLE equipment has been added to the new sport model which the Nash Motors Co., Kenosha, Wis., is now presenting. The new model is similar to the former sport car mounted on the 121-inch six-cylinder chassis except for the additional furnishings. These justify the $250 increase in price, the latest job listing at $1,645.

Disc wheels are now used. Six are supplied, the two extras, regularly furnished with extra cord tires and tire covers, being mounted one on either side of the car on the running board at the front. On the rear of the car there is a trunk rack and waterproof-covered trunk. Directly in front of the trunk, there are upright guard bars on the back of the body.

The deep maroon body is fitted with an ecru top. Further enhancing appearance are nickel trimmings, barrel-type lamps, nickeled front and rear bumpers and upholstery in Spanish leather. All nickel-plated parts are nickeled over brass to prevent rusting.

Other equipment regularly furnished includes rear view mirror, windshield wiper, windshield wings, spotlight; nickel-plated head, cowl and combination stop-tail lamps; nickel-plated radiator shell, cowl ventilator, and Moto-Meter with locking-type monogram cap; special running board covering with aluminum step plates and rubber pads with metal filler. The windshield is of interest, having a one-piece glass and nickel-plated posts.

PRACTICALLY every item that makes for the owner's comfort and convenience has been added to the Nash six-cylinder sport model. All equipment shown is regularly furnished



Oldsmobile Adds Sport Roadster to Eight

Full Equipment and Some Unique Details for Convenience Featured

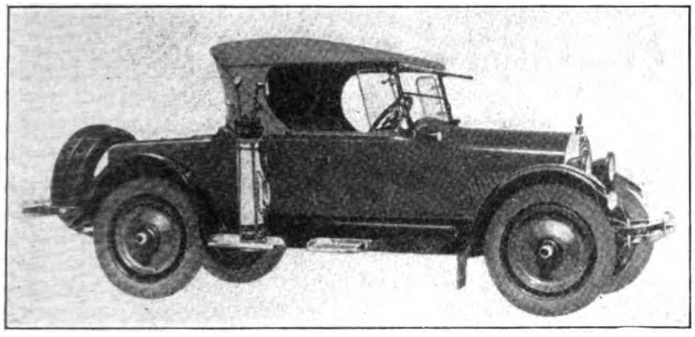
ADDED to the 1923 Oldsmobile light eight models is a new sport roadster which the Olds Motor Works, Lansing, prices at $1,625. The conveniences and equipment of this model are its featured points. Its golf bag rack and leather-lined deck compartment are unique touches.

The entire car has been designed so that it sets off at a lower angle. It provides a sporty appearance, but at the same time keeps a conservative tone.

The body is finished in a new shade of green, with nickel trimmings and vertical nickel rails on the rear deck to give it a distinctive appearance. Disc wheels, cowl lights and cowl ventilator contribute to the car's style.

One of the new notes struck in this car is a rack, mounted at the rear of the right hand step, for carrying a golf bag. A large rear deck has been incorporated, with pockets in the under side of the

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AMONG distinctive features of the new Oldsmobile light-eight sport roadster is the golf bag rack on the side. The spot-light under the left front headlight is still another

door where tools and small articles may be carried. The entire space under the deck is finished in leather, this providing, therefore, a large clean space for two suitcases or a small trunk, clothes or lunches, and the like.

Lights set in either door, which automatically light when the door is open, serve to illuminate the steps and interior of the car. Switches in the door jam shut the light off the minute the door is closed. Other equipment included in the list price consists of windshield wings, spotlight mounted under the left front headlight, aluminum steps, stop and parking light, cigar lighter, bumpers, windshield visor, double tire carrier, Moto-Meter, nickel windshield wiper, and non-fading Burbank top.

Haynes Makes Several Improvements in "55"

Important Chassis and Body Refinements Give Added Selling Points

ABOUT the time the new 1923 Haynes "55" sport models were disclosed, photographs of which cars, incidentally, are available for the first time, the Haynes Automobile Co., Kokomo, Ind., made several important improvements in the "55" chassis and body. These recent changes are of a nature which add to the car's performance and convenience, and by that token give valuable additional selling points for the dealer to put forth.

Taking the engine first, a hot-spot has been incorporated on the engine block which applies hot exhaust gases direct to the intake manifold. Action of the accelerator automatically operates the hot-spot, the supply of exhaust gas to the intake manifold being checked as speed of the engine increases.

Another interesting adoption is the new rotor-type (revolving blade) oil pump, which, driven directly from the generator shaft, has the advantage of a more positive drive. The engine is lubricated thoroughly at all speeds as the oil vacuum increases with the engine speed. By thus automatically increasing and decreasing flow of oil, an oil regulator is no longer required. The pump is simple, positive in action, and requires little attention.

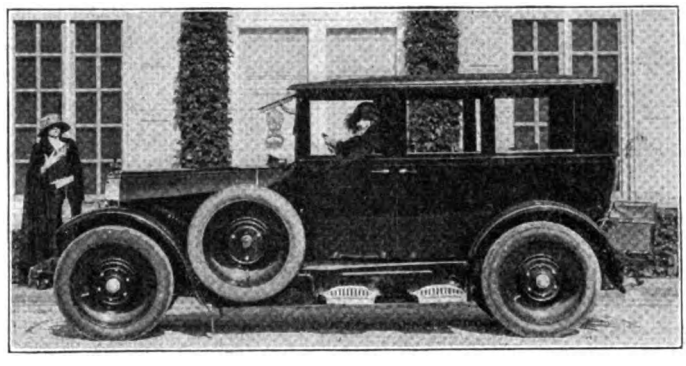
This pump plays another important part since it, instead of the suction of the intake manifold, supplies the vacuum necessary for the operation of the newly adopted Kingston vacuum tank. This arrangement makes it impossible for the engine to be run when the oil supply is exhausted. Should the supply of oil become used up, the engine will stop before any damage can be done, an evident advantage from the owner's viewpoint.

An improved Warner clutch eliminates all back-lash due to wear, because of the fact that the center of the drum disc is keyed and held tightly to the main drive gear by a taper. This eliminates the spline which is subject to wear. The new clutch has four friction discs instead of two as the former one had.

The new rear axle is semi-floating. All wheel thrust is taken directly through the axle shafts on the large out axle-shaft self-aligning bearings, rather than by plain ball thrust bearings in the differential assembly. This design makes it possible to adjust the whole axle unit for any kind of wear. Shaffer self-aligning taper roller bearings are now being used in both front and rear wheels.

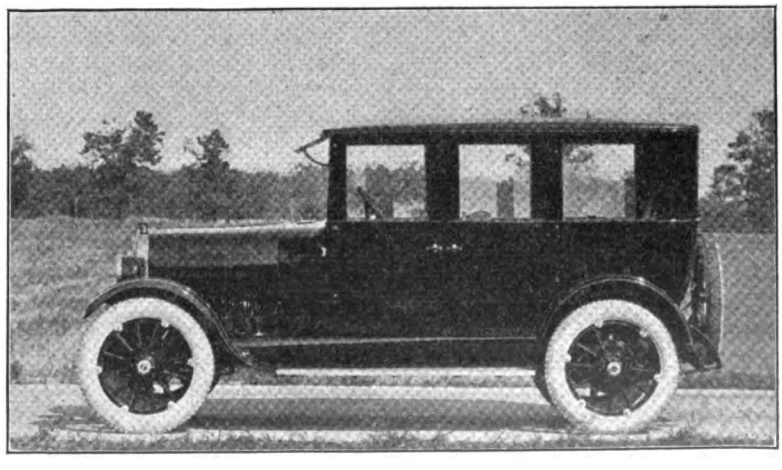
Lifting power of both front and rear springs has been reduced—25 and 15 pounds per square inch, respectively—thus giving the springs more resiliency

SO great has been the demand for the new Haynes "55" sport models, of which the sedan is shown, that this is the first car that could be held up long enough to photograph. Equipment is featured



Oakland 1923 Sedan Has Fisher Body

ONE of the high spots of the new Oakland five-passenger sedan is its Fisher-built body. Contrasted with the former sedan, the new body has a lower belt line and slightly lowered roof, giving it the improved appearance to be noted in the illustration. Conforming with the new exterior, interior fittings and appointments have likewise been refined. Windows are wider and deeper on this $1,545 model



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with a consequent greater degree of riding comfort. It also cuts down spring breakage and reduces wear and tear on the car, thus lessening depreciation and cost of upkeep.

Another important new detail applies to the brakes. Emergency now operates on the rear of the transmission direct through the propeller shaft to the axle shaft. A new design lever permits greater leverage with less effort on the part of the driver. Service brake, formerly internal expanding, is now external contracting on the rear axle. It gives greater bearing surface around the drum and has the added advantage of operating with a flexible steel band which has a tendency to grip and conform to the shape of the drum when applied. Cable method of application does away with brake rods and brake cross-shafts on frame.

The Dot pressure oil system has been applied to spring shackles and other lubricating points on the chassis. Tire size has been reduced to 32x4½ cords.

Body changes include a new cowl ventilator with screw instead of pull adjustment and a clear vision top on which the rear bow socket arm has been eliminated. All of the standard "55" models are now finished in coach blue with a gold striping around the belt line and around the hood.

The new "55" sport models are: touring and roadster, $1,895; three-passenger coupelet, $2,195; and sedan, $2,695. They differ from the standard "55" models, which are continued, only in finish and equipment.

Some of the sport model appointments are: six disc wheels, with six tires and tubes, the two extra wheels being mounted on the sides of the body at the front; trunk conforming to shape of body, mounted on sturdy rack at the rear, and polished body-protecting bars; nickel-plated radiator with wing cap, head and cowl lights; Moto-Meter; visor on all models; windshield wings on open cars; front and rear bumpers; new individual steps, these being unusually wide and having high protective flares.

Body finish is in deep maroon. Open cars are trimmed in brown Spanish leather and the top may be had in either black or rubberized khaki.

New Stephens Closed Car Generously Sized

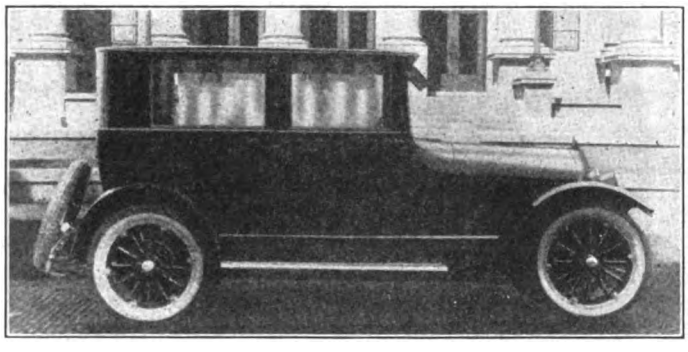
Five-Passenger Two-Door Sedan Is Being Put on Market at $2,000

UNUSUAL roominess as compared with other similar body types is one of the characteristics of the new five-passenger two-door sedan now being produced by the Stephens Motor Car Co., Inc., Moline, Ill. This model, designed to meet the demand for lower-priced cars, is offered at $2,000.

This five-passenger body has two wide doors, 33 inches wide to be exact. These are of substantial design and make entrance and exit easy. Windows, it will be noted from the illustration, are generously wide, too. The plate-glass door panels are fitted with crank regulators.

Front seats are individual, 18 inches wide and 19 inches deep. The right seat tilts forward to permit access to the rear seat. The left front, or driver's seat can be shifted to insure absolute comfort. The full-width rear seat is 45 inches wide, 21 inches deep. Pitch of front seats is 4 inches; of rear seat, 3 inches. Cushions are built on Marshall spiral springs, upholstered in soft brown all-wool broadcloth.

Appointments of this model include dome light, silk window curtains, platinum-finished hardware, storm-proof and clear-vision windshield, cowl ventilator and Moto-Meter. The windshield is fitted with an adjustable sun and rain visor.



UNUSUALLY wide doors and windows, with generous room inside, are characteristics of the two-door five-passenger sedan of the Stephens line. This closed model sells for $2,000

Velie's New Brougham $1,795

Velie Motors Corp., Moline, Ill., is introducing a new five-passenger brougham, listed at $1,795. It will replace the former $2,185 model.

Time Proves Dorris Principles

Dorris Motor Car Co., St. Louis, has used a valve-in-head engine, unit power plant construction, and a multiple disc clutch for seventeen years. While basically every feature is the same today as in the first Dorris, there have been numerous improvements in mechanical details, notably the Dorris distillator.

Dort Adds Sport Models at Dealers' Request

Touring and Roadster at $1,015 Specially Finished and Equipped

FOLLOWING requests from its dealer organization, the Dort Motor Car Co., Flint, Mich., has added two new sport models, a touring and roadster, both of which list at $1,015. These jobs are similar to the standard open models, except that they are specially finished and equipped.

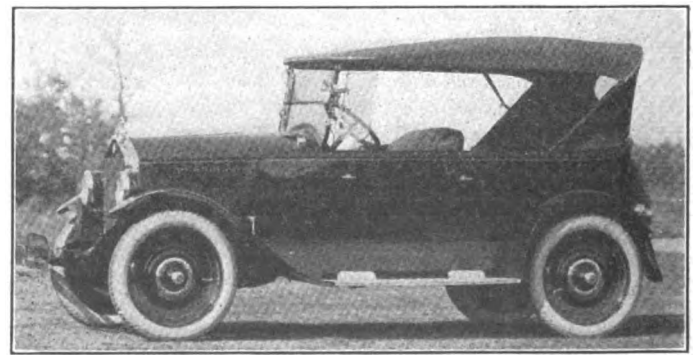
The sport models are finished in maroon with aluminum stripe. Forming a pleasing contrast are the top and side curtains of khaki. Trimming of cushions and backs is in genuine leather with a mottled tan finish.

Radiator is nickel-plated and carries a Moto-Meter with nickel-plated bar cap. A key-locking device is provided on the heat indicators to prevent theft.

Nickel-plating is extensively used throughout, incidentally. For example, the hub rings of the disc wheels are nickel-plated, the hub itself being painted in maroon. Nickel-plating is also used on the doors of the drum-type headlights, cowl lights, spotlight attached to the cowl board switch, combination stop and tail light, and front bumper.

The windshield is fitted with side wings of plate glass with nickel-plated fixtures. It is also provided with a wiper.

SPECIAL finish and equipment distinguish the new Dort sport models from the standard cars of the line. Sport roadster equipment is similar to that shown on the touring car



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IDEAS THAT LEAD TO GREATER SALES

How About a Good Crop of Fall Business?

REAPING a good crop of Fall and Winter business isn't such a hard job after all," writes an accessory dealer who knows whereof he speaks. "That is" he adds, "it's not such a hard job if you know how to tackle it, and make up your mind nothing's going to stop you once you get started."

It may here be said that this man, who is conducting a prosperous accessory store in the heart of New England has long dismissed from his mind the thought that his must of necessity be a seasonal business.

"No sooner is the Summer season well under way" he states, "than I start in getting ready for my Fall work. For you've got to begin early, to start sowing seed if you expect to do any reaping later on."

All during the Summer he keeps gathering information about every car owner in the neighborhood. What interests him most is what use the owner makes of his machine, and whether he intends running it through the Winter months. This takes time, to be sure, but it is essential.

There are certain classes of car owners he knows he can count on. Every doctor, in the surrounding country, for example, goes on his list automatically.

Any man who uses his machine in connection with his business is also included in the list. Salesmen, for example, who make their rounds by automobile are regarded as decidedly worth cultivating.

By the end of Summer, he finds he has a substantial list of names on which to start working. And he loses no time in commencing operations.

His opening shot takes the form of a general sales letter. Here it is:

My dear Mr. Smith:

Did you feel that touch of Fall in the air this morning as you stepped into your car? Sort of made you think of Winter, didn't it?

When the time comes for slipping on your overcoat, it's time to think of slipping something on your automobile in the way of extra equipment that will make you more comfortable when the days get sharper.

We've got a complete line-up of winter devices ready to show you. We've tried 'em all, and know they're all they're cracked up to be.

By the way, there's a new windshield-cleaner out, that's just about the neatest thing we've ever seen. Come in and let us show it to you.

"That last sentence" the writer states, "I try to make just as individual as possible. That is to say, I aim to make mention of some device I know the owner doesn't happen to have on his machine."

His method of obtaining this information is similar to that described in these columns several weeks ago. A card index plays an important part in his sales work. This records just as accurate a history of each customer as it is possible to obtain—what kind of machine he runs,—the model, type—every detail possible, including items of equipment.

This first letter, as before stated, forms the opening shot in his Fall business campaign. Within a short time it is followed by others.

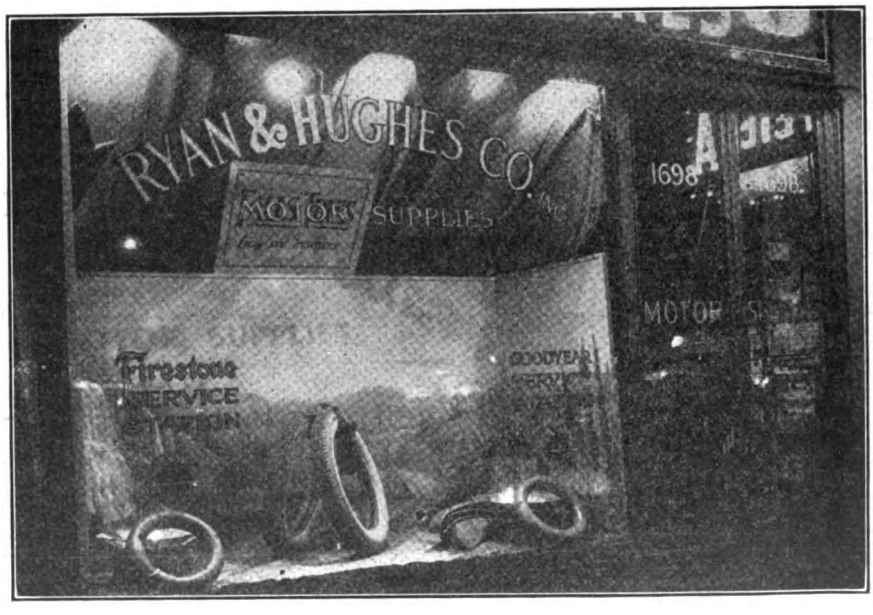
A unique feature of the campaign lies in the fact that part of it at least is directed to the woman of the household. This holds true particularly, in those instances where the car is being operated for the convenience of the family as a whole, rather than for the benefit of one special member.

One letter of the series therefore, is addressed to Mrs. Car Owner. The Fall season is the time for freshening things up, this points out, and goes on to emphasize the importance of a Fall housecleaning for the automobile.

"You'd be surprised how much this letter has done in the way of arousing interest," this enterprising merchant states. And he adds, "the trouble with too many of us is that we grab at every little excuse for sitting back and taking things easy. So when Winter comes, we light up the old stove and doze away.

"There's more and more cars being used up our way in the Winter time. This means that there's more and more business. But you've got to stir it up systematically to get the full benefit."

Lights and Color Sell Tires



Ryan & Hughes Co., Inc., made New York's "row" sit up and take notice when it staged this attractive display of Falls tires. Effective lighting was a feature

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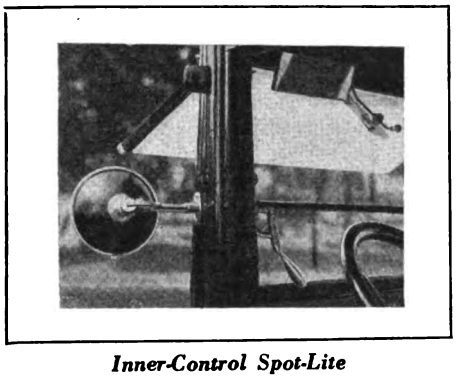
IN THE FIELD OF ACCESSORIES

INNER-CONTROL SPOT-LITE HAS HANDY SWITCH

Operation of the spotlight from inside the car is made possible through use of the Inner-Control Spot-Lite. This unique feature of the light which is being manufactured by the Cino Auto Products Co., Third & Race streets, Cincinnati, Ohio, known formerly as the Cincinnati Lamp & Bracket Co., has been accomplished by means of a switch or controlling handle placed within easy reach of the driver.

Reflector of the Inner-Control is spun from 22-gauge brass, silver-plated and highly polished. Back of the reflector is finished in black enamel, or silver-plated if desired. Convex lens is designed to throw a powerful, concentrated beam.

Various models are offered and to provide for the different angles of corner posts on closed cars six brackets are supplied thus allowing for installation on every make and model. Designed particularly for use on closed cars is the Pathfinder model. This can be installed on the lightest post. Price of this model ranges from $9 to $12 according to the finish.



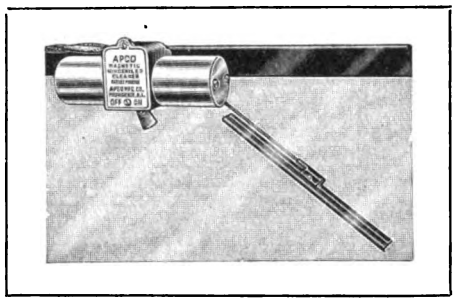
Inner-Control Spot-Lite

The Perfecto model as illustrated, is adapted to all coupe and sedan types where installation can be made through the side of the car, parallel with the windshield, or through the door. This type sells for $14 or $16 depending upon the finish.

The Ideal model is offered for touring cars and roadsters with glass wings, while the Popular model also has been designed for open cars. Prices of these two models range from $7.50 to $13. Each light is furnished complete with cord and switch, ready for installation.

APCO WINDSHIELD CLEANER IS MAGNETIC

Elimination of the motor and the substitution of magnets is a feature of the Apco magnetic windshield cleaner which is a recent addition to the Apco line of automotive products placed on the market by the Apco Manufacturing Co., Providence, R. I. Coupled with this unique construction the fact that it is small in size and neat in appearance adds to its desirability.



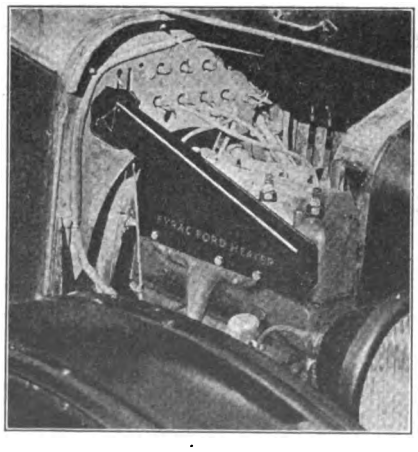
Apco magnetic windshield cleaner

Little current is required in operating this cleaner, it is claimed, and it operates about as noiselessly as a clock. It runs at a uniform high speed which does not vary with the speed of the car. When not operating, the cleaner arm is always up out of the line of vision.

Installation is a matter of a few minutes. It can be attached to any car by simply drilling three holes in the windshield frame. Construction is simple throughout with very few moving parts to get out of order. Price complete, ready for installation is $5.

FYRAC FORD HEATER IS EASILY REGULATED

Attached to the Ford manifold, the Fyrac heater which has been designed by the Fyrac Manufacturing Co., Rockford, Ill., for Ford cars, carries the heat through a metal pipe to an outlet on the dash. This device which is the latest product to be offered by the manufacturer of Fyrac spark plugs is being produced to fill the demand for a Ford heater that will be adequate and dependable in every respect and yet which will come within the means of every Ford owner.

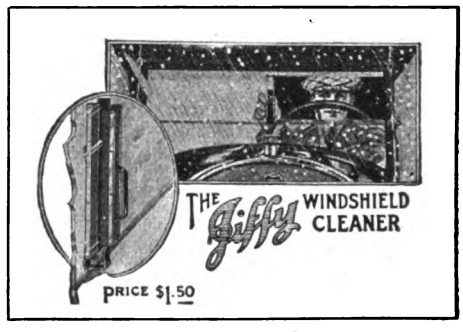


Fyrac Ford heater

Design of the Fyrac heater is such that the heat can be regulated instantly by the driver, or may be shut off entirely if desired. It is substantially constructed and can be installed in a short time with little difficulty. Price complete, is $2.50.

JIFFY WINDSHIELD CLEANER DRIES BOTH SIDES

With one sweep across, the Jiffy windshield cleaner cleans and dries both sides of the glass. This device which is being produced by the La Vietes Manufacturing Co., Inc., New Haven, Conn., attaches to the upper half of the glass, fitting the shield with overlapping glass or with weather strip. Moreover, it may be put on or taken off with little difficulty, and is always out of the way when not in use.



Jiffy windshield cleaner

But one style is made. This is constructed of aluminum, highly polished, with four strips of rubber said not to be affected by the weather. A tempered steel spring holds the cleaner firmly on the glass. This type is adapted to all two-piece windshields. Price complete ready for attachment is $1.50.

BOSK SIGNAL WARNS BOTH FRONT AND REAR

It signals both to the front and rear. This is one of the interesting features of the Bosk signal which is being produced by the Bosk Auto Signal Co., 39 Suburban avenue, Stamford, Conn. The slow and stop warnings are operated by the brake. Right and left signals are lighted up by hand.

The signal is located on the mudguard of the left rear wheel. Stenciled faces are made of steel, and signal in bright red the slow-down, stop, or direction the driver intends taking. Size of the signal is 4½ inches square and two inches thick.

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With the Wholesalers and Retailers

ACTIVITIES OF THE WHOLESALERS

Simmons Motor Car Co., with headquarters at 5202 Prospect avenue, has been appointed Oldsmobile distributer for the territory of Cleveland and vicinity.

Ray C. Morgan has contracted for the distribution of the Cleveland line in Reynolds, Ill., and adjacent territory.

Colorado Motor Sales Co. has taken on the agency for the sale of the Peerless throughout Denver and surrounding Colorado territory.

Collins Chevrolet Co. and the **Smith Chevrolet Co.** have taken over the distribution of the Chevrolet in Houston and south Texas. Although the companies will operate separate headquarters, salesrooms and staffs, they will conduct a consolidated service station.

E. M. Walcutt has been appointed distributer of the Anderson for central Ohio. He will maintain headquarters at Columbus.

Stuyvesant Motor Co., located at 5005 Euclid avenue, Cleveland, has taken over the sale of the Chandler for a large part of Ohio and West Virginia. During the last eight years the concern has distributed the Hudson and Essex cars. H. L. Lance is president of the firm; E. G. Guthery, vice-president, and B. J. Guthery, secretary and treasurer.

Daggett-Yewdale Motor Co. has been named Gray distributer for Milwaukee, Wis., and vicinity.

Tivoli Motors Co., Chicago, Ill., has added the distribution of the Templar to its Noma agency.

A. P. Sullivan & Co. has contracted with the Peerless Motor Car Co. for the distribution of its car in Houston, Texas, and territory.

Rhoda-Rems Motor Cars, Allentown, Pa., has signed for the distributer franchise of the Anderson in that territory.

Chattanooga Auto Co., located at 617 Broad street, has taken on the agency for the distribution of the Dort in Chattanooga, Tenn., and surrounding territory.

Trotti Motor Co., southwestern distributer of Dodge Brothers cars, has added to its personnel Grover L. Pickrell and his brother, Frank T. Pickrell, who have purchased a half interest in the firm. Grover L. Pickrell will become actively engaged in the company as general manager.

W. F. Bohme Machinery Co. has secured the agency throughout several counties surrounding Joplin, Mo., for the sale of the Velie car.

Logan Auto Co., whose headquarters are located at 1515-21 Broadway, Fresno, Cal., has taken on the sale of the Dort line for territory comprising the San Joaquin Valley.

Payne & Dillon have secured the franchise for the distribution of the Cleveland car in and around Lynchburg, Va.

Wallis Baird has contracted for the Star agency throughout Knox and Warren counties. He will maintain headquarters at Galesburg, Ill.

Columbus-Liberty Motor Co. has been established here with E. T. Ash as manager to distribute the Liberty line in Columbus and central Ohio territory.

W. E. Grimes Co. has been organized by W. E. Grimes to conduct a wholesale and retail accessory business in Dallas, Texas.

Charles A. Day Motor Co. has contracted for the distribution of the Dort line for southern Alabama. He has obtained a location as headquarters at 110-114 North Royal, Mobile.

Robbinson Motor Co., Jacksonville, Fla., has secured the franchise for the sale of the Peerless line throughout that territory.

CHANGES IN RETAIL PERSONNEL

L. M. Ferguson, of Kansas City, has been made manager of the Omaha, Neb., branch of the Stephens Tire Co.

John Mattus has been appointed master mechanic at the Ideal Garage, located at Homer, Neb.

Walter I. Jordan has been appointed sales manager of the Barber-Warnock Co., Ford dealer at Indianapolis, Ind. Jordan is a veteran in automobile salesmanship, having been associated with Henry Ford in Detroit in 1905 in selling the original two-cylinder Ford. Later he was with the Oldsmobile and Packard organizations as traveling representative. His most recent connection was with the Kelly-Springfield Tire Co.

Harry Brenn, proprietor of a garage at Baumgartner and Telegraph roads, Oakville, Mo., was burned to death in a fire which destroyed the garage.

Donald Dalziel, owner of a garage at Big Rapids, Mich., died following an operation for appendicitis. He is survived by a brother, sister and father.

IN THE TRADE

EASTERN STATES

MASSACHUSETTS — SPRINGFIELD.—Hampden Motors, Inc., has been organized by Meagher & Bouchie to distribute the Gray car in this territory.—H. P. Baldwin has been named to take over the sales of the Haynes in this city.

NEW YORK—BROOKLYN.—A two-story garage will be erected on the southeast corner of Park avenue and 168th street on a plot, 195 x 150. The operation of purchasing the plot and erecting the building will represent a total expenditure of approximately $350,000.—Distribution of the Davis for this borough has been taken over by William B. King.

FLUSHING.—Drury & Goette has purchased the two-story building at the southwest corner of Broadway and Old Lawrence street. The structure is occupied by two showrooms on Broadway and a garage in the rear with service station and paint shop.

NEW YORK.—Plans have been filed by the Ambro Stores & Garage Corp., for the erection of a three-story garage to be 149.2 x 150. The building, which will be constructed on the west side of Eleventh avenue, 18th to 19th streets, will cost approximately $150,000.—Elsey Motor Co., Inc., 2424 Grand Concourse, has filed a petition in bankruptcy.

SOUTH

ALABAMA — MONTGOMERY.—Williams has sold his interest in the firm of the Futch-Williams Motor Co. to James D. Flowers. The business will hereafter be conducted under the name of the Futch-Flowers Motor Co., handling Ford and Lincoln cars, Ford trucks and Fordson tractors.

MIDDLE WEST

OHIO—COLUMBUS.—B. W. Ellis and Frank Babbitt have taken over the agency for the distribution of the Jordan, operating as the Jordan-Columbus Co.—With Nathan Hallwood at the head, the Hallwood Motors has been established to distribute the Westcott in this territory.

INDIANA — COLUMBUS.— Coombs Auto Co., Dodge Brothers dealer, has been succeeded by the Sutter-Meddaugh

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Co. The concern is located at Second and Washington.

INDIANAPOLIS. — George Kanouse has been appointed dealer of the H. C. S. car in this territory. Kanouse, until recently, represented the Stephens in this city. The H. C. S. car moves over to the Kanouse agency from the Charles E. Stutz Sales Co., which now is handling the Jordan.

RICHMOND.—Distribution of the Elgin for this territory has been awarded G. C. Ridenaur.

ILLINOIS — LINCOLN.— Langellier Motor Co. has purchased the garage building on North Chicago street, the present location of Peifer Brothers. The new occupant handles the Ford car in this territory.—Distributing the Durant and Star cars in Logan county, the James Haffey Motor Sales Co. has been organized by James F. Haffey.

MICHIGAN — FLINT.— Flint Oldsmobile Sales & Service, located at First avenue and Garland street, has secured the dealership for the Rickenbacker car. The concern is operated by Willard Scott and Roy Jobson.

WISCONSIN—ANTIGO.—D. H. Duval, of Wausau, has purchased the Palace Garage from Charles Schubert. Ray and Don Rud will act as managers of the business.

CAMBRIDGE.—John Simmonson has sold an interest in the garage conducted by himself and son to Allen Hanson.

CHILTON.—Aug. Hingiss and A. Ben Bessler, of Kiel, have purchased some property from M. Meier and McCole, on which they will erect a garage, 60 x 150 feet.

HANCOCK.—Huven & Booth have sold their garage business to Tony Valansky.

JANESVILLE.—A branch of the Badger State Tire Co., of Madison, will be established here.

KEOWNS CORNERS.—Frank Reinke has leased the Blau Garage here.

LADYSMITH. — Aug. Buchholz has purchased the City Garage from John Steinfort.

MADISON.—Moon Motor Sales Co. has leased floor space at 20 South Webster street, the location of the Marmon Motor Sales Co. Al Kvanvig, formerly of the Madison Buick Co., is sales manager of the newly organized concern and A. G. Brandel, C. H. Pierce and W. H. Ryde are officers.

MAUSTON.—Bick Post has opened the Mauston Nash Co. in the Allaby building.

MILWAUKEE.—An involuntary petition in bankruptcy has been filed by the W. Frank Horn Co., Inc., dealer in automobile accessories. The company placed its liabilities at $93,270 and assets at $95,212.

RHINELANDER.—J. Segerstrom has started work on the construction of a garage to be 50 x 140.

SHEBOYGAN.—Expansion of business has compelled Andrew Clicquennoi, automobile body painter, to seek new quarters. He has leased the former roller skating rink building at 1105 Michigan avenue.

WEST BEND.—Michael A. Johannes and Joseph Schill will erect a new garage which when completed will be occupied by them as the American Service & Storage Garage.

IOWA—BEDFORD.—Charles and Vic Weiser, who recently disposed of the Weiser Motor Co. to the Bedford Auto Co., have become interested in the Blockton Auto Co.

CEDAR RAPIDS.—A $20,000 garage will be erected on Second avenue by W. Anderson.

CENTERVILE.—A new garage will soon be constructed by the Carmer Motor Co.

GLENWOOD.—Plans are under way for the erection of a garage to be built for D. C. Eyler.

IOWA CITY. — Burkett - Updegraff Motor Co. has taken possession of its new home at the intersection of College and Capitol streets. The concern is Ford dealer for this section.

MISSOURI — EXCELSIOR SPRINGS. — Lincoln distribution has been added to the Ford line now handled by the Hedges Motor Co.

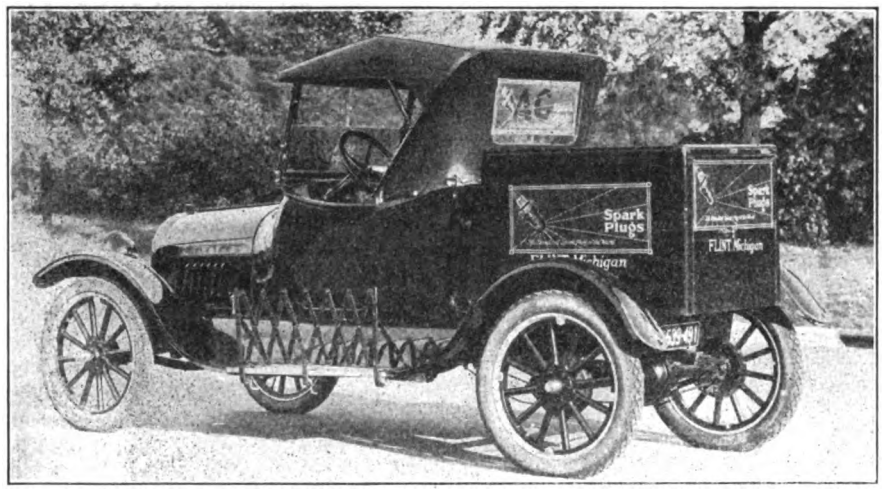
GRANT CITY.—Charles E. Pettis, of the Pettis-Buick Co., will move his garage and salesroom into the west room now occupied by the Farmers Produce & Shipping Co. He will use the basement as a work room and the other floor for the storage and display of Buicks. He is contemplating the erection of an office and parts room.

GUILFORD.—Chesley C. Noland Co. has contracted for the sale of the Dort line in this section.

JOPLIN.—Bell Motor Co., local agent for the Studebaker, has purchased the old property at 418 Wall street on which he will erect a new $20,000 two-story brick building to be used as a salesroom and service station. The building will cover the entire lot, 50 x 150. The entire lower floor will be used for the company's salesroom and office and the second floor as a work shop.

KANSAS CITY.—Rock Front Garage, located at 306-308 Westport avenue, is now under new management.

AC Spark Plug Believes It Pays to Advertise



HERE is pictured one of a fleet of roadsters used by the AC Spark Plug Co., Flint, Mich., to carry to dealers throughout the Country merchandising and advertising aids to increase spark plug sales. These roadsters are manned by skilled advertising men who are able to assist dealers in keeping their stocks in good shape, put in window trims and other advertising matter and enable the retailer to benefit by the manufacturer's advertising

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IT took a lot of selling on the part of the old time tire dealer to swing his customers with him when he dropped one brand of tires to feature another.

The modern dealer who is stocking U. S. Tires for the first time doesn't find this exertion necessary.

He can assume that U. S. Tire quality is a matter of common knowledge.

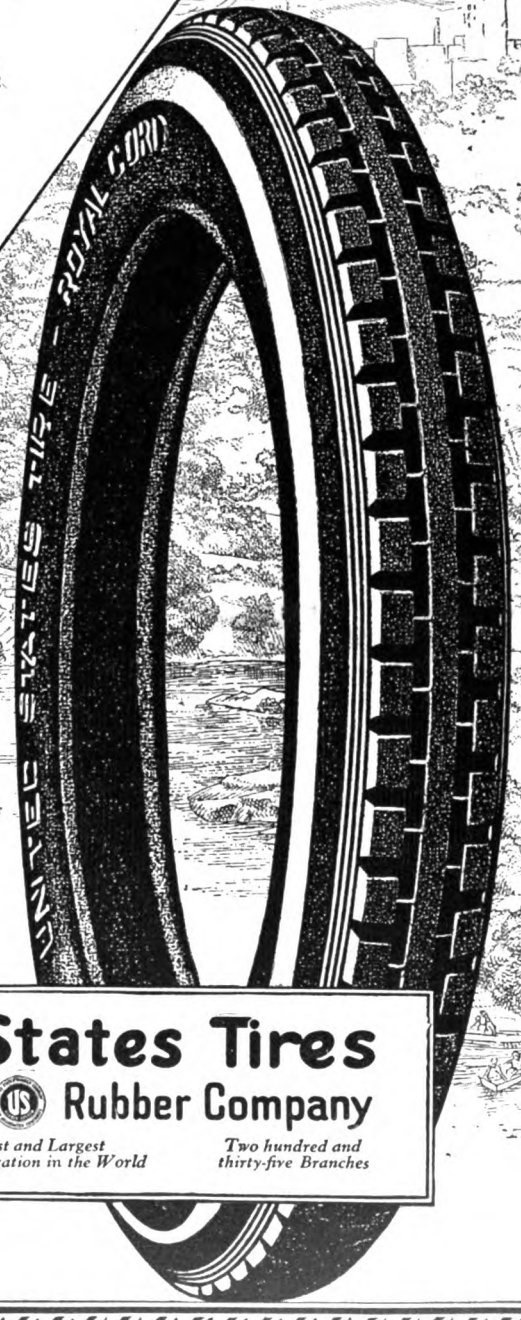
That the reputation of U. S. Tire value has out distanced even its own widespread distribution.

United States Tires are good tires.

The U. S. Sales Relationship is a good relationship.

United States Tires are Good Tires

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United States Tires

United States Rubber Company

Fifty-three Factories | The Oldest and Largest Rubber Organization in the World | Two hundred and thirty-five Branches

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KIRKSVILLE. — George F. McCormick, of Milan, has taken on the agency for the distribution of the Hudson and Essex cars, and with J. M. Vaught, who recently contracted for Buick distribution, will occupy front rooms in the F. A. Adams building. Each will use the room for display and motor car accessories and the rear of the building, which is to be equally divided, will also be occupied by them.

LABELLE.—LaBelle Motor Co. has been sold by Walter, Hamilton and Hancock to Grover Daniels, of Fall Creek, Ill.

MONTGOMERY.—T. J. Weeks, of this city, and John Uptogrove, of Warrenton, have formed a partnership for the distribution in Montgomery county of the Durant and Star cars.

PECULIAR.—Hill & Trog have established an agency for the distribution of the Chevrolet.

PORTAGEVILLE.—C. C. Bock has purchased the lot on the east side of Main street for the purpose of erecting a brick building, 60 x 135, to be used exclusively as a Ford sales and service station. The concern will be conducted as the Universal Sales Co. with C. C. Beck as manager.

QUITMAN.—L. H. Roberts has purchased the new garage here.

SARCOXIE.—Carpenter & Keith have sold the Ford garage to H. T. Hickman, G. T. Rawlings and J. R. McFall, of Mount Vernon. The buyers are also the owners of the O'Neill Motor Co., a Ford garage in Mount Vernon.

WARRENTON.—Frank Morhaus and Hugo Meyer, who conducted a garage in Marthasville for the past year, have moved their equipment to this city and have opened a garage in the Schaper building.

KANSAS—BONNER SPRINGS.—A garage is now under erection at the county line for E. C. Wussow.

CENTRALIA.—Gunter and McCourt of the Day & Night Garage have leased the Norris Garage and Repair Shop.

CHEROKEE. — Uneed-a Garage has been opened for business with O'Connor as mechanic.

CLEVELAND.—Al. Fitch, of Oklahoma City, has established a garage business here.

FREDONIA. — Baker & Kirkwood have moved their Exide Battery Service Station to the Post Office corner.

HUTCHINSON.—E. J. Rohrman has purchased the Third Avenue Garage which he will operate with Clyde Grandon as manager of the repair shop.—A building is now under construction at the southwest corner of Fifth and Washington which when completed will be occupied by Harry Jones as an automobile accessory, storage and repair shop.

KANONA.—William Stramp and Ray Vernon have purchased the business of the West Side Garage.

KANSAS CITY.—In addition to conducting a general repair and car storage business, A. Overton, proprietor of the new Star Garage at 64 Kansas avenue, will also carry a line of tires and automobile supplies.

NORTHWEST

MINNESOTA — BROWNSVILLE.—A new garage will soon be erected here for Bemis & Soule.—John Luke and Joseph Achtier have taken over a garage business at this place.

MINNEAPOLIS.—Distribution of the King car for this territory has been taken over by the Laybourn Auto Co.

NORTH DAKOTA—FAIRMONT.—Fairmont Motor Inn has been sold by Meredith to Banik, of Cathway. The new owner will operate the garage business under the name of the Banik Motor Co.

SOUTHWEST

ARKANSAS — MAGNOLIA. — W. I. Mitchell has opened a new service station with a location on East Main street.

MENA.—Robert Connelly has moved his automobile repair shop from the building opposite the K. C. S. passenger depot to the new structure recently built by Albert Robertson.—W. L. Webb has purchased the equipment of the Dickson garage on Mena street and has moved it to the Alvey building where he has located the Webb Auto Co. The services of George Jackson, of Kansas City, have been secured as chief mechanic of the repair department.

MORRILTON.—Pryor Cruce, proprietor of the Cruce Parrish Motor Co., has sold his business to J. C. Risinger, who will continue the business at the same location. Cruce will be manager of a filling station at the Mitchel building on the south side of Railroad avenue.

PINE BLUFF.—Arthur Branch and Fitzpatrick have established an automobile repair shop at 910 State street. They will conduct the business under the firm name of the Reliable Auto Co.—More spacious quarters in the Knox Soull building have been obtained by the F. G. Smart Auto Co. The location, which is situated at 307-311 West Second avenue, at present is the home of the Pogue-Buick Co.

OKLAHOMA—ATOKA.—E. Skillern, proprietor of the C. O. D. Garage, has moved his business to the building formerly occupied by the F. A. Russell hardware store.

GOODWELL.—J. B. Boston has sold the Goodwell Garage to L. R. Spears who will continue the operation of the business under the name of the Spears Garage with L. F. Denny as manager.

MEDFORD.—I. C. Lash has opened an automobile, tractor and truck overhauling business with a location at the J. L. Machine Shop.

MIAMI.—E. D. Shimer and Wayne Anderson have opened a vulcanizing and accessory shop at 123 South Main street.

OCHELATA.—A. L. Prichard has sold his garage and filling station to Truman Kratzer.

POTEAU.—J. Arthur Skinner has opened a Chevrolet agency and is awaiting the arrival of a car load shipment of cars.

PURCELL. — Work is progressing rapidly on the new Hine garage building at the corner of Main street and Third avenue.

TULSA.—Through the activities of W. H. Burned, James W. Donaldson, R. E. Downing, John Freeman and others, a local agency for the distribution of the Dusenberg car has been established at Twelfth and Main streets, in the former Pierce-Arrow showrooms. The newly organized concern will be conducted under the name of the Dusenberg-Oklahoma Co.

TEXAS—ABILENE.—Howard Marion Benskin, proprietor of the Highway Garage, has filed a voluntary petition in bankruptcy with liablities listed at $21,250, and assets at $14,503.

BEAUMONT.—A loss of approximately $2,000 was sustained by Earl J. Dupre when his garage and work shop at 1540 Avenue B was destroyed by fire. —M. Burge, proprietor of Burge's Garage, Fannin between Orleans and Park streets, has taken over the local agency of the Cole Motor Co. The new agent, it is understood, will set aside the section of his garage, which occupies a plot 120 x 120, to be transformed into salesrooms for Cole cars.

BRYAN.—J. F. Oates, dealer for Dodge Brothers cars in Bryan and Brazos county, has been transferred by the company to Ohio. He has sold his business at this place to the Halsell Motor Co.

DALLAS.—Work has been completed on the erection of the building for the Jefferson Hotel Auto Storage Co. at Jefferson and Jackson streets. Ralph Briggs, formerly manager of the General Motor Truck Co., and Howard Parks, of the General Motors Co., are operating the concern. The new structure is a fireproof building, three stories, with 30,000 square feet of floor space for the storage of cars.

RUSK.—Herbert Hughes has opened a new garage at this place.

SAN ANTONIO.—Albert C. Deutsch has purchased an interest in the firm of Orsinger Brothers, Liberty agency.

SWEETWATER.—George C. Massey, of this city, has purchased the Motor Mecca from the Fomby Brothers and will operate it as a general automobile service station under the name of the George C. Massey Auto Service Station. He will specialize in tires, tubes, oil, car washing and crank case draining, and also maintain a filling station in connection.

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"Your Bank Balance is the Real Thing that Counts"

By C. A. Earl

EVERY automobile distributor and dealer will agree with this statement by Mr. Thomas H. Tracy, Jr., president of the Tracy Sales Company, Earl distributors in Toledo, Ohio. Mr. Tracy made it in a letter on his Company's experience with the Earl car and the Earl factory organization, written to a prospective Earl distributor who had asked for his opinion on the Earl car and on the Earl franchise as a money-making opportunity.

"Our Company has approximately ninety Earl cars in Toledo and its vicinity. We can truthfully say that every Earl owner in the lot is a booster for his car.

"The Earl is attracting a great deal of attention and much favorable comment throughout our territory.

"It has real distinction. Your eye singles it out in an instant wherever it is seen. You can park an Earl on a downtown street for a few minutes, and always find a crowd around it when you come back.

"The Earl's performance is simply marvelous. The writer has driven a Sedan for close to 7,000 miles—without any kind of trouble. It uses very little oil and I get from 19 to 20 miles on a gallon of gasoline.

"We cannot say enough for the Earl. If you decide to take on the Earl franchise, you will be well satisfied—not only in your sales volume, but in the growth of your bank balance, which is the real thing that counts."

No one will question Mr. Tracy's conclusion that net profit is the thing that makes the Earl franchise attractive. If the Earl is not represented in your city, write or wire for the facts about our liberal contract terms and the quality Earl line.



President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Deubel Rotary Motors Corp., Manhattan, N. Y., has increased its capital from $1,000 to $1,500.—C. H. Frazee, Manhattan, N. Y. To deal in automobile accessories. Capital $25,000. Incorporators: W. H. Frazee, C. H. Brown, C. H. Frazee.—Freeport Automobile Corp., Manhattan, N. Y. Capital $25,000. Incorporators: R. O. Goldschmidt, A. M. Place, M. Gries.

Harvey Mfg. Corp., Manhattan, N. Y. To deal in metal goods and motors. Capital $20,000. Incorporators: F. Roberts, C. E. Sutherland, A. Schichowsky.—Inwood Service Station, Manhattan, N. Y. Capital $5,000. Incorporators: J. Finkelstein, R. Parson, E. Brook.—K. and K. Garage, Manhattan, N. Y. Capital $10,000. Incorporators: G. Wolkewitz, B. S. Katz, Z. Shapiro.

Solax Taxi Corp., Manhattan, N. Y. Capital $5,000. Incorporators: A. Krassner, A. Saperstone, S. Krassner.—Joseph Steiner Co., Manhattan, N. Y. To deal in taxicabs. Capital $10,000. Incorporators: J. Steiner, M. Katz, C. Steiner.—Taxi Corp., Manhattan, N. Y. To deal in automobiles. Capital $10,000. Incorporators: H. M. McAuley, E. A. Dunford, S. J. Berger.

Manhattan Bearings & Supply Co., Bronx, N. Y. To deal in automobile supplies. Capital $20,000. Incorporators: L. Shapiro, P. Shapiro, P. L. Bomeisel.—Superb Garage, Bronx, N. Y. Capital $5,000. Incorporators: L. Adel, M. C. Harah, N. Adel.—White Star Taxi Corp., Bronx, N. Y. Capital $5,000. Incorporators: J. Pitter, R. W. Specht, H. Myers.

M. A. Fisher Motor Car Co., Brooklyn, N. Y. Capital $15,000. Incorporators: N. M. Fisher, M. Grossman.—O. & F. Garage, Brooklyn, N. Y. Capital $5,000. Incorporators: F. P. Price, G. Federman,

Gurdon H. Smith, Binghamton, N. Y. To deal in motors. Capital $20,000. Incorporators: G. S. and S. W. and E. F. Smith.

Automotive Power Gear Co., Buffalo, N. Y. To deal in automobile accessories. Capital $25,000. Incorporators: C. R. Berney, D. Pasternack.—Davidson Motor Corp., Buffalo, N. Y. Capital $25,000. Incorporators: B. Berman, R. E. Davidson, H. E. Scull.

New Rochelle Wills Sainte Clair Corp., New Rochelle, N. Y. To deal in automobiles. Capital $20,000. Incorporators: C. S. Bentley, H. D. Seymour, I. Bercow.

Interstate Utilities, Watertown, N. Y. To deal in automobile accessories. Capital $30,000. Incorporators: R. W. Kinney, D. R. Richardson, W. W. Lord.

NEW JERSEY.—Motor Bus Sales Corp., Passaic, N. J. To manufacture buses. Capital $125,000. Incorporators: Joseph Y. Johnson, Emerson Honstra, Nicholas Honstra.

DELAWARE.—Motor Car Specialties Co., of Mississippi, Dover, Delaware. To deal in automobile parts. Capital $125,000. Incorporators: J. D. Robertson, W. H. Moore, H. Thompson, M. Jackson.—Nedlin Corp., Dover, Delaware. To deal in automobiles. Capital $50,000.—Warner Gear Corp., Dover, Delaware. To deal in automobiles. Capital $100,000. Incorporators: H. F. Herberman, W. F. Mangum, Gordon B. Hayes.

Double Seal Piston & Ring Co., Wilmington, Delaware. To manufacture piston rings and automobile supplies. Capital $400,000.

NORTH CAROLINA.—Carolina Motor Club, Greensboro, N. C. Capital $120,000.

KENTUCKY.—Jones National Automobile Registration System, Louisville, Ky. Capital $25,000. Incorporators: C. M. Jones, H. B. Green, Thomas E. Schrock.

OHIO.—Eaton Buick Co., Eaton, Ohio. Capital $15,000. Incorporators: E. J. White, Wm. M. Watts, V. White, Cora S. White, McClellan White.

INDIANA.—Signal Truck Corp., Indianapolis, Ind. To deal in motor vehicles. Capital $16,000.

R. J. Gill & Co., South Bend, Ind. To repair automobiles. Capital $25,000. Incorporators: D. E. Gill, Mildred J. Gill, Russell J. Gill.

Vincennes-Nash Motor Co., Vincennes, Ind. To deal in motor vehicles. Capital $30,000. Incorporators: Charles H. Griggs, John F. Hall, Henry Ostendorf, John T. Brokhage, Frank J. Bastin.

ILLINOIS.—Chicago Auto Parts Co., Chicago, Ill. To manufacture and deal in automobiles, automobile parts and accessories. Capital $5,000. Incorporators: Ernest G. Fairbank, Emanuel Ross Bostick, Nettie L. Fairbank.—Clark Teaming Co., Chicago, Ill. To own and operate automobiles, wagons and horses for the purpose of conducting a general teaming and cartage business. Capital $2,000. Incorporators: Arthur Donoghue, Thos. G. McElligott, Waldemar H. Bassler.—Universal Body Corp., Chicago, Ill. To manufacture and deal in automobile bodies, vehicles, accessories, etc. Capital $50,000. Incorporators: A. H. Earl, J. L. Geier, H. L. Schroeder.

Arrow Garage, Chicago, Ill. To own and operate public garages. Capital $20,000. Incorporators: Joseph Schwartz, Reese Vinograde, James Vinograde.—Degraw Johnson Co., Chicago, Ill. To manufacture and deal in automobile accessories, etc. Capital 25 shares no par value. Incorporators: Clement Degraw, Colvin L. Johnson, R. Draper.

B. P. E. Motor Sales Co., Marseilles, Ill. To deal in and hire automobiles, motor vehicles, etc. Capital $4,500. Incorporators: Carl Bottino, John Pomatto, Victor Ellena.

Marshall Auto Sales Co., Oak Park, Ill. To manufacture and deal in automobiles and accessories. Capital $65,000. Incorporators: Joseph Jares, Charles Marshall, Mark J. Murphy, Jerry Horn.

Marsul Auto Sales Co., Oak Park, Ill. To manufacture and deal in automobiles and accessories. Capital $25,000 and 250 shares no par value. Incorporators: Joseph Jares, Charles Marsal, Mark J. Murphy, Jerry Horna.

Ellwood Tractor Co., Paris, Ill. To deal in tractors and farm and road-working machinery. Capital $300,000. Incorporators: Henry A. Burd, Horace Link, Elmer Sunkel.

WISCONSIN.—King Motor Supply Co., Milwaukee, Wis. Capital $10,000. Incorporators: Jos. E. Tiemey, A. B. Cope, F. J. Jennings.

Appleton Motor Truck Co., Appleton, Wis. Capital $125,000. Incorporators: A. G. Bruzewitz, M. Rossmeisel, W. G. Jamison.

Riessmeyer Rank Motor Car Co., Cedarburg, Wis. Capital $25,000. Incorporators: G. Rank, Wm. Riessmeyer, F. Rank.

System Sales Corp., Fond du Lac, Wis. To deal in automobile supplies. Capital $10,000. Incorporators: E. and A. and B. Jacob.

KANSAS.—R. W. Donovan Motor Co., Leavenworth, Kans. Capital $600. Incorporators: R. W. Donovan, F. D. Webster, Floyd E. Harper.

SOUTH DAKOTA.—United Battery Co., Inc., Aberdeen, S. D. Capital $25,000. Incorporators: Chas. W. Gates, Max Stokes, Ada F. Gates.

MONTANA.—Havre Motor Co., Havre, Mont. To handle Ford cars and Fordson tractors. Capital $100,000. Incorporators: H. W. Springfellow, William Kendy, W. C. Lange.

TEXAS.—"2727" Tire and Battery Co., Beaumont, Tex., has changed its name to Cheat-Hutchings Tire Co., Inc.

Kosse Motor Co., Kosse, Tex. Capital $20,000. Incorporators: S. C. Fishburn, P. M. Humble, W. N. White.

Travis Storage Garage, Inc., San Antonio, Tex. Capital $20,900. Incorporators: E. E. Jacobs, A. S. Wright, L. S. Whipple.

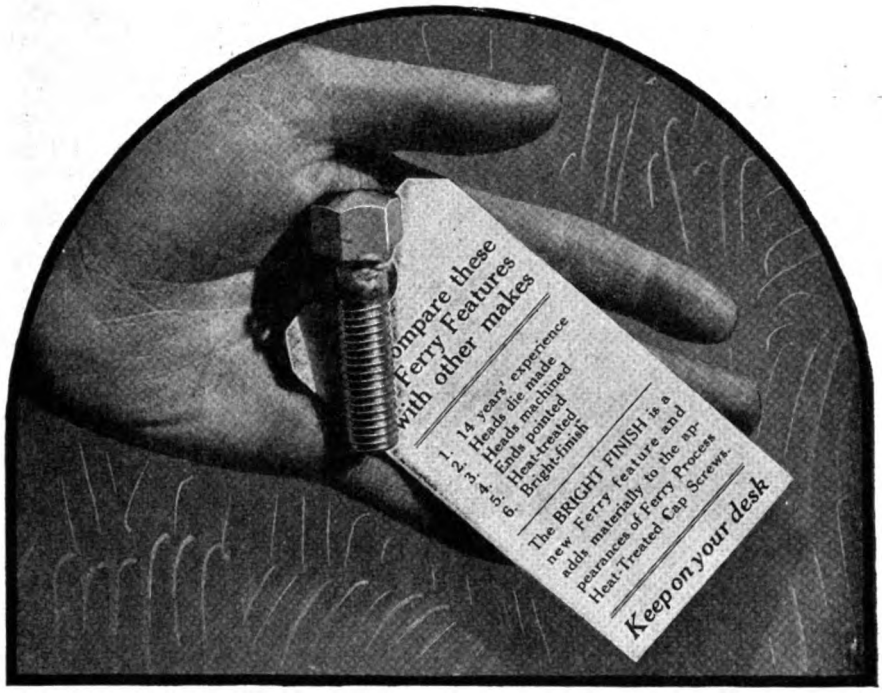
Wills Storage Battery Co., Inc., San Marcos, Tex. Capital $12,000. Incorporators: M. B. Wills, M. Rector, F. C. Wills.

Wichita Fender Brace Co., Wichita Falls, Tex. Capital $10,000. Incorporators: J. C. Mytinger, W. H. Gaskin, O. D. Taylor.

WASHINGTON.—Sunset Rubber Co., Everett, Wash. Capital $150,000. Incorporators: C. E. Powley, W. A. Cloud, S. A. Powley.

Chappell Motors Corp., Seattle, Wash. Capital $1,000,000.—Hawks, Inc., Seattle, Wash. To manufacture and deal in automobile supplies and accessories. Capital $1,500,000.

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Ferry Bright-Finished, Heat-Treated Cap Screws

Ends Properly Pointed for Production Purposes

Engineers and buyers of Screw Machine Products have long desired Screws that are properly pointed for production purposes.

The exacting care that is taken in pointing Ferry Process Screws is an important Ferry feature. Perfect uniformity of finish always assures you of a screw that fits snugly wherever it is placed.

Send for the Ferry Bright-Finish, Heat-Treated Cap Screw illustrated above—check its many features with other makes. You will be pleasantly surprised at the superior quality and workmanship.

Let us quote you prices on your requirements.

"If It's Upset, It Must Be Heat-Treated"

The Ferry Cap & Set Screw Co., Cleveland, O.

FERRY
PROCESS SCREWS

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CALENDAR

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Pomona, Cal., Oct. 17-21.—Automobile and Automotive Accessory Show, auspices of the Citrus Belt Auto Trade Assn., Los Angeles County Fair Grounds at Pomona; James E. Granger, manager.

Chicago, Ill., Oct. 18-20.—Convention of the National Farm Equipment Manufacturers.

Akron, O., Oct. 18-21.—Open Air Automobile Exhibit, auspices Akron Motor Vehicle Assn., East Market Street.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Detroit, Mich., Oct. 26-27.—Society of Automotive Engineers, meeting to discuss problems of production.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Los Angeles, Cal., November.—Tent Show, auspices of the Motor Car Dealers' Assn. of Los Angeles.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Pittsburgh, Pa., Nov. 4-9.—Electric Show, auspices of the Electric League of Pittsburgh, Motor Square Garden; Paul D. Lockard, manager.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn., E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Commodore.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Annual Winter Show, auspices Cleveland Automobile Manufacturers' and Dealers' Assn.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; Jos. Thompson, manager.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12.—Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn.; Frank R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19.—Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the Saginaw Auto Dealers' Assn.; Guy S. Garber, manager.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Muskegon, Mich., Feb. 28.—Automobile Show, auspices of the Automobile Business Assn.; John C. Fowler, manager.

Bay City, Mich., Mar. 5.—Automobile Show, auspices of the Bay City Auto Dealers' Assn.; George L. Weiler, manager.

*Tentative.

STATEMENT of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of Automobile Topics, *The Trade Authority*, published weekly at New York, N. Y., for October 1, 1922.

County of New York } ss.
State of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared James H. Taylor, who having been duly sworn according to law, deposes and says that he is the Business Manager of the Automobile Topics, *The Trade Authority*, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are: Publisher, Motor Trades Publishing Co., 1790 Broadway, New York; Editor, Frank W. Roche, 1790 Broadway, New York; Managing Editor, Niran Bates Pope, 1790 Broadway, New York; Business Manager, James H. Taylor, 1790 Broadway, New York.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock) Motor Trades Publishing Co., 1790 Broadway, New York; Frank W. Roche, 1790 Broadway, New York; C. D. Wight, Detroit, Mich.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amounts of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders, as they appear upon the books of the company, but also, in cases where the stockholders or security holders appear upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

James H. Taylor, Business Manager.

Sworn to and subscribed before me this 29th day of September, 1922. Herman Forstein, Notary Public. No. 242. (My commission expires March 30, 1924.)

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AJAX TIRES
With New Features

Their performance records have proved the truth of their maker's claims — mileage, good looks, non-skid security.

More and more manufacturers of leading motor cars are using the famous black tread Ajax Cord tires as original equipment. Thousands and thousands of new customers are being made, therefore, for Ajax dealers.

Ajax Tires are in big demand among car owners. Therefore they offer an exceptional profit opportunity to dealers.

AJAX RUBBER COMPANY, INC.

General Offices, New York City
Branches in Principal Cities

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PUBLISHER'S OBSERVATIONS

CHECK THE PACEMAKERS

THE State Motor Vehicle Commissioner is speaking.

There must always be a pacemaker somewhere. Put your finger on him and you have solved the problem of fast driving. For example:

We had been receiving complaints of excessive speeding from a certain town. It seemed as though all traffic, reaching that village immediately put on speed; there were almost no exceptions. And of course, "foreign" cars followed the procession.

Conditions seemed so exceptional in that particular case that I put one of my men on the job in plain clothes. Told him just to stick around and see what he could find out.

At the end of a few days he came back and reported. "All right," I said. "Now go in and make your arrests." And I proceeded to tell him who to get.

So he went back in uniform and trailed around until he picked up the people he wanted. He got exactly three good, clean cases, on which we obtained convictions. That stopped all complaints from that section.

The men arrested were the chief selectman of the village, the son of a circuit court judge and a brother of the chief of police. That was all there was to it. As soon as they found we meant business and intended to enforce the law, people around there simply quit running a little faster than the law allowed and merely ran a little slower, so as to be on the safe side.

¶ It's the same way everywhere. We hear a lot about fast driving on the part of tourists, and there may be a few people from other states who are trying to get away with all they can. But most of them mean to keep on the safe side because it interferes with their plans to be arrested and fined. So they generally take their cue from the local traffic and don't pass many automobiles in towns and villages.

There is a percentage of drivers who are always trying to pass traffic. But it is small. You'll find most people are in the habit of driving at one certain speed. If others want to go faster, they'll pull out and let them pass; if others are driving more slowly they'll pass them if they can.

Most people readily adapt themselves to traffic conditions and are amenable to regulation. If you except the small percentage of persistent violators, regulation of traffic, as a whole, becomes comparatively simple.

¶ All you have to do is determine what are "reasonable speeds," considering local surroundings, and if traffic is moving too fast, find out why. Find the "pacemakers." In small communities they are apt to be three or four influential people who have been getting away with it for years. In cities the taxicab drivers are apt to be the worst offenders. But in any case, if you study the situation long enough you can boil it down to a case of responsibility involving a few individuals.

When you do that; select your cases with care, make sure of your ground, and leave no room for doubt of your intentions, you can do what you set out to do with a minimum number of arrests. That is always desirable, because too many arrests cause friction and tend to defeat your very purpose.

¶ "Raids," for instance, do more harm than good. You can rush in almost any day and collar a handful of violators, and go right back the next day and get as many more. If you keep it up long enough the word will be passed to look out for a trap, and traffic will slow up at that point, but accelerate somewhere else to compensate, because people always want to make up lost time.

You can overdo the thing so badly that the courts won't back you up, and then you might as well resign. Traffic raids are a bad thing because they always arouse the suspicion that you have some ulterior motive. Then you are through.

But if you choose with discretion and make public examples of the "pacemakers," you will find it perfectly possible to control traffic in any reasonable way—provided, of course, you have a reasonable law behind you, and provided the official machinery is moving in harmony with you.

By "traffic control," mind you, I mean control, not repression. You can't stop traffic; you can only regulate it for its own good.

¶ If a series of accidents points to a certain intersection as a danger spot, or a bad curve or a blind turn become conspicuous in the record, it may be possible to divert some of the traffic, or widen the radius of the curve or clear away obstacles to direct vision. In that way you increase safety without decreasing speed.

You'd be surprised how many accidents are due to congestion, but if you get the idea you'll see that proper control of traffic involves speeding it up at congested points, where it is moving too slowly, as well as eliminating excessive speed at other points.

¶ Most of the trouble with traffic comes from one of two causes. It comes from laws which are so badly drawn that they cannot be enforced, or if enforced would fail to serve their intended purpose. Or else it comes from political complications, which have nullified as many laws as have ever been deliberately violated.

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Five Convex Wheels In Each Set

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Oldsmobile

FOURS and EIGHTS

Model 43-A, Four-Cylinder
(115" Wheel Base)

3-Passenger Roadster	$ 955
5-Passenger Touring Car	975
4-Passenger Semi-Sport	1075
5-Passenger California Top	1350
5-Passenger Brougham	1375
4-Passenger Coupe	1475
5-Passenger Sedan	1595

Model 47, Light Eight
(115" Wheel Base)

5-Passenger Touring Car	$1375
3-Passenger Sport Roadster	1625
4-Passenger Super-Sport Touring	1675
4-Passenger Coupe	1875
5-Passenger Sedan	2025

Model 46, Larger Eight
(122" Wheel Base)

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6-Passenger Touring Car (with Tuarc Wheels)	1850

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Coil'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 443	5	Starter—Dem. Wheels	$ 414	2	Starter-Dem.Wheels	$ 580	2	$ 645‡	5	Starter–Dem.Wheels	3¼x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	C	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760‡	5		3½x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		680§	2	860	5	C.	3¼x4	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5		3½x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P.	850	2	C, P.	980§	2	1,195§	5	C, N, P, V	3⅞x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P.	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3¾x4¾	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3½x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	B.	885	2		1,045§	2	1,095§	5	B.	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	L	4.45	31x4	108	Dort
Maxwell	885	5	C, K, P.	885	2	C, K, P.	985§	2	1,335	5	C. D. K, P, T	3⅝x4½	Own	L	H	T	...	Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z.	890	2	P, Z.	1,365	4	1,365	5	C, P, V	3⅞x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, D, H.	895	2	C, D, H.	1,095§	2	1,345	5	C, D, H.	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.66	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5		3⅜x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5		1,075	4	C, D, M, P, Z.	1,375§	5	1,595	5	P, V.	3¼x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, H, O	1,095	4	D, E, G, H, J, L, O	1,395	3	1,395	5	D, G, H, J, L, N, O, V	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, D, H.				1,245§	5				3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B.	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H.	1,485	2	C, E, H, J, M, Z.	1,395§	4	1,795	5	C, E, H, N, T, V.	3⅛x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, b	1,095	2	C, D, H, O, P, b	1,345	3			C,D,H,N,O,P,T,U,b	3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P.	1,150	2	C, P.	1,335§	2	1,785	5	C, N, O, P, V	3¼x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5		1,295	5		1,795	4	1,795	5		3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B.	1,235	2	B.	1,795	4	1,950	5	B.	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B.						2,195	7	B.	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O.	3¾x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q.	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3¾x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q.	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T	...		Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5		2,250	2		3,150	4	3,450	5		3¾x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M.	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	B, D, H, J, L, O, Q.	2,790	4	B, D, H, J, L, O, Q, X	3,490	4	4,450	5	B, D, H, J, L, O, U.	4⅜x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	D, G, J, K.				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H.	3,000	2		3,800		4,000			3¼x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, J, L, Z	3,785	2	A, D, G, J, L, Z.			4,650	4		4¼x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer	3,950	6	G, 2I, L, O, P, Z, c.	3,950	4	G, 2I, L, O, P, Z, c.	4,850	4	5,250	7	G,2I,L,N,O,P,T,U,Z	3¾x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S.	3.87	32x4½	132	Mercer
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	1,550	5	B, D, C, G	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K.	985	2	H, J, K.	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Hanson Light Six	995	5	H, J, K, P									3½x4¼	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B.	995	3	B.	1,445	4	1,465	5	B, V.	3½x5	Own	L	H	P	...	Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P.	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V.	2½x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5		1,260	5	C D E H J L T W X Z	1,495	4	1,585	5		3⅛x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4¼	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Elgin "K-1"	1,125	5	C, D.	1,125	4	C, D, H, K, Z			1,645	5	C, H, N.	3½x4¼	Fal	H	H	T	...	Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Chalmers	1,185	5	C, K, P.	1,185	2	C, K, P	1,595	4				3½x4½	Own	L	C	T	...	Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, D, H, O, P.				1,450§	4				3½x4¼	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.62	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3⅜x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	R.	1,645	4	C F H 2 I 2 J K Q R W Y b			2,040	5	D, R, V.	3½x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G.	1,250	2	B, C, D, G.	1,875	4	2,050	5	B, D, G, S.	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P.	1,275	2	D, H, P.	1,795	5	1,795	5	D, H, N, P, V.	3½x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Own	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3¼x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Davis "71"	$1.295	5	E, J, K, O, Z, c				$1,795	4	$1,795	5	E, J, K, N, O, S, V, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Moon "6-40"	1,295	5	B				1,595	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3½x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3½x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V ab	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7					1,890	4	2,190	7		3½x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	D, H, P, Z						1,850	5	D, H, P, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B		Col	S		32x4	118	Barley
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, P, Z, b.	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P	1,395	2	C, D, H, O, P	1,975	3	1,995	5	C, D, H, N, O, P	3½x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, H, K, O, T, Z	1,695§	2	2,095	5	C, D, G, H, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D, P, G, T, V	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C, D	3½x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W X Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3½x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3½x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3½x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	1,835§	4	1,885§	5	C, D, K, N, T, V, Z	3½x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, D, G, H, M, O, P	1,945	4	A C D F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3½x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	2,375	7	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, G, H, K¹, O, P	1,545	2	D, G, H, K¹, O, P	2,095§	3	2,395	5	D, G, H, K¹, O, P, U, V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3½x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3½x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, D, H	1,525	4	B, D, H	1,625§	5	2,295	7	B, D, H, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "66"	1,595	5	G, H, P, Z	1,695	4	G, H, P, Z	2,475	4	2,585	5	G, H, P, U, Z	3¾x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "66"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L		War	Tim	S	5.11	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,475	7	B, C, D, G, O, S	3½x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K¹, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3¾x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J M O P X Zc			2,890	5	E2I2JMNOPTUVX	3¾x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Davis "63"	1,695	4	E, J, K, O, S, V, c				2,095	4				3¾x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "63"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y Z	2,145§	5	2,545	5	U, V	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D E G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal		4.5	33x4½	127	American
Moon "6-58"	1,785	7	B, Z	1,885	5	B, X, Z			2,485	7	B, N, U, V	3½x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	3	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, P, b	1,750	3	A, D, H, P, b	2,550	4	2,690	5	A, D, H, N, P, V, b	3½x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, D, Z	2,150	4	B, C, F, X, Y	2,485	5	2,485	5	B, D, Z	3¾x4¼	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3½x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1.885	5										3½x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Y b	1,895	2	F H 2I 2J K R T V W X Y	2,195	3	2,695	5	F H 2I 2J K R T V X Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, P	1,900	2	A, B, G, P	2,750	3	2,850	5	A, B, G, P	3½x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	D, H, O, P, Z, c	2,190	7	E H 2I 2J M O P T X c						3½x5½	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3½x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5		2,150	2		2,800	4	2,950	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O	2,245	4	A, B, C, D, G, O	3,100	5	3,155	7	A, B, C, D, G, O, U	3½x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, b	2,200	4	A, D, H, O, P, b	2,850	4	3,250	7	A, D, H, N, O, P, V, b	3½x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Roamer "6-54-E"	2 285	4	A, G, H, Z	2,750	4	A, G, H, J, L, Z	3,285	3	3,585	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Bjr	B&B	G-L	Tim	F	4.8	32x4½	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3½x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, X, Y	2,395	2	C D H J K¹ L O T W	3,095	5	3,395	7	A D G H K¹ O U V X Y	3½x5½	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	34x4½	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U, V	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3¾x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, O, M						3,525	7		3¾x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5		2,700	4		3,350	4	3,700	7		3¾x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C		34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ferris "70"	$2,795	6	A C F G H J K O P T X	$2,895	2	A C F G H J K O P T X	.....	...	$3,795	4	A C F G H J K O P T X	3½x5¼	Con	L	C	P	...	Zen	A-K	L-N	B-L	B-L	Col	S	4.08	32x4½	130	Ferris "70"
Ace "C"	2,975	5		2,975	2				4,500	5		3½x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3½x5¼	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, O	3,300	4	A, B, C, D, G, L, O, X, Y	4,300	4	5,100	7	A, B, D, G, N, O	3½x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	..	Ray	Del	Del	War	War	Tim	S	4.91	33x5	132	Winton "40"
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3½x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4	4,800	7		3¾x5¼	Own	S	C	P	...	Ray	Sen	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z				4,900	3	4,900	5	A C D G H J M O T Z	3¾x5	Own	H	H	A	..	Zen	Sen	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, H	3,950	4	A, G, H	4,985	4	5,750	7	A, G, H	4x5	Own	H	L	P	..	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			6,500	5	A, G, H, O	3½x5¼	Con	L	C	P	..	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6 850	3	7.000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,500	5							5,500	5		3¾x5¼	Own	H	S	P	..	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M O Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	..	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, D, E, G, 2I, P, Q	7,600	4	A, B, D, E, G, 2I, P, Q, X			11,000	7	A, B, D, E, G, 2I, P, Q, U	4½x5½	Own	T	H	P	..	B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	10,900	2				12,900	7		4½x4¾	Own	L	H	P	..	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
												EIGHT-CYLINDER PASSENGER CARS																
Oldsmobile "47"	1,375	5	C, D, P, T	1,675	4	F H K O P Q T W Z b	1,875	4	2,025	5	D, N, O, P, V	2⅞x4½	Own	L	H	P	..	Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			2,635	7	G, N, O, P	2⅞x4¾	Own	L	H	P	..	B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	7	A, B, G, H, M, P, R, Z, b	1,795	2	A B G H J L O P Z b	2,400	4	2,550	7	A B C D G H N O P V Z b	3x5	Own	L	C	T	..	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G, J, M, O, P	2,395	4	A, D, G, J, M, O, P	2,750	4	3,200	7	A D G J M N O P V a	3¼x5	Own	L	H	P	..	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, D, E, G, H, O	2,620	4	A, D, E, G, H, O	3,625	4	3,695	7	A C D E G H O N T V	3¼x5	Own	L	H	T	..	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A, B, G, M, N, O, X	2,685	4	A, B, G, M, N, O, X	3,385	4	3,685	7	A, B, G, M, N, O, X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G O P T Z b c	2,990	4	A B C G O P T X Y Z b c	3,400	4	3,900	5	A B G O P T U V X Y Z b	3¼x5	Own	L	H	P	T	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5⅛	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3¾x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A, B, C, D, G, H, I, O, T	4,090	4	A, B, C, D, G, H, I, O, T	5,500‖	4	5,500	7	A B C D G H I O T U V	3½x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, B, G	4,350	2		5,350		6,000			3½x5¼	Own	L	H	P	..	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	4	A B E G H J M O U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	B F G H I J L O 2 Q S Z b	6,500	4	B F G H I J L O 2 Q S Z b	7,800‖	4	7,800	7	B F G H I J L N O R V Y b	2⅞x5	Own	H	V	P	T	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
												TWELVE-CYLINDER PASSENGER CARS																
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

†**CLOSED MODELS:** Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §. ‡ Two-Door. ‖ Four-Door.

ENGINE: **Ans**—Ansted; **Con**—Continental; **Due**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lye**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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Every man who owns a car uses a tire gauge

If he doesn't carry his own, you should sell him one

A good merchant knows what his customer needs. He knows what the customer will buy. He offers it and sells it. The merchant makes a profit and the customer is *served*.

Every man who owns an automobile ought to own a Schrader Tire Pressure Gauge.



The proof of this is that car owners *use* tire gauges even if they don't own them.

They *borrow* an instrument that they ought to *own*.

All you need to do to sell a Schrader Tire Pressure Gauge is to say, "Don't you own a tire gauge? You need one. I'll sell you one."

Nine out of ten motorists will say, "All right," and buy it. There isn't much of anything else to say. They know they need one.

And they know that the Schrader Universal Tire Pressure Gauge is sold at a fair price, is always accurate, and with proper care will last as long as an automobile.

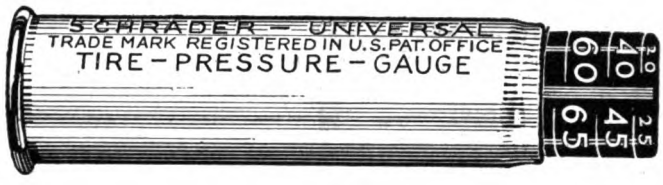
Manufactured by A. SCHRADER'S SON, Inc., Brooklyn, N. Y.
CHICAGO TORONTO LONDON

Manufacturers of Schrader Valve Insides and Valve Caps, Packed in Metal Boxes of Five Each

SCHRADER

TIRE-PRESSURE-GAUGE

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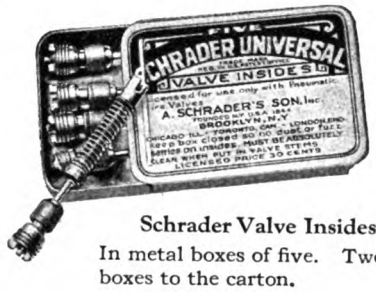


At retail $1.25 and every motorist needs one

The Schrader Tire Pressure Gauge is sold in boxes of ten.
Order from your jobber.
Other Schrader products you can sell readily are:



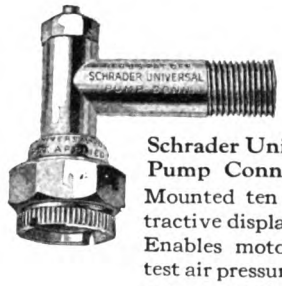
Schrader Valve Repair Tool
Mounted ten on attractive display card. A small handy tool for all kinds of valve repairs.



Schrader Valve Insides
In metal boxes of five. Twenty boxes to the carton.



Schrader Valve Caps
In metal boxes of five. Twenty boxes to the carton.



Schrader Universal Pump Connection
Mounted ten on attractive display card. Enables motorist to test air pressure without unscrewing connection.

Sold by automobile supply houses everywhere

Manufactured by A. SCHRADER'S SON, Inc., Brooklyn, N. Y.
CHICAGO TORONTO LONDON

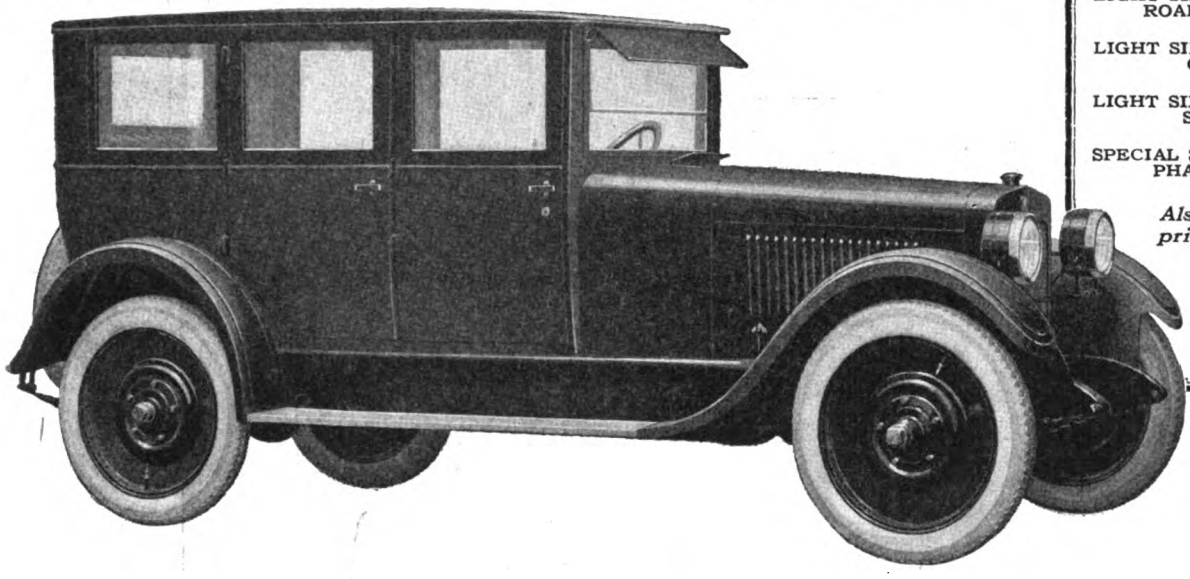
Manufacturers of Schrader Valve Insides and Valve Caps, Packed in Metal Boxes of Five Each

SCHRADER

TIRE-VALVE-ACCESSORIES

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An Even Better Sedan—Still Lowest in Price



A Line of Self-Sellers

LIGHT SIX TOURING	$ 985
LIGHT SIX ROADSTER	995
LIGHT SIX COUPE	1195
LIGHT SIX SEDAN	1395
SPECIAL SIX PHAETON	1095

Also Elite models priced from $1475 to $1995

All Prices F. O. B. Detroit

At the height of the closed car season and in the face of an unprecedented demand for the Columbia Light Six Sedan—a demand that caused us recently to double the size of our plant—we have added further refinements designed to make this car the most attractive all-year model a dealer can offer this Fall and Winter.

The price still stands at $1395—the Columbia Light Six remains the lowest priced six-cylinder sedan on the market today.

The new body is set lower on the chassis to insure easier riding and give a more graceful appearance. Deeper springs are now used in the seat backs and cushions. Upholstery is of very high grade velour. There is a greater richness of finish on the body.

Nowhere among moderate priced sedans will you find such roominess. Built on a chassis of 115-inch wheelbase, the body provides more leg room than you ever believed possible in a car at anywhere near this price. Further comfort for occupants is afforded by a cowl ventilator.

And remember that every major unit in the Light Six chassis represents the greatest effort of specialized manufacturers known the world over. Such units as the 50 h. p. Continental "Red Seal" motor, Timken axles, and the high grade body—at a remarkably low price—provide the Columbia dealer with an unbeatable proposition for getting winter business.

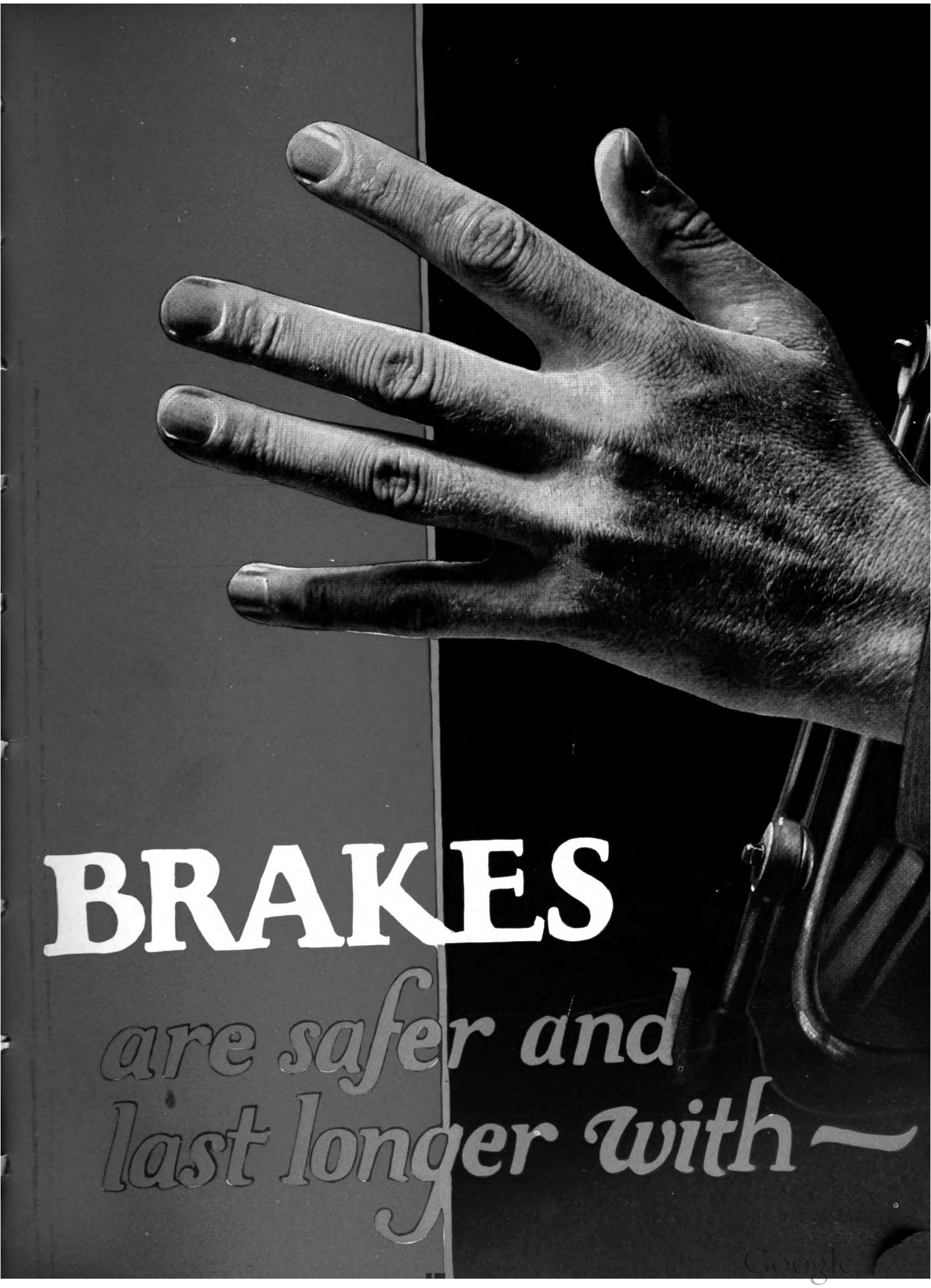
Is your territory open? It's better to sell the Columbia than to compete with it.

COLUMBIA MOTORS COMPANY, DETROIT, U. S. A.

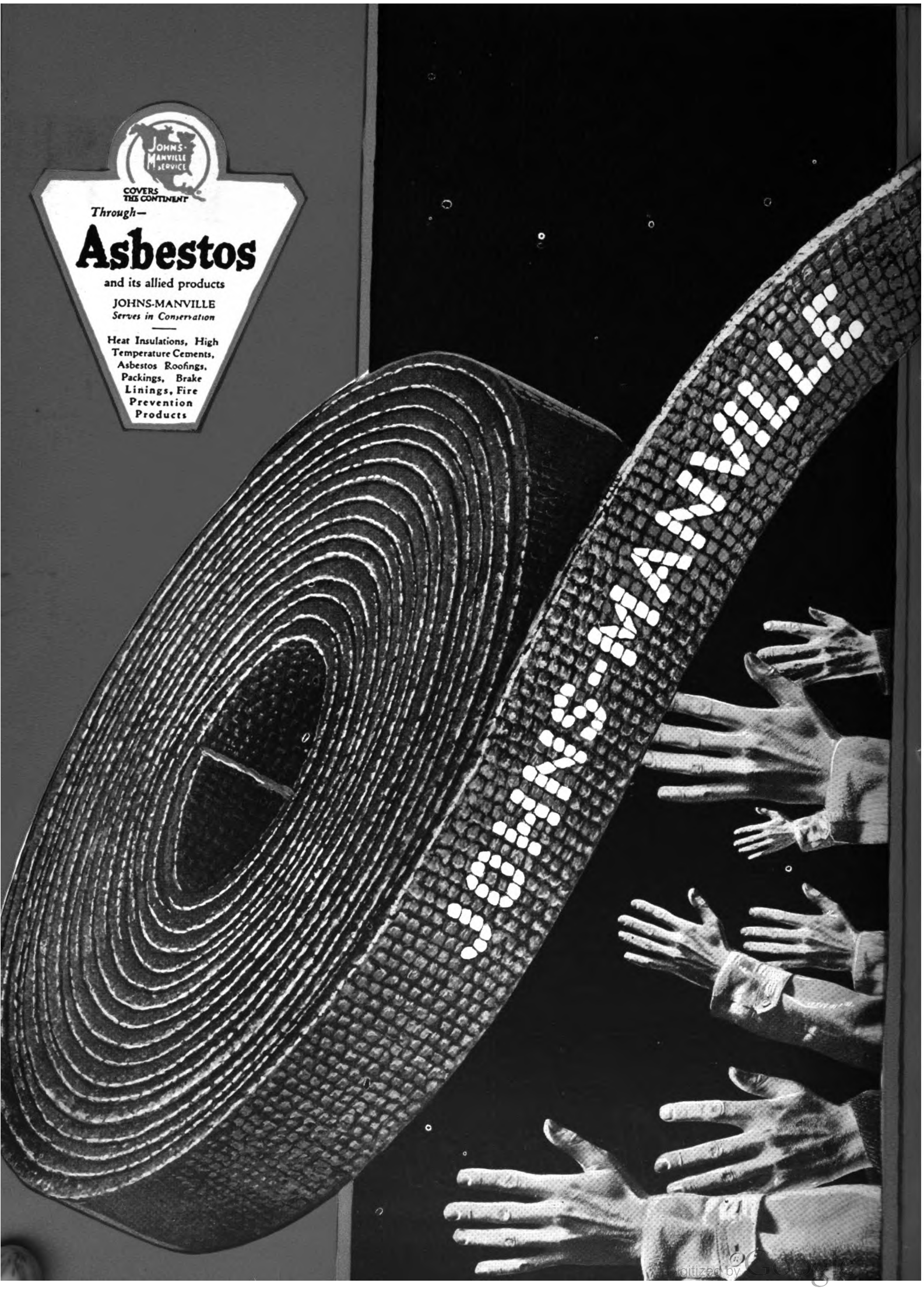
Columbia Light Six Sedan

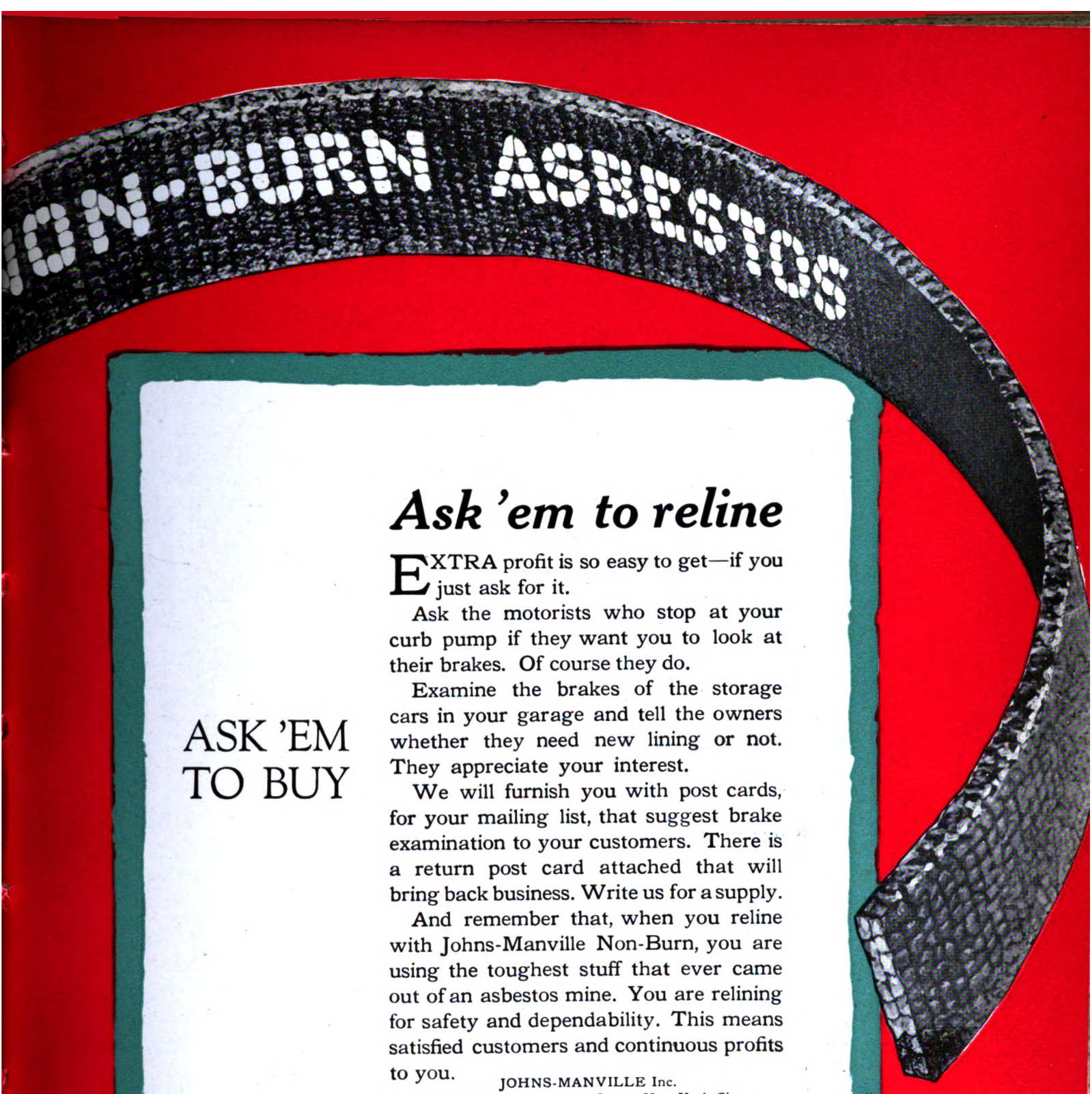
CONTINENTAL MOTOR TIMKEN AXLES

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COVERS THIS CONTINENT
Through—
Asbestos
and its allied products
JOHNS-MANVILLE
Serves in Conservation
Heat Insulations, High Temperature Cements, Asbestos Roofings, Packings, Brake Linings, Fire Prevention Products
JOHNS-MANVILLE



Ask 'em to reline

EXTRA profit is so easy to get—if you just ask for it.

Ask the motorists who stop at your curb pump if they want you to look at their brakes. Of course they do.

Examine the brakes of the storage cars in your garage and tell the owners whether they need new lining or not. They appreciate your interest.

ASK 'EM TO BUY

We will furnish you with post cards, for your mailing list, that suggest brake examination to your customers. There is a return post card attached that will bring back business. Write us for a supply.

And remember that, when you reline with Johns-Manville Non-Burn, you are using the toughest stuff that ever came out of an asbestos mine. You are relining for safety and dependability. This means satisfied customers and continuous profits to you.

JOHNS-MANVILLE Inc.
Madison Avenue at 41st Street, New York City
Branches in 56 Large Cities
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

JOHNS-MANVILLE
Automotive Equipment

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CHOOSE YOUR DISTRIBUTOR

Alabama
Moore-Handley Hardware Co., Birmingham
Johnson Tire & Auto Co., Montgomery

Arkansas
Crow-Burlingame Co., Little Rock

California
Chanslor & Lyon Co., Fresno
Chanslor & Lyon Co., Los Angeles
Featherstone, E. A., Los Angeles
McCoy Motor Supply Co., Los Angeles
Waterhouse & Lester Co., Los Angeles
Weinstock-Nichols Co., Los Angeles
Chanslor & Lyon Co., Oakland
Weinstock-Nichols Co., Oakland
Kimball-Upson Co., Sacramento
P. W. Gavin Company, Inc., San Diego
Chanslor & Lyon Co., San Francisco
Electric Appliance Company, San Francisco
McCoy Motor Supply Co., San Francisco
Waterhouse & Lester Co., San Francisco
Weinstock-Nichols Co., San Francisco
California Auto Supply Co., Stockton

Colorado
Auto Equipment Co., Denver
Foster Auto Supply Co., Denver
Motor Accessories & Tire Co., Pueblo

Connecticut
Hessel & Hoppen Co., New Haven
Motor Tire Service Co., Putnam

District of Columbia
National Electrical Supply Co.
Rubel, Chas., & Co.

Florida
Baughman Company, G. Norman, Jacksonville
Baughman Company, G. Norman, Miami
Baughman Company, G. Norman, Tampa

Georgia
Alexander-Seewald Co., Atlanta
Ozburn-Abston & Co., Atlanta
Cody Co., W. E., Columbus

Illinois
Automobile Supply Co., Chicago
Chicago Automobile Supply House, Chicago
Electric Appliance Company, Chicago
Motor Car Supply Co., Chicago
Sheridan Auto Supply Co., Chicago
Tenk Hardware Co., Quincy
Washington Auto Supply Co., Washington

Indiana
Orr Iron Co., Evansville
Lomont & Co., Ft. Wayne
The Gibson Co., Indianapolis
The I. J. Cooper Rubber Co., Indianapolis
Goodlin Auto Equip. Co., South Bend

Iowa
Cedar Rapids Pump Co., Cedar Rapids
Sieg Co., Davenport
Herring Motor Co., Des Moines
Repass Auto Co., Waterloo

Kansas
The Frank Colladay Hardware Co., Hutchinson
Watson-Weldon Co., Salina
Southwick Auto Supply Co., Topeka
Massey Hardware Company, Wichita

Kentucky
Peaslee-Gaulbert Co., Louisville

Louisiana
Electric Appliance Company, New Orleans
Shuler Auto Supply Co., New Orleans
Cupples-Lonergan, Inc., Shreveport

Maine
Bigelow & Dowse Co., Bangor
The Farrar-Brown Company, Inc., Portland

Maryland
Auto Supply Co., Baltimore
Coggins & Owens, Baltimore

Massachusetts
Linscott Supply Co., Boston
Motor Tire Service Co., Fitchburg
Bigelow & Dowse Co., Springfield
Duncan & Goodell Co., Worcester
Motor Tire Service Co., Worcester

Michigan
Bowman Gould Co., Detroit
Roehm & Davison, Detroit
Tisch Auto Supply Co., Grand Rapids

Minnesota
Kelley-Duluth Co., Duluth
Minneapolis Iron Store Co., Minneapolis
Reinhard Bros. Co., Minneapolis
Williams Hardware Co., Minneapolis
Nicols, Dean & Gregg, St. Paul

Missouri
Joplin Supply Co., Joplin
The Faeth Company, Kansas City
Ayers Farmer Auto Supply Co., St. Joseph
Beck & Corbitt Iron Co., St. Louis
Fred Campbell Auto Supply Co., St. Louis
Geller, Ward & Hasner, St. Louis
Hermann-Sanford Company, Springfield
Joplin Supply Co., Webb City

Montana
Northwestern Auto Supply Co., Billings

Nebraska
Nebraska Buick Auto Co., Lincoln
Western Auto Supply Co., Omaha

Nevada
Nevada Auto Supply Co., Reno

New Hampshire
Thompson & Hoague Company, Concord

New Jersey
Economy Auto Supply Co., Newark
Pruden Hardware Co., Newark

New York
Albany Hardware & Iron Co., Albany
Martin-Evans Co., Brooklyn
H. D. Taylor Co., Buffalo
Barker, Rose & Clinton Co., Elmira
Weaver-Ebling Co., New York City
Pruden Hardware Co., W. E., New York City
Whittemore-Sim Co., Inc., New York City

North Carolina
Carolinas Auto Supply House, Charlotte
Automobile Supply Co., Wilmington

North Dakota
Grant-Dadey Company, Fargo

Ohio
The Penn. Rubber & Supply Co., Akron
C. & D. Auto Supply Co., Cincinnati
The I. J. Cooper Rubber Co., Cincinnati
The Penn. Rubber & Supply Co., Cincinnati
The Penn. Rubber & Supply Co., Cleveland
The I. J. Cooper Rubber Co., Columbus
The Penn. Rubber & Supply Co., Columbus
Justus & Parker Co., Columbus
The I. J. Cooper Rubber Co., Dayton
The Penn. Rubber & Supply Co., Toledo
The Penn. Rubber & Supply Co., Youngstown

Oklahoma
Severin Tire & Supply Co., Oklahoma City
Joplin Supply Co., Tar River
Racine Tire Co., Tulsa
Tulsa Motor Supply Co., Tulsa

Oregon
Wiggins Company, Inc., Portland
Chanslor & Lyon Co., Portland
Waterhouse & Lester Co., Portland

Pennsylvania
Motor Accessories Co., Allentown
General Motor Supply Co., Altoona
The Penn. Rubber & Supply Co., Erie
Front Market Motor Supply Co., Harrisburg
General Auto Supply Co., Harrisburg

Pennsylvania—Continued
Johnstown Auto Co., Johnstown
General Auto Supply Co., Lancaster
The Penn. Rubber & Supply Co., Oil City
Berrodin Rubber Co., Philadelphia
Gaul, Derr & Shearer Co., Philadelphia
Roberts Electric Supply Co., H. C., Philadelphia
Dyke Motor Supply Co., Pittsburgh
Jackson Motor Supply Co., Pittsburgh
General Auto Supply Co., York

Rhode Island
Belcher & Loomis Hardware Co., Providence

South Carolina
Franke Co., Inc., C. D., Charleston
D. W. Alderman, Jr., Inc., Florence
D. W. Alderman, Jr., Inc., Greenville

South Dakota
L. & L. Motor Supply Co., Sioux Falls

Tennessee
Southern Auto Supply Co., Chattanooga
The I. J. Cooper Rubber Co., Knoxville
Ozburn-Abston & Co., Memphis
Auto Supply Co., Nashville
The I. J. Cooper Rubber Co., Nashville

Texas
Electric Appliance Company, Dallas
Ferris-Dunlap Co., Dallas
Tri-State Accessories Corp., El Paso
The Equipment Company of Texas, Fort Worth
Meyer Co., Jos. F., Houston
The Southern Equipment Co., Houston
The Southern Equipment Co., San Antonio
McCauley-Ward Motor Supply Co., Waco

Utah
Inter-Mountain Electric Co., Salt Lake City
Motor Mercantile Co., Salt Lake City

Virginia
Owens-Merritt, Danville
Piedmont Hardware Co., Danville
Crump Co., Benj. T., Richmond
Talman Auto Supply Co., Richmond
Meadows-Price Co., Roanoke

Washington
Chanslor & Lyon Co., Seattle
Reynolds & Reynolds, Seattle
Chanslor & Lyon Co., Spokane
Holley-Mason Hardware Co., Spokane
Chanslor & Lyon Co., Tacoma
Reynolds & Reynolds, Tacoma

West Virginia
Williams Hardware Co., Clarkesburg

Wisconsin
Clemons Auto Supply Co., Eau Claire
Andrae & Sons Co., Julius, Milwaukee
Shadbolt & Boyd Iron Co., Milwaukee
Tisch Auto Supply Co., Milwaukee
Western Motor Supply Co., Milwaukee

Wyoming
Auto Equipment Co., Casper

CANADA

Alberta
The Motor Car Supply Co., of Canada, Ltd., Calgary and Edmonton
Wood, Vallance & Adams, Ltd., Calgary

British Columbia
Wood, Vallance & Leggat, Ltd., Vancouver

Manitoba
Wood, Vallance, Ltd., Winnipeg

New Brunswick
Lounsbury Company, Ltd., Newcastle

Nova Scotia
J. J. Snooks Ltd., Truroo

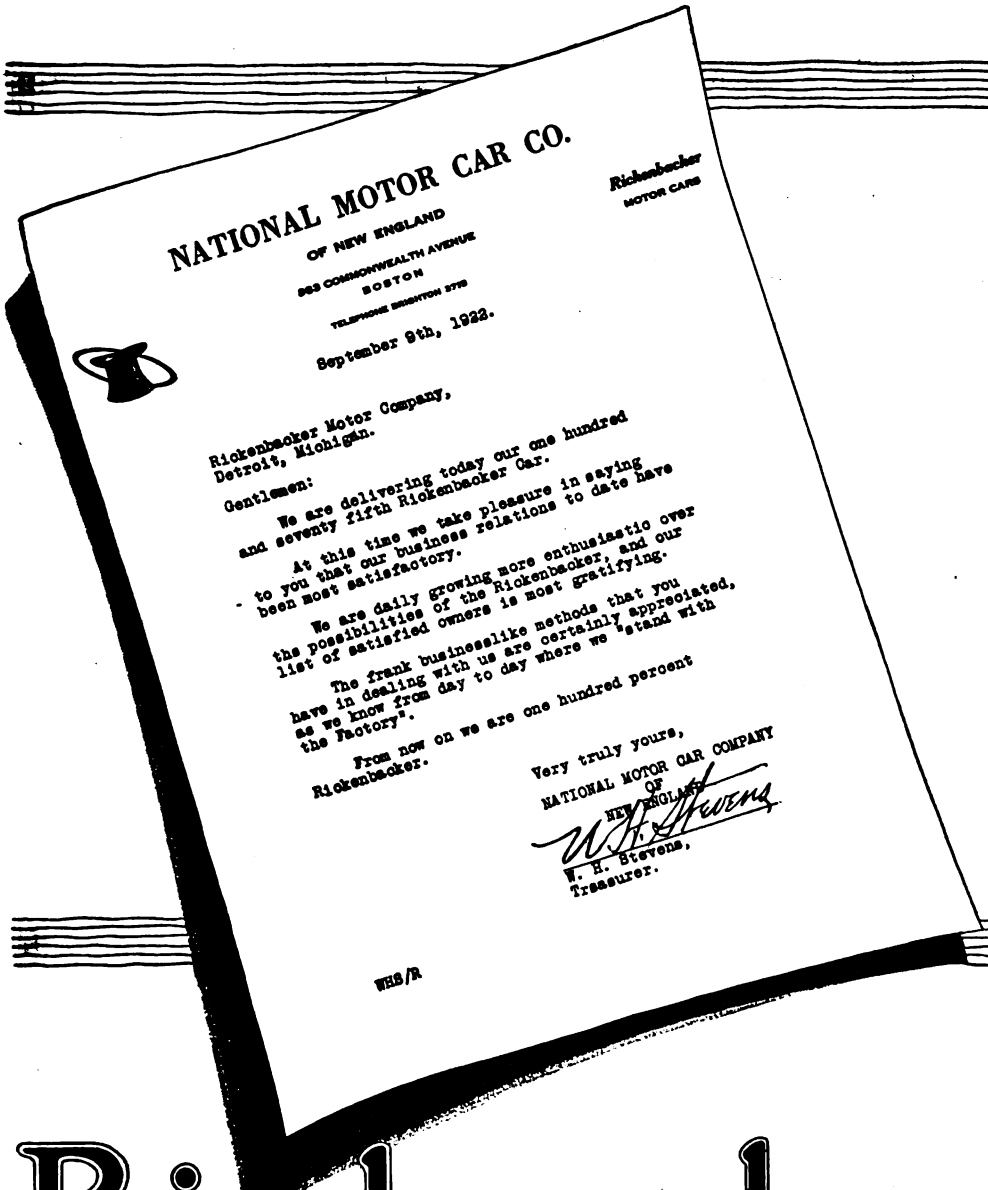
Ontario
Whites, Limited, Collingwood
Nicholson Sales & Service Co., Hamilton
A. Chown Company, Kingston
James Cowan, London
Just Motors Limited, Ottawa
Samuel Trees & Company, Toronto
Bowman Anthony Co., Windsor

Saskatchewan
Wood, Vallance, Limited, Regina

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Another Astonishing Achievement!

Read what this Distributor thinks of the Rickenbacker. He is but one. Almost Daily We Receive Similar Letters.



NATIONAL MOTOR CAR CO.
OF NEW ENGLAND
883 COMMONWEALTH AVENUE
BOSTON
TELEPHONE BRIGHTON 8778

Rickenbacker
MOTOR CARS

September 9th, 1922.

Rickenbacker Motor Company,
Detroit, Michigan.

Gentlemen:

We are delivering today our one hundred and seventy fifth Rickenbacker Car.

At this time we take pleasure in saying to you that our business relations to date have been most satisfactory.

We are daily growing more enthusiastic over the possibilities of the Rickenbacker, and our list of satisfied owners is most gratifying.

The frank businesslike methods that you have in dealing with us are certainly appreciated, as we know from day to day where we "stand with the Factory".

From now on we are one hundred percent Rickenbacker.

Very truly yours,
NATIONAL MOTOR CAR COMPANY
OF NEW ENGLAND
W. H. Stevens,
Treasurer.

WHS/R



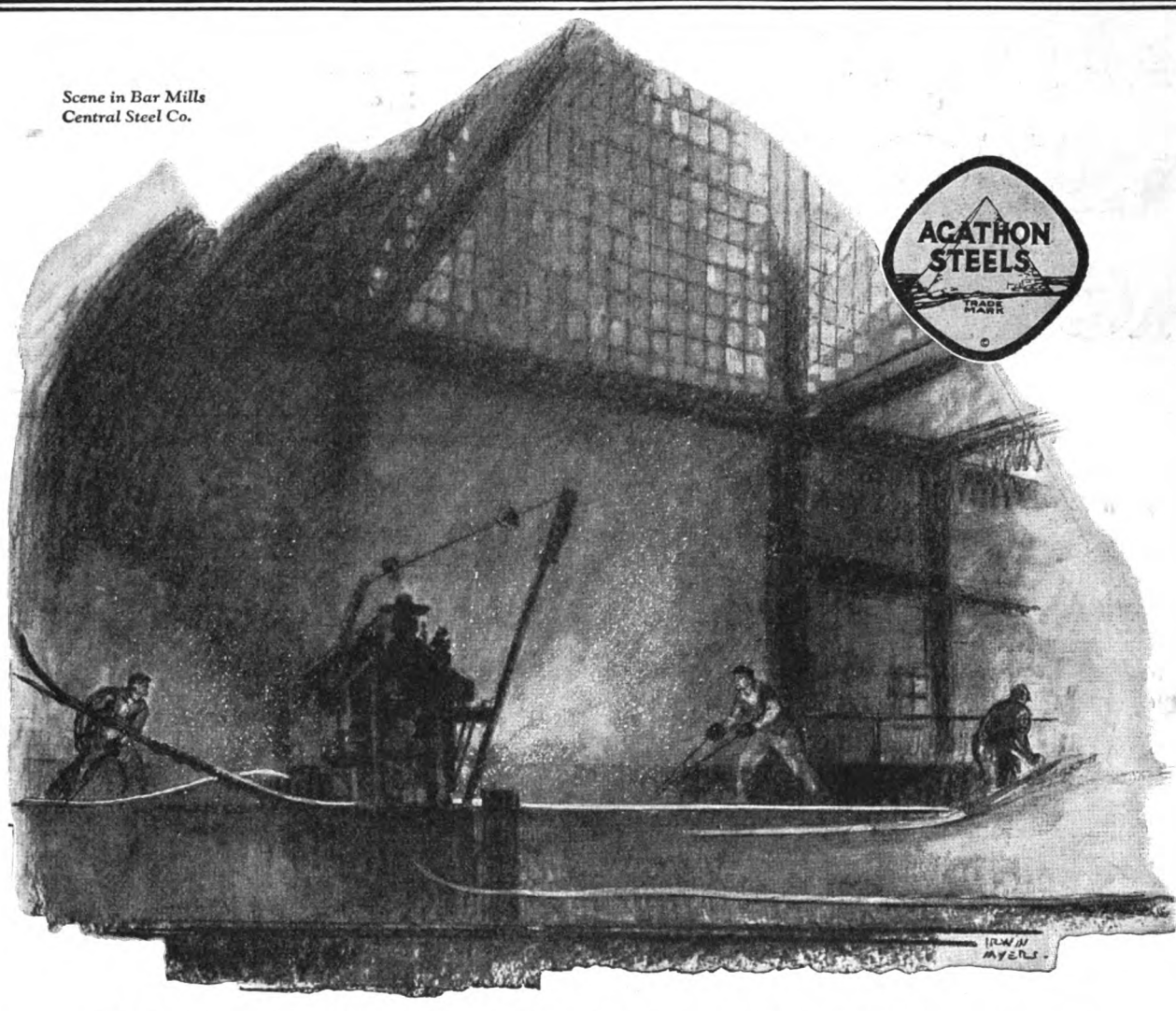
Let us show you the way to Greater Earning Power. Write us for the FACTS.

Rickenbacker Motor Company
Detroit Michigan

Rickenbacker

A • CAR • WORTHY • OF • ITS • NAME

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Scene in Bar Mills Central Steel Co.

We Can Solve Your Problem if It's IN the Steel

AGATHON ALLOY STEELS are closely refined steel to which have been added certain other metals, such as Nickel, Vanadium, Chromium, Molybdenum, etc. They provide superlative steel strength with a minimum of bulk and weight.

Somewhere in the list of Agathon super-steels may be the exact steel for the purposes of your product. With these alloy steels have been fashioned, without sacrifice of lightness, the highly stressed parts of the American automobile—gears, springs, shafts, knuckles, bolts, frames, etc. Consider if the extra strength, hardness, resistance to wear, etc., which you are seeking for your product is in the steel you are using.

Our Research Laboratories and staff of metallurgical engineers are trained to advise and consult with you regarding the adaptability of Agathon Alloy Steels to your particular machine or product. Our years of experience in this line of endeavor will enable us to short-cut into the heart of your steel problem.

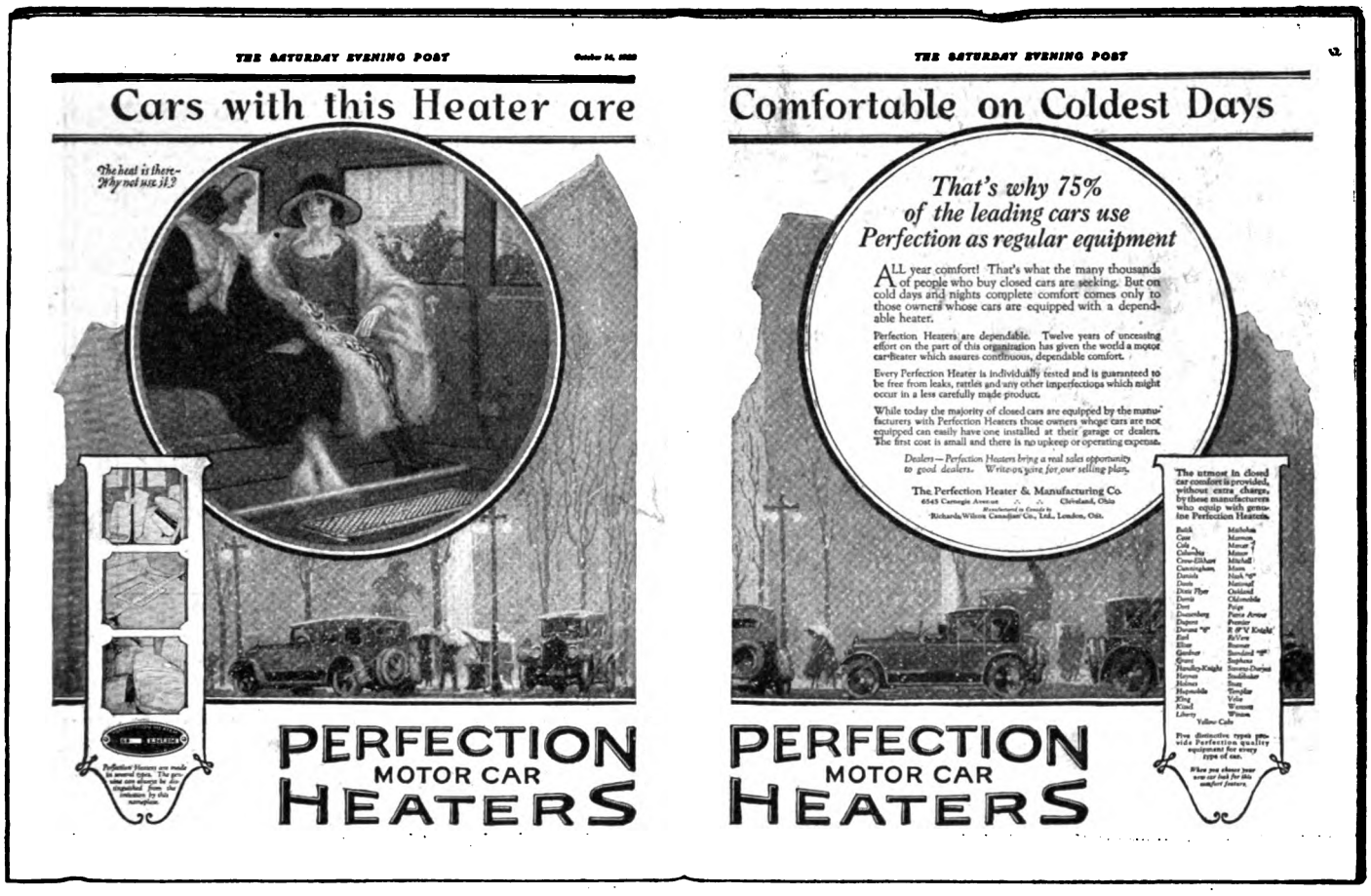
Write for a copy of the booklet, "Agathon Alloy Steels," which describes dozens of Agathon grades regularly in production and their adaptability to various lines of steel products manufacture.

THE CENTRAL STEEL COMPANY, Massillon, Ohio

SWETLAND BLDG. CLEVELAND | BOOK BLDG. DETROIT | PEOPLES GAS BLDG. CHICAGO | UNIVERSITY BLOCK SYRACUSE | WIDENER BLDG. PHILADELPHIA

AGATHON ALLOY STEELS

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These Heaters Are Recognized as Standard

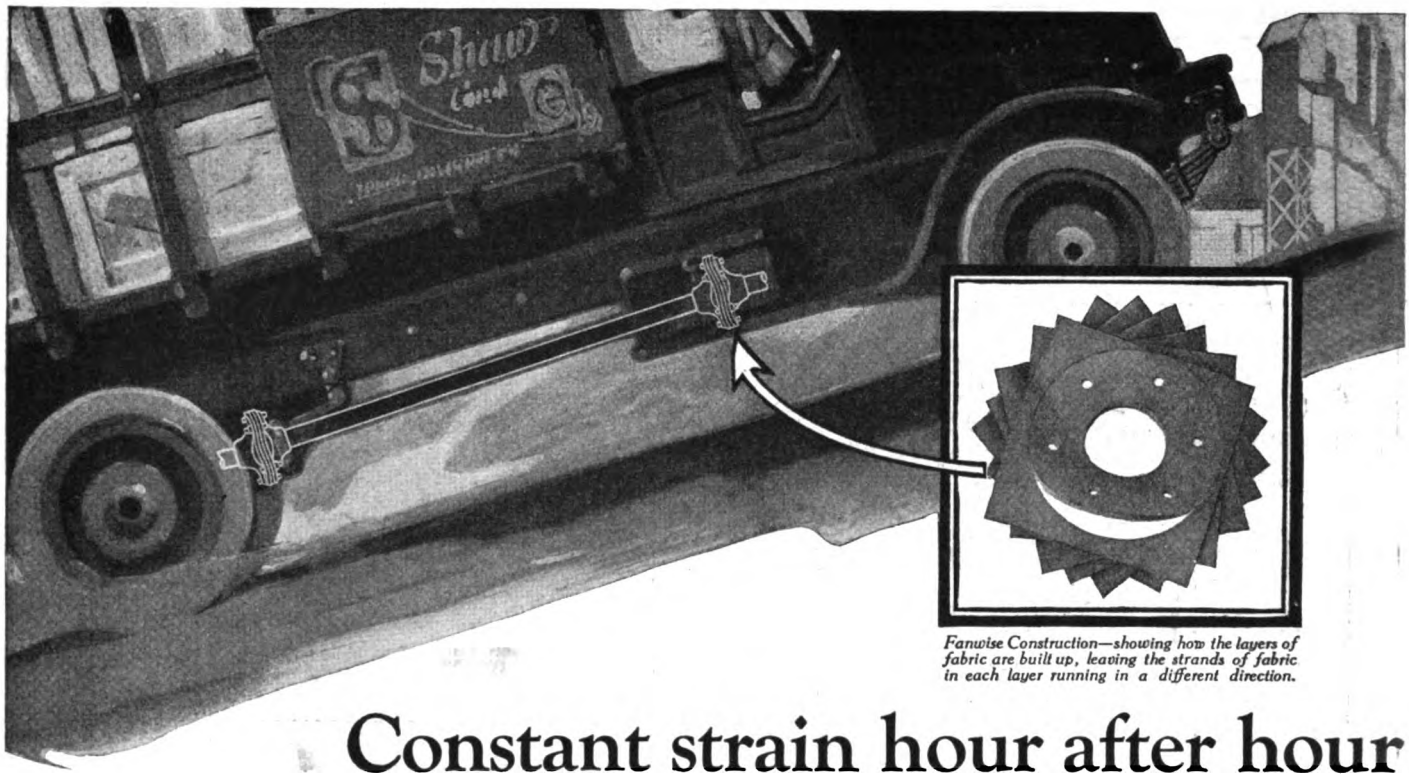
Nine out of every ten motor car manufacturers who equip their cars with heaters use Perfection. This is concrete, definite proof of the satisfactory service which Perfection Heaters give.

Wise dealers are handling Perfection Heaters which are recognized by the public as the standard of heater value. These dealers are profiting in prompt turn-over and good profits.

The PERFECTION HEATER & MANUFACTURING Co.
6545 CARNEGIE AVENUE ∴ CLEVELAND, OHIO

PERFECTION
MOTOR CAR
HEATERS

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Fanwise Construction—showing how the layers of fabric are built up, leaving the strands of fabric in each layer running in a different direction.

Constant strain hour after hour

—*the test of Fanwise Construction*

DURING every moment the car is being driven there is a constant strain on the universal joint. In starting a truck these strains often amount to as much as 5 tons. Even in comparatively light cars, they often reach 6,000 pounds.

In the flexible disc type of universal joint, this entire strain comes on a series of fabric discs. If there is to be no vibration or "whipping" resulting from the disc stretching out of true, every sector of the disc must be able to stand an equal strain.

In the Thermoid-Hardy—the original disc universal—this is provided for by the famous method of Fanwise Construction—the patent of the Thermoid Rubber Company.

Look at the illustration in the square above. Notice how the disc is built up with the strands of each layer of fabric running in a different direction. Each sector is of uniform strength and elasticity. Every stress is balanced—

—the torsional stresses between the bolt holes

—the centrifugal stresses from the center outward

—the lateral stresses from the forward and back motion of the shaft.

This means the elimination of "whipping" and vibration. It means that the shaft is held true on every revolution.

Fast replacing metal universals

So flexible that it cushions every shock of the road—yet strong enough to withstand a 21,000 pound twist! Capable of going 60,000 miles without adjustment, lubrication, or attention of any kind—yet built to stand the hardest service on the heaviest trucks!

The Thermoid-Hardy disc type of universal joint marks another forward step in automobile construction. Metal universals that need constant attention and that transmit every shock of the road are fast being displaced.

You should have this book—sent free to any engineer or dealer

We have prepared a book, "Universal Joints—Their Use and Misuse," that treats the whole subject from all its angles—the mechanical principles involved, construction, lubrication, processes of manufacture, tests for strength, and records of performance. Send for your copy today.

THERMOID RUBBER COMPANY

Sole American Manufacturers Factory and Main Offices: Trenton, N. J.

New York, Chicago, Los Angeles, Detroit, Cleveland, Kansas City, Seattle, Atlanta, Boston, London, Paris, Turin.

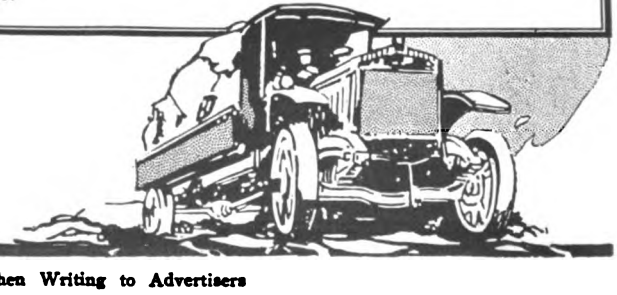
LIST OF USERS

American British Mfg. Co.
Allis Chalmers Mfg. Co.
Anderson Motor Co.
The Autocar Co.
Available Truck Co.
Barley Motor Car Co. (Roamer)
Crow-Elkhart Motor Corp.
Jas. Cunningham Son & Co.
Dart Truck & Tractor Corp.
The Dauch Mfg. Co.
Diamond T Motor Car Co.
Doane Motor Truck Co.
Elgin Motor Car Corp.
Elgin Street Sweeper Co.
Fageol Motors Co.
Fifth Ave. Coach Co.
H. H. Franklin Mfg. Co.
Garford Motor Truck Co.
Gramm-Bernstein Motor Truck Company
Handley Knight
Hawkeye Truck Co.
Hendrickson Motor Truck Co.
Highway Motors Co.
Holt Mfg. Co.
Indiana Truck Co.
International Harvester Co. of A., Inc.
International Motor Co.
Jackson Motors Corp.
Kelsey Motor Co.
Kentucky Wagon Mfg. Co., Inc.
Kenworthy Motors Corp.
King Motor Car Co.
King Zeitler Co.
Lakewood Eng. Co.
Larrabee-Deyo Motor Truck Co.
Lexington Motor Co.
Locomobile Co.
Menominee Motor Truck Co.
Mercer Motors Co.
Moreland Motor Truck Co.
McFarlan Motor Co.
Nelson & LeMoon
E. A. Nelson Automobile Company
Nelson Motor Truck Co.
D. A. Newcomer Co.
O'Connell Motor Truck Co.
Oliver Tractor Co.
Oneida Motor Truck Co.
Packard Motor Car Co.
Parker Motor Truck Co.
Patriot Motors Co.
Reliance Motor Truck Co.
Reo Motor Car Co.
Reynolds Motor Truck Co.
Root & Van Dervoort Eng. Co.
Sanford Motor Truck Co.
Southwark Fdy. & Mach. Company
Sprague Electric Co.
Stoughton Wagon Co.
Studebaker Corp.
Stutes Mar Tractor Co.
Templar Motors Co.
Tioga Steel & Iron Co.
Towmotor Co.
Traffic Motor Truck Corp.
Transport Truck Co.
Twin City Four Wheel Drive Co., Inc.
United Motors Co.
Walter Motor Truck Co.
Ward La France Truck Corp., Inc.
Watson Products Corp.
Geo. D. Whitcomb Co.
Wichita Motors Co.
H. E. Wilcox Motor Co.
J. C. Wilson Co.
Willys-Overland, Inc.
Zeitler & Lamson Truck & Tractor Co.

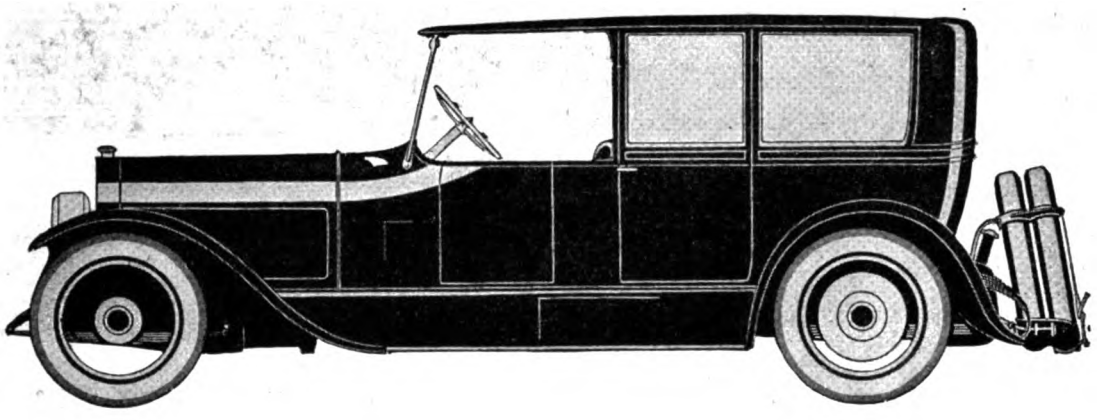
THERMOID-HARDY
UNIVERSAL JOINT

Fanwise Construction for strength

Makers of "Thermoid Hydraulic Compressed Brake Lining" and "Thermoid Crolide Compound Tires"



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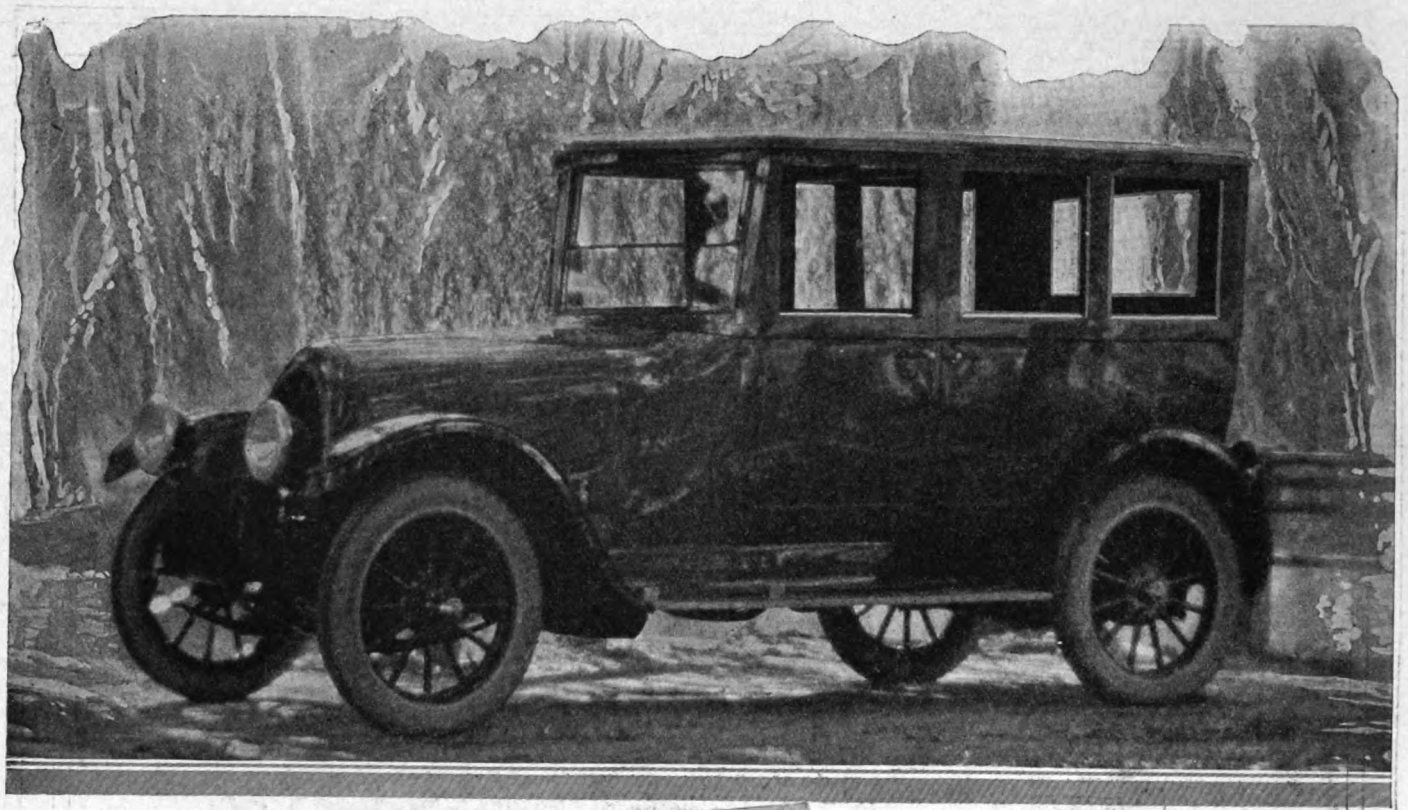
Three-Quarter Limousine $8,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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H. H. FRANKLIN MANUFACTURING COMPANY

SYRACUSE, N.Y. U.S.A.

Franklin MOTOR CARS

July 29, 1922.

Bowen Products Corp.,
Auburn, N. Y.

Attention: Mr. P. A. Ross, Adv. Mgr.

Gentlemen:

Our reasons for adopting the Bowen Empress lubrication system for our Series 10-A car was due to the following:

This system was the best for oil lubrication and allowed us to use the combination of pressure and a reservoir, which system requires the least attention in order to obtain satisfactory lubrication.

The Empress gun, due to the check valve, can be carried in the car all loaded with engine oil so that, on a trip, the spring pivots and other parts can be given a shot of oil with a minimum of soiling the operator's clothes. The Empress gun and connections worked out to be as convenient to get at as any system tried.

The pressure can be built up in the gun and when released by pressing into the cups, seems to have a beneficial effect in expelling dirt from the bearings.

Our dealings with the Bowen Company which has extended over a number of years has been very pleasant and satisfactory.

Yours very truly,

H. H. FRANKLIN MFG. CO.

S. R. Castor, S. R. Castor
Engineering Dept.

SRC
S

Bowen-Empress

HIGH PRESSURE LUBRICATING SYSTEM

FOR ALL MOTOR CARS AND TRUCKS

Standard Equipment On The Franklin CAR

Series 10-A

Franklin Engineers realizing the inadequacy of ordinary methods of providing proper lubrication for the Franklin Car, adopted, after exhaustive tests, the Bowen-Empress High Pressure Lubricating System as standard equipment.

The Bowen-Empress System was selected from among competing systems with a full realization that it would add to the efficiency and easy upkeep of the Franklin car.

Descriptive Booklet W-301
Sent Upon Request

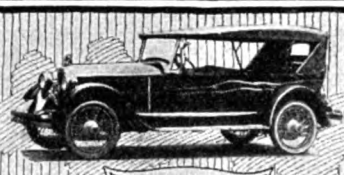
Bowen Products Corporation

Auburn Division, Auburn, N.Y.

Standard equipment on more than fifty other automobiles and motor trucks.

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Franklin


Paige

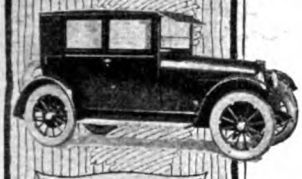

Jewett

A Few Representative Basco Equipped Automobiles


Cleveland


Chalmers

BASCO electrical components in one form or another are embodied in ***all*** of the passenger cars illustrated on this page. Other Basco Products including body hardware and horns are incorporated in ***many*** of them. And the fourteen vehicles here pictured represent only a ***small fraction*** of the total number of cars and trucks that are Basco equipped.


Nash


Haynes

No greater testimony could be given as to the reliability, practicability and adaptability of Basco products than this almost universal acceptance by automotive manufacturers. Nor would the continued and ever broadening acceptance of Basco products have been possible over a period of twelve years except for an unflinching maintenance of that high standard of material quality and commercial integrity that are the very foundation of this business.


Rickenbacker


Essex

Basco Products

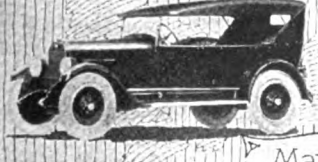
Lighting, Ignition and Starting Switches, Instrument Panels, Generator Cutouts, Motor Driven Horns, Door Handles, Compartment Locks, Door Locks, Body Hardware.

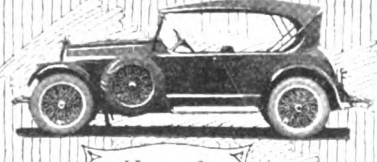

Chevrolet

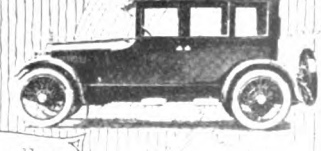

Earl



Briggs & Stratton Co.
Milwaukee, Wisconsin


Maxwell


Kissel


Chandler

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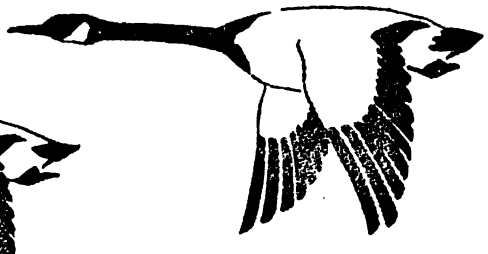




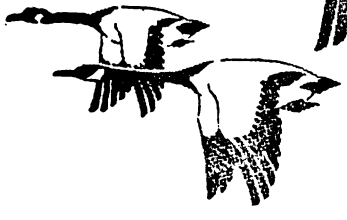
Delco

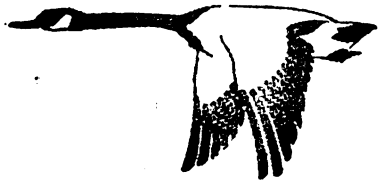
Starting, Lighting *and* Ignition System











The manufacturers and the owners of the Wills Sainte Claire, which is also Delco-equipped, rightly pride themselves on the car's power and its splendid engineering efficiency.

They know that Starting, Lighting and Ignition performance of the calibre demanded in such a car as the Wills Sainte Claire is dependably and continuously rendered by Delco.

THE DAYTON ENGINEERING LABORATORIES CO.
DAYTON, OHIO, U. S. A.



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Sales and Profit Building

Mr. W. J. Benson, President of the W. J. Benson Company, San Francisco, the original and only Stephens distributor in northern California, sums up for other motor car merchants his convictions about the Stephens line and the money to be made by holders of the Stephens franchise.

"WITH the exception of two other cars, I believe the Stephens line offers more possibilities from now on than any other automobile manufactured.

"Good representation will put the Stephens over in any territory. It is without doubt the best car built between $850 and $3000; and there is a great field for a car of its size, quality and price. It comes as near selling itself as any car can; but as you and I know from experience, it takes aggressive merchants to sell motor cars today.

"We have been distributing the Stephens since the first model was built. We believe in the car; we believe in the factory; and as we have learned to believe in ourselves, we are getting results.

"The Stephens franchise offers a wonderful opportunity in any territory that is still uncovered. It seems to me that if distributors and dealers in these communities could get in touch with Stephens representatives elsewhere, and could realize how well pleased we are with the Company's policies, the car and our contracts, they would be knocking at the factory door and pleading for the line in their districts.

"If this were not sufficient evidence, they would only have to talk with a few Stephens owners to appreciate their chance to secure a line that stays sold and tends to build up a permanent business in a permanent territory with a permanent factory organization."

.... Mr. Benson's vigorous statement needs no postscript to emphasize his opinion of the Stephens and the money-making opportunity provided by an open Stephens territory. If the Stephens is not represented in your city, let us send you our contract terms and a catalogue of body types to show you the solid basis on which Stephens owner and dealer satisfaction is built.

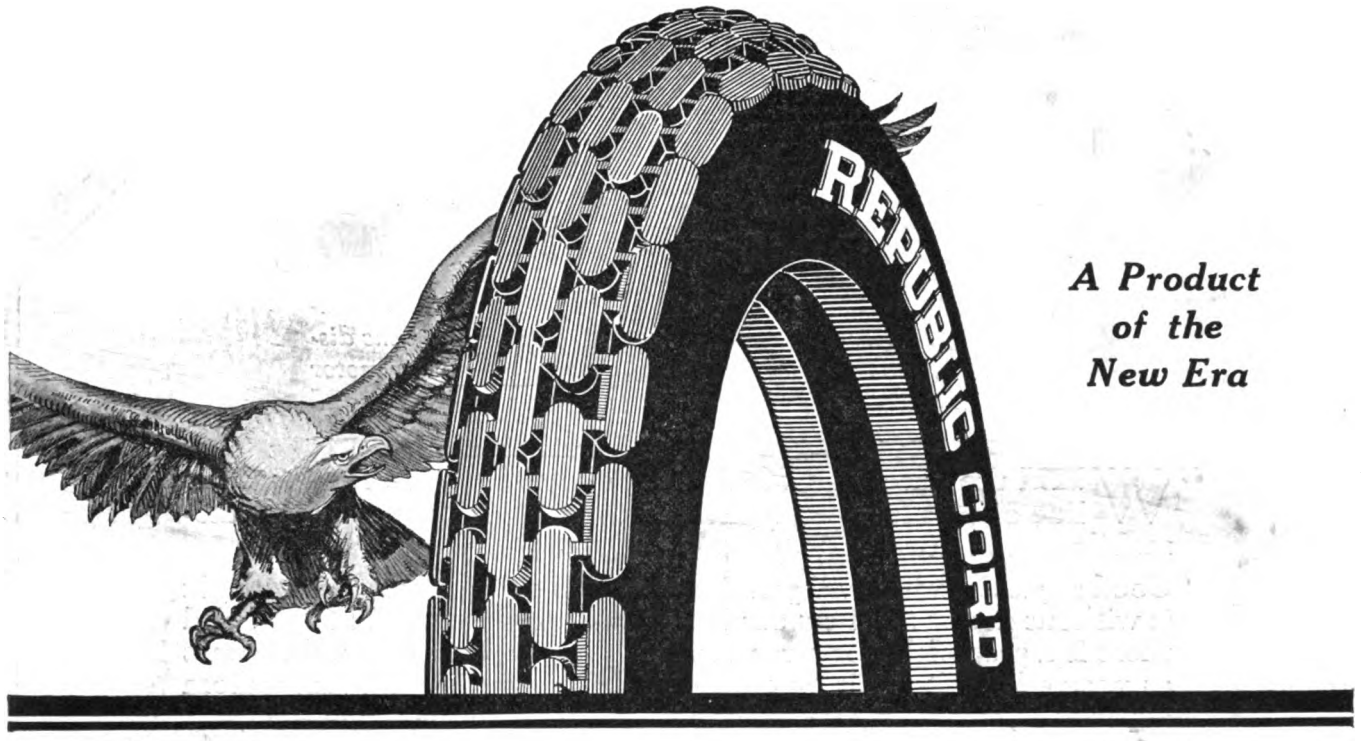
R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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A Product of the New Era

A NEW REPUBLIC CORD

Interchangeable with fabric for the light car owner

Republic sensed months ago the tremendous demand for a Cord tire that would be interchangeable with a Fabric tire. The answer to this long felt want of the small car owner was the 30 x 3½ Republic Cord.

Now the Republic Cord line has been extended to include sizes 30 x 3½ to 34 x 4 inclusive. This gives the light-car owner the Cord mileage and resiliency he has been looking for at a price slightly higher than he has been paying for good fabric tires.

Moreover its size make it possible for him to replace fabric tires one by one without unbalancing his car. Misalignment is impossible.

The same skilled workmanship and high grade material that have won other Republic Tires a nation wide reputation for strength, beauty and quality are found in this latest member of the Republic family.

The same famous Staggard Non-Skid Tread, that has given Republic Grande (oversize) Cords their perfect traction and non-skid qualities is found in the Republic Cord. Prodium Processed rubber guarantees long mileage under all conditions.

There are good profits and a quick turnover in Republic Cords for you. Get in touch with our nearest branch today for plans and prices.

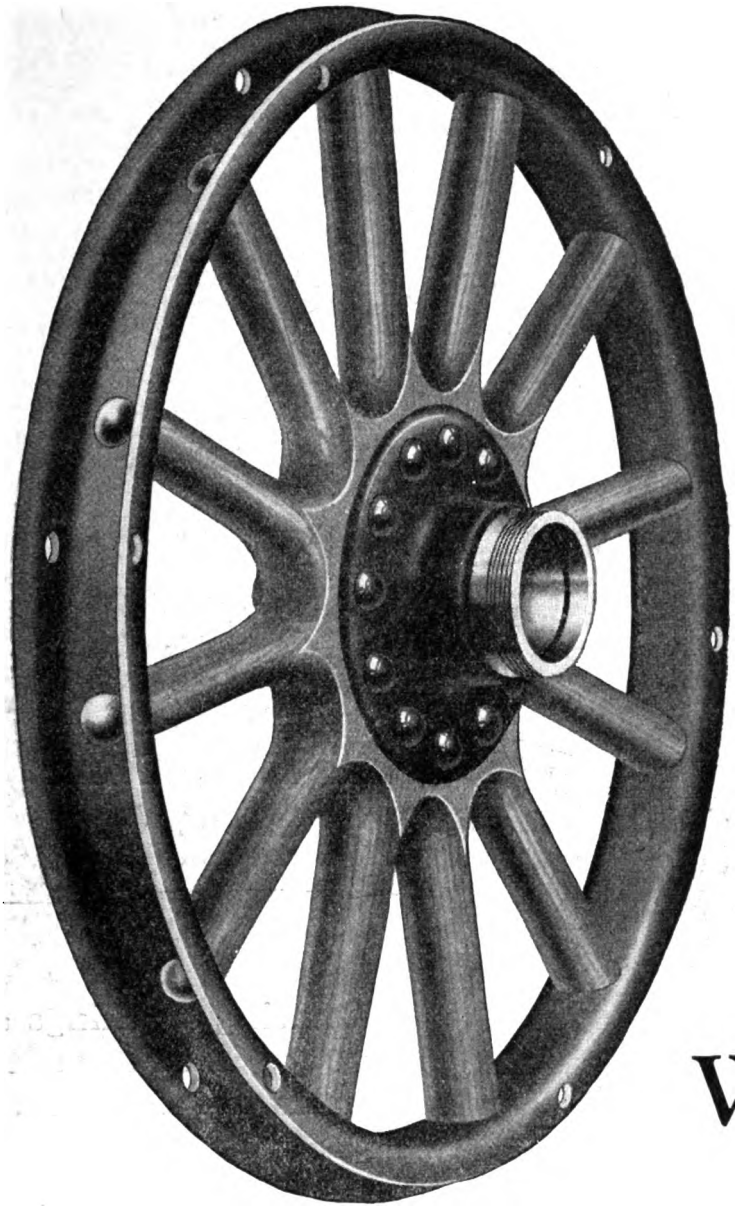
THE REPUBLIC RUBBER COMPANY
YOUNGSTOWN, OHIO

New York, Philadelphia, Minneapolis, Atlanta, Chicago, Kansas City, Cincinnati, Pittsburgh

REPUBLIC TIRES

With STAGGARD Tread

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Motor Wheel PRODUCTS

Who Makes the *Wheels?*

THE hickory in the wheels built by Motor Wheel is logged in our own forests, cut in our own mills, and seasoned with the aid of equipment that only our extensive resources can command.

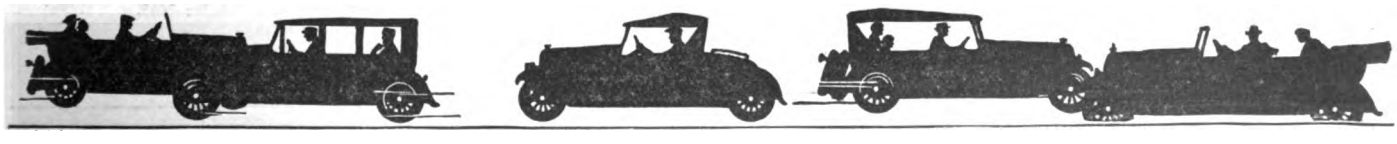
Wheels built by Motor Wheel Corporation are better wheels. A natural consequence of their excellence is that they are more in demand as well, among all who know wheel quality. It is this preference which has established us among the very largest builders of wheels in the world.

Just as you talk other important units of your car or truck, it is to your advantage to talk *wheels*, when they are built by Motor Wheel Corporation. As a result of the confidence so inspired, quicker, easier sales may be expected.

MOTOR WHEEL CORPORATION, LANSING, MICH.

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

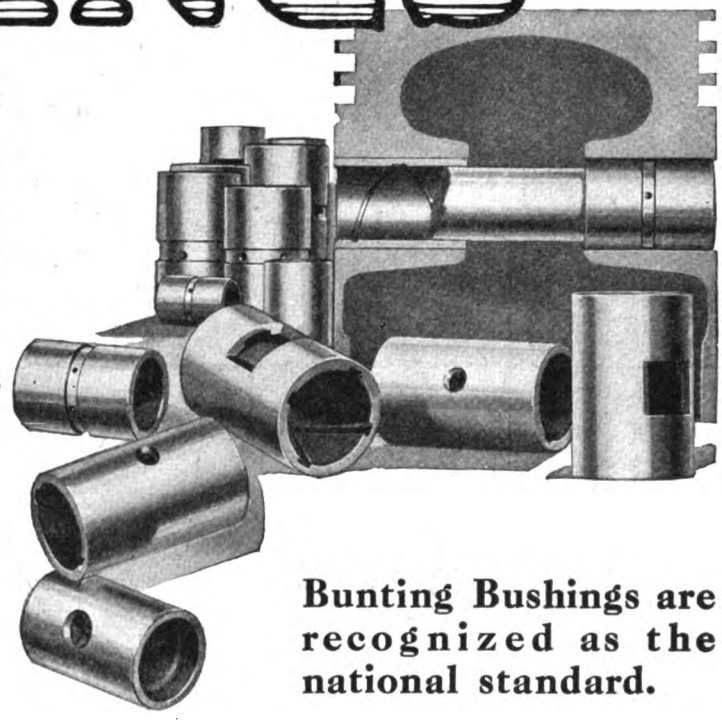
Gier TUARC *and Gier* LEWIS *Steel Wheels*



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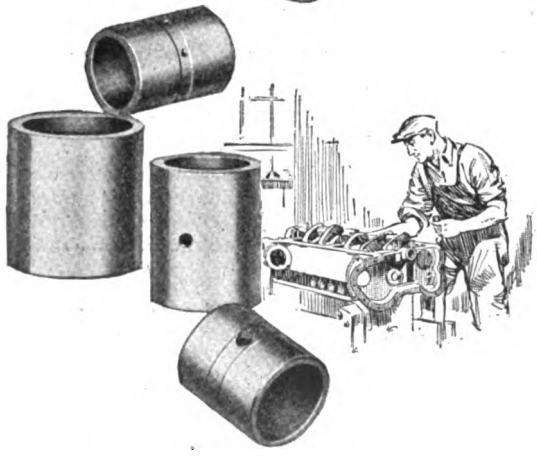
BUNTING BUSHINGS

Order Bunting Piston Pin Bushings — It's easier, less expensive, and more satisfactory for manufacturer, jobber, service man and owner.



Bunting Bushings are recognized as the national standard.





Leading manufacturers put them in when the motor is assembled. Practically all jobbers sell them. Service men everywhere employ them for replacement.

Thus good motor performance is guaranteed throughout the entire life of the car and trouble and expense of rebushing reduced to the minimum.

They're always in stock at the factory and all Bunting branches. They include every bushing in common demand.

Stock list 19 gives full information as to sizes and prices of bushings for the different models, years, etc., of all popular automobiles, trucks, tractors, and motors. Write for it.

THE BUNTING BRASS & BRONZE COMPANY

759 Spencer Street - Toledo, Ohio

NEW YORK: Grand Central Palace, Vanderbilt 7800.
CHICAGO: 722 S. Michigan Ave., Wabash 9153.
CLEVELAND: 1363 E. 6th Street, Main 5991.
SAN FRANCISCO: 198 Second St., cor. Howard, Douglas 6345.
BOSTON: 36 Oliver Street, Main 8488.

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PREST-O-PLATES have opened the eyes of Car Owners to this vital fact:-

the life of the battery is in the plates.

The long-lived plates, Prest-O-Plates, *naturally* make Prest-O-Lite the long-lived battery.

Possessing great heat-resisting durability for hot summer driving, and ready reserve power for winter weather starting, Prest-O-Plates *naturally* make Prest-O-Lite the best all-around, all-weather battery. Here is the net of selling the best battery:

Choose Prest-O-Lite with Prest-O-Plates. They are found *only* in a Prest-O-Lite battery.

THE PREST-O-LITE COMPANY, INC.

Carbide and Carbon Building, 30 East 42nd Street, New York

Eighth and Brannan Streets, San Francisco, California

In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto

To Dealers: We have a better battery proposition—more profit for you—more and better satisfied customers. Write us.

To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

Write us for open territory.

Oldest service to motorists



"INSIDE THE BATTERY"

An unusual book explaining how a battery is made, how it works, and how to take care of it. We have a free copy for you. Write for it.



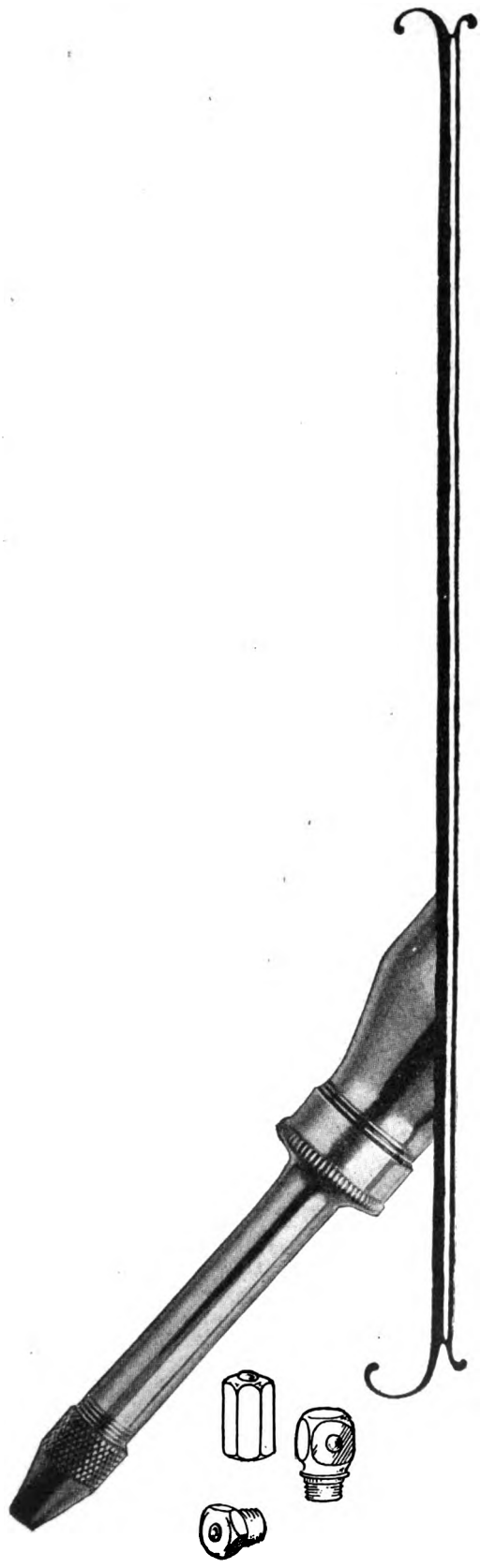
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Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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PRESSURE! PRICE! PROFIT!



SAAL OIL SHOOTER

Motor car owners are fast learning that this is the best pressure chassis lubrication system to use.

The little solid copper Oil Shooter forces a heavy *oil* into bearings under 2000 pounds pressure. Thorough lubrication! An easy operating tool, too—fool-proof, with no flexible tube or other delicate parts.

In Package Form

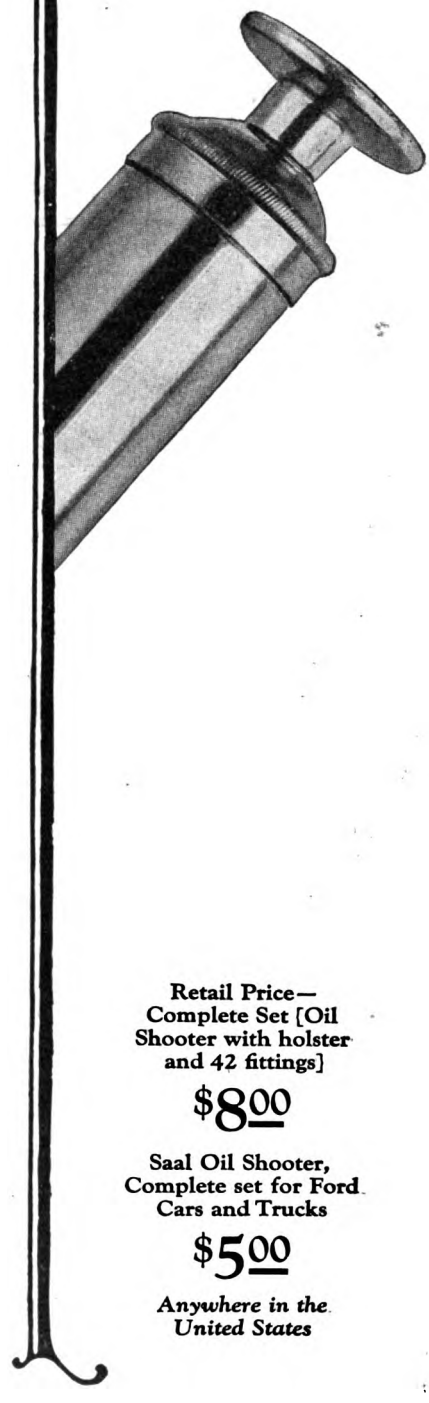
Note the retail prices. They fit the motorist's purse. The Saal Oil Shooter with steel holster and enough contact fittings for the largest car is included in a handy package. *Order picking is done away with. No installation sheets are needed. No returned goods bother.* Truly a convenient piece of merchandise for aggressive dealers to carry.

Profit! A liberal margin is to be made on this better lubricator. National advertising—magazines and newspapers—is putting the "Keeps Your Car Young" message across to the motor car public. Will you be able to supply your customers with Saal Oil Shooters?

Your jobber has Dealer Sales Helps and Oil Shooters. Drop him a line for complete information.

H. G. SAAL COMPANY
1800 Montrose Avenue
CHICAGO, ILL.

KEEPS YOUR CAR YOUNG



Retail Price—
Complete Set [Oil Shooter with holster and 42 fittings]
$8.00

Saal Oil Shooter, Complete set for Ford Cars and Trucks
$5.00

Anywhere in the United States

There is no Substitute for Oil as a Lubricant

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HAYES

DEMOUNTABLE AT THE RIM

Resources



THE resources of the largest organization in the world producing wheels exclusively are back of Hayes Demountable at the Rim Wire Wheels. This means not only ample financial resources, but every facility for designing and producing wheels,—a well grounded engineering staff of wheel experts, the largest body of skilled workmen, the most efficient automatic machinery for immense quantity production. All these factors are turned to one idea—to make the very best wheels possible in design, in materials and in workmanship, at the lowest price consistent with quality. All are placed unreservedly at the disposal of the motor car manufacturer, with whom we are always pleased to work in planning our product to efficiently meet his requirement.

(51)

WIRE WHEELS

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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DURA

WINDOW REGULATORS



THE difference between a closed and open car is largely a matter of ventilation. Dura Regulators operate more easily, more quietly, and are more durable.

The DURA COMPANY *Toledo, Ohio.*

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DURA

WINDOW REGULATORS

Prepare Now for the Increased Business

EVERY car builder has been struck by the tremendous *increase* in public demand for *closed* models.

Every manufacturer wants this desirable business. But the moment he decides to increase his percentage of closed models, he is called upon to solve several production problems.

One of them is the installation of window regulators.

For, in the last analysis, the success of a closed model depends largely upon the ease and efficiency of its ventilation—that is, the constant lowering and raising of the windows by the owner.

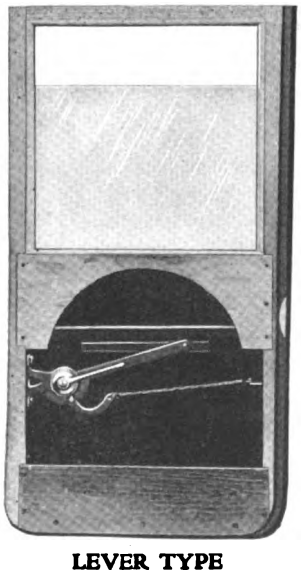
We make three distinct types, which offer a selection available for every possible window requirement. So successful are these types that the *majority* of closed cars are equipped with Dura Window Regulators.

Dura has been the leader in initiating to pioneering, experimenting and originating improvements and refinements. This work goes on continually. The results, such as our creating the solid groove felt channels, have been a great source of satisfaction to our clients.

From your body drafts, through the manufacture and shipment, to the installation in your shops, we exercise most careful and expert service.

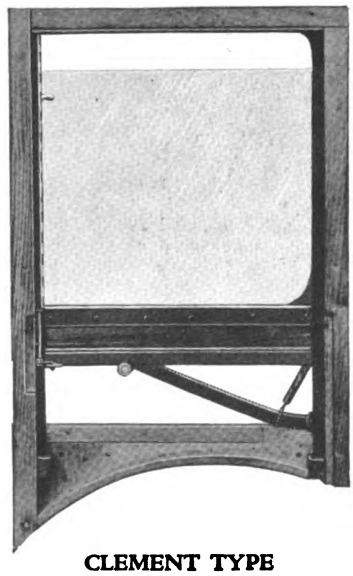
We can show you how to install window regulators more quickly and more economically, and have a more satisfactory installation for both yourself and the car owner.

Let us consult with you concerning *your* needs.



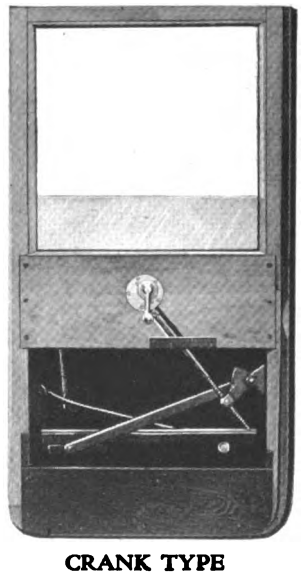
LEVER TYPE

This quick-acting Lever Type Dura raises or lowers the window instantly—with less than half a turn.



CLEMENT TYPE

This type most satisfactorily meets every need for rear windows or other windows where the operating handle must be out of the way.



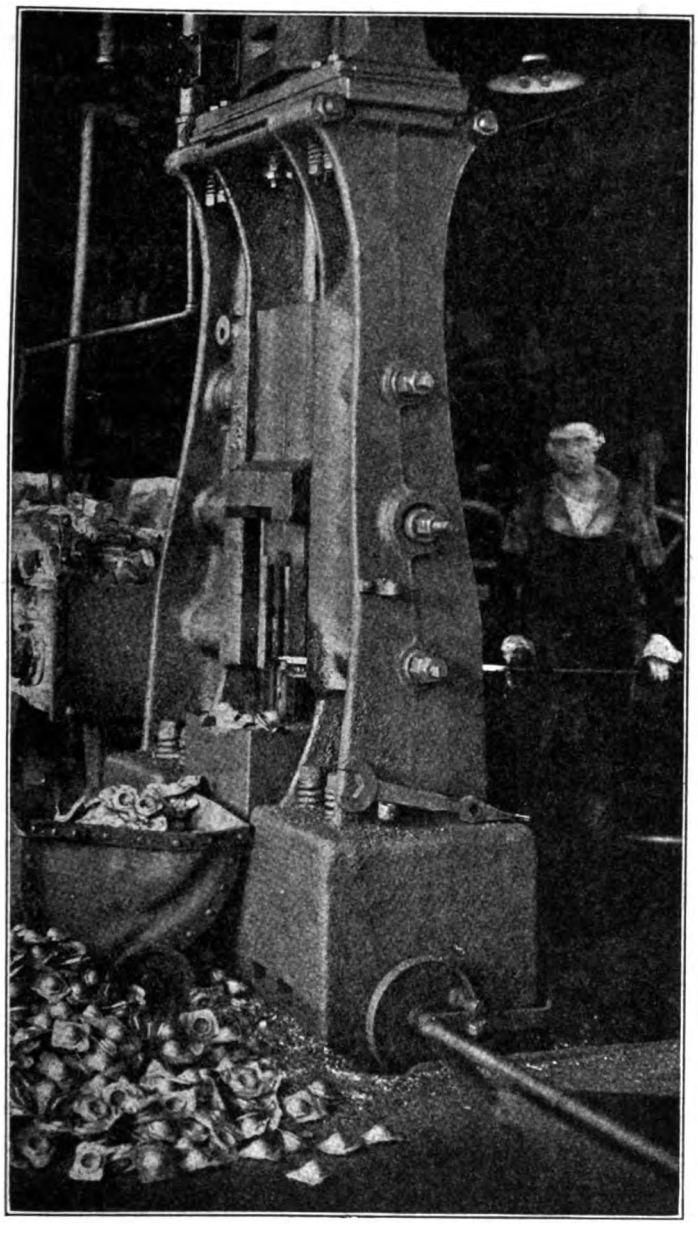
CRANK TYPE

A crank-operating regulator with less than thirty-five parts with the simplest locking means known.

The DURA COMPANY Toledo, Ohio.

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The Ideal Combination



VANADIUM STEEL PISTON RODS and FORGING DIES

The piston rod in the hammer shown in the illustration has given over ten times the length of service of rods of other alloy and carbon steels.

The dies have forged over twice as many caps as the best dies of other steels—and are still good for many thousands more.

These records are typical of Vanadium Steel.

Let our Metallurgical Department help you solve your steel problems.

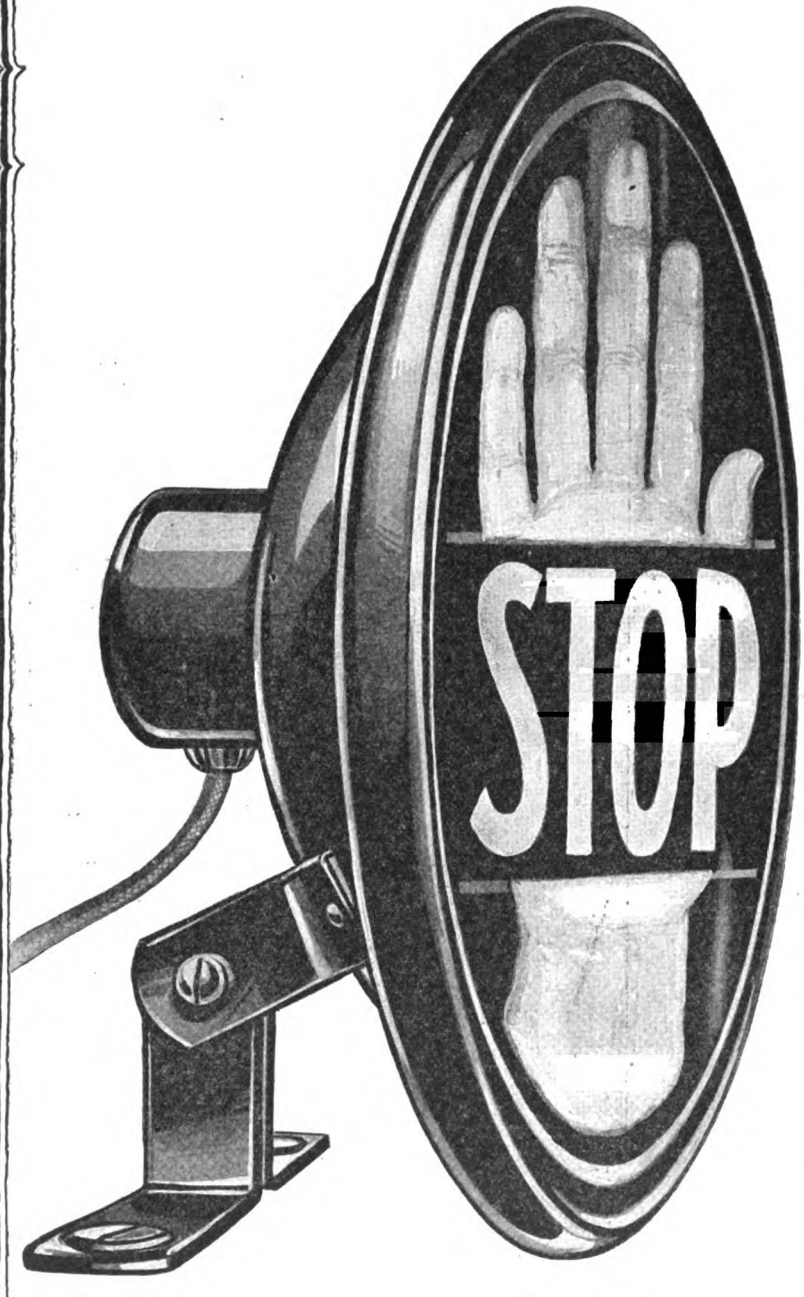
VANADIUM CORPORATION of AMERICA

120 Broadway NEW YORK CITY

Detroit, Michigan, 849 Book Bldg.

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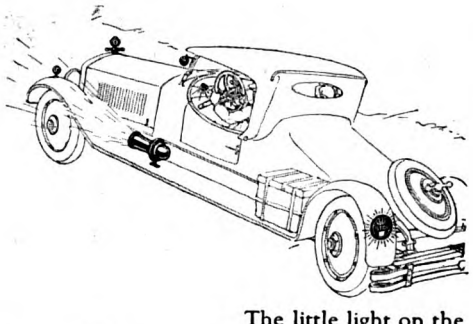
The Hand that Stops 'Em



DIFFERENT from other stop lights—the commanding hand, flashing out in brilliant red when the brake is depressed, can't possibly be overlooked. And it's big enough to be seen before you're on top of it. Model 184-B is furnished with a little instrument board signal light which flashes on and off with the stop light. Price, complete, $7.00.

Model 184-A, without the small signal light, is $5.00.

Stewart-Warner Speedometer Corporation
CHICAGO, U. S. A.



The little light on the cowl tells you that the Stop Light is working.

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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THREE main reasons why G & J Tires have been such a profitable line for dealers during the past quarter century.

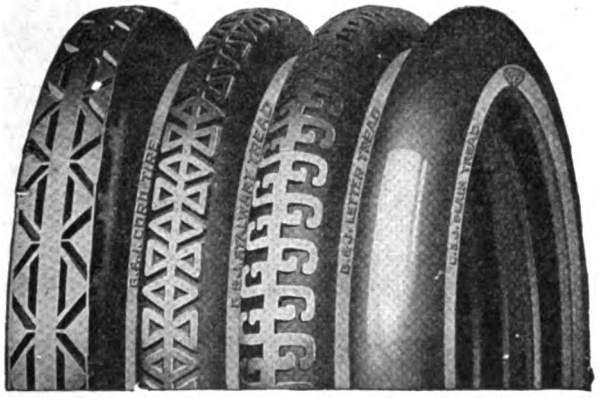
In the making—a determination to produce a tire that never varies from quality standards.

In the selling—the certainty that each G & J Tire sold adds to the permanent volume of satisfied business.

In the using—a long history of distinguished service.

G & J TIRE COMPANY

1790 Broadway **New York**



Tires and Tubes

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Regarding Service on Bearings

IN order to continue for the millions of car and truck owners, a broad and comprehensive service on Timken, Hyatt and New Departure bearings, the present plan whereby the Bearings Service Company has acted for six years as the service department of the manufacturers of Timken, Hyatt and New Departure bearings has been supplanted by a new arrangement.

A PART of this arrangement will be consumated beginning October 1, 1922 and the plan in full will be completed by January 1, 1923.

THE Bearings Service Company throughout its organization will continue to service Timken bearings just as it always has in the past until January 1, 1923.

BEGINNING October 1, 1922, United Motors Service Incorporated will begin to act for the Hyatt Roller Bearing Company and for the New Departure Manufacturing Company as the service department of these bearing manufacturers in a similar manner to the way in which the Bearings Service Company has acted in the past.

DURING the months of October, November and December, 1922, the Bearings Service Company and after that date The Timken Roller Bearing Service and Sales Company will act in the servicing of Hyatt and New Departure bearings as authorized service distributors for these products in the following cities where it has direct branches but where United Motors Service does not have branches.

Pittsburgh	*117 S. Highland Ave.*	*Baltimore*	*1041 Cathedral*
Portland	*24 N. Broadway*	*Newark*	*458 Broad St.*
Brooklyn	*1408 Bedford Ave.*	*Oklahoma City*	*1116 N. Broadway.*
Fresno	*907 Van Ness Ave.*	*Richmond*	*1309 W. Broad St.*
Milwaukee	*145 Oneida St.*	*Birmingham*	*613 S. 20th St.*
Salt Lake City	*64 W. 4th St. S.*	*Winnipeg*	*327 St. Mary's Ave.*

ON and after January 1, 1923, a new concern to be known as The Timken Roller Bearings Service and Sales Company will service Timken Tapered Bearings and maintain direct branches in the same 32 cities and at the same addresses at which the Bearings Service Company's direct branches are now located.

Bearings Service Company

THIRTY-TWO BRANCHES

Atlanta	Buffalo	Detroit	Los Angeles	New Orleans	Pittsburgh	Seattle
Baltimore	Chicago	Fresno	Milwaukee	New York	Portland, Ore.	St. Louis
Birmingham	Cleveland	Indianapolis	Minneapolis	Oklahoma City	Richmond	Toronto
Boston	Dallas	Kansas City	Newark	Omaha	Salt Lake City	Winnipeg
Brooklyn	Denver			Philadelphia	San Francisco	

Approximately 1000 Distribributors in Other Cities

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A New Battery or An Old One?

Every car owner who prefers a *new battery* to an *old one* is on the side of bone-dry shipment and stocking of batteries, because the battery is kept brand new until prepared for active use.

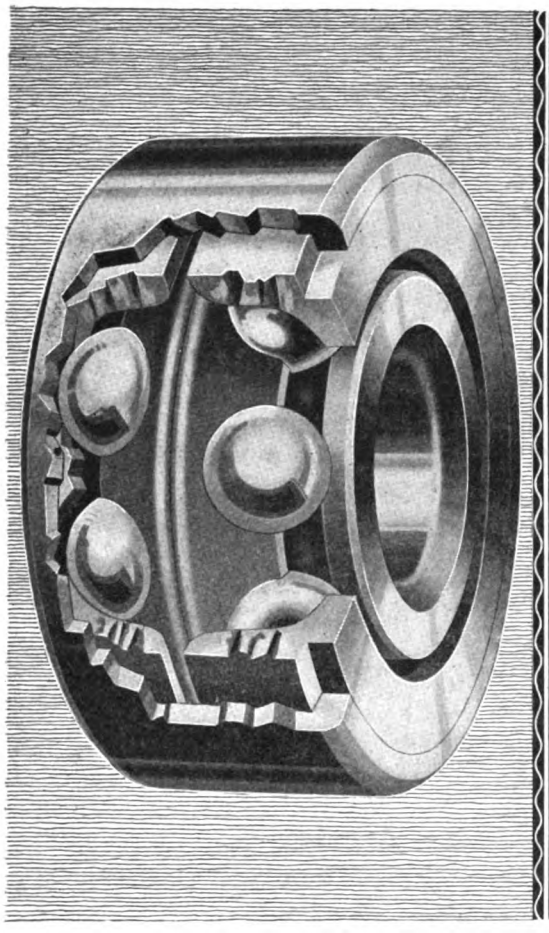
Willard Threaded Rubber Insulation is the battery feature that makes true bone-dry battery shipment possible.

WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio
Made in Canada by the Willard Storage Battery Co. of Canada, Limited, Toronto, Ontario

Willard THREADED RUBBER BATTERY

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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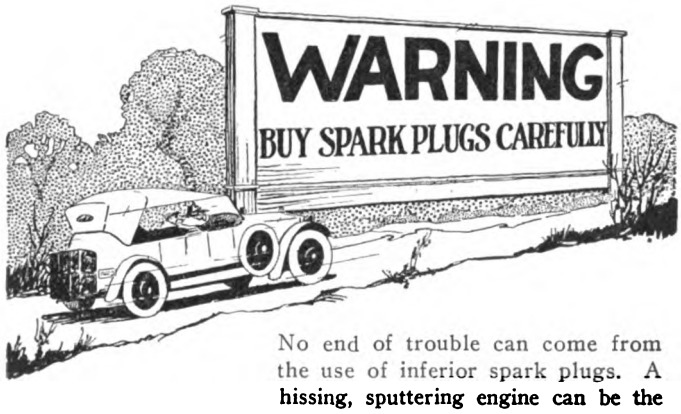
New Departure Ball Bearings

THE Double Row type carries loads from all and any direction,

with least friction
with greatest strength
with negligible wear

The ideal bearing for economizing space, mounting expense and up-keep in motor trucks.

THE NEW DEPARTURE MFG. COMPANY
Detroit BRISTOL, CONNECTICUT Chicago



No end of trouble can come from the use of inferior spark plugs. A hissing, sputtering engine can be the result of a careless selection. But if you choose the spark plug with the "775" mark on the insulator, you can be sure of 100% spark plug service.

"775"

"775" insulator is especially made to resist heat and to live long. That's the reason most good spark plug manufacturers use it. It identifies their spark plugs as the best on the market.

FRENCHTOWN PORCELAIN CO.
Trenton New Jersey

"Established 1910— Busy ever since"

STANDS THE TEST

The Bearings Company of America

Lancaster Penna.



"STAR" Ball Retainers for Thrust, Magneto and Cup and Cone Bearings.
Thrust Ball Bearings.
Angular Contact Radial Bearings.
Angular Contact Thrust Bearings.

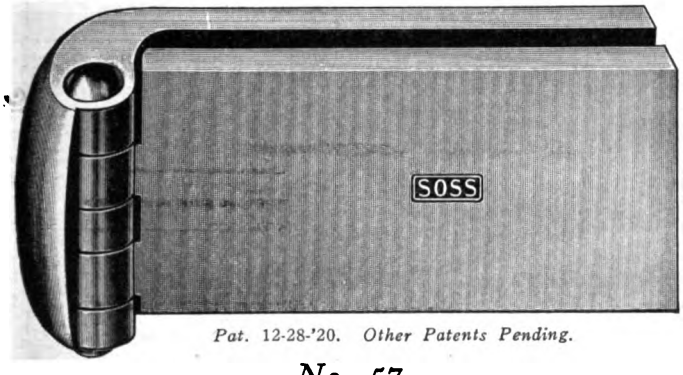
YOUR INQUIRIES ARE SOLICITED

Western Sales Office,
1012 Ford Bldg. Detroit, Mich.

L

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PRESSED STEEL



Pat. 12-28-'20. Other Patents Pending.

No. 57

Interchangeable Parts
Greater Strength
Reduced Cost

The use of pressed steel and new methods of quantity production have enabled us to offer this improved hinge at a substantial saving in cost. Semi-straight, covered joint type, 1¾" wide, any length to 6".

Write for sample and prices.

Anti-Rattling Devices
Door Bumpers
Door Handles
Door Locks
Concealed Hinges
Die Cast Hinges
Hood Hinges
Malleable Hinges
Rear Deck Hinges
Automobile Fittings
"Grip-Tite" Curtain Lights
Metal Stampings

SOSS MANUFACTURING CO., INC.
GRAND AVENUE & BERGEN STREET
BROOKLYN, N.Y.

SOSS



Metal parts washing machines show best results with Oakite

A MOTOR plant ran a test to compare Oakite with 3 other materials. Tests were made in both Niagara and Crescent Washers. In the crescent washer it took 6 lbs. of the best of the other materials to get results on a par with those produced by 1 lb. of Oakite.

In the Niagara washer cleaning cylinder hoods and blocks—they had been using 50 lbs. of Oakite to charge the machine. They put in 250 lbs. of another material, but it would not remove the chips and grindings which are on cylinders from boring operation. They dumped this out and tried 200 lbs. of another material, but this did no better. It cleaned fairly well, but it would not remove chips. Oakite does this mighty well.

Tests in auto plant metal parts washing machines show Oakite cleans best.

1 lb. instead of 6 lbs. means an important saving, not only in the cost of cleaning material itself, but also in freight, handling and storage charges.

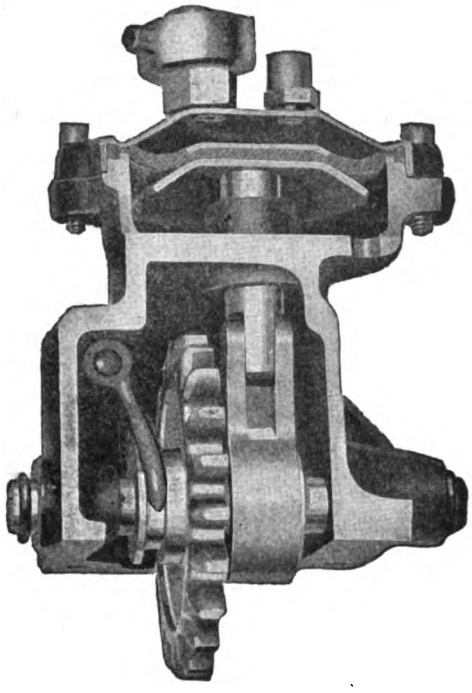
Whether you use washing machines or cleaning tanks, we can help you to get faster, better results, at a minimum cost. It incurs no obligation to have a friendly talk with an Oakite Service Man. Out of his broad experience and ability you are sure to get some useful ideas that are worth while.

Drop us a postal card—it is a little thing to do but a big step in the right direction.

OAKITE
MANUFACTURED BY
OAKLEY CHEMICAL CO.
32 THAMES STREET · NEW YORK

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DETROIT DIAPHRAGM TIRE PUMP



DETROIT CARRIER & MFG. CO.
DETROIT, U. S. A.



COUNTER-BALANCED CRANK SHAFTS
HEAVY DIE FORGINGS
The Park Drop Forge Co.
Cleveland, Ohio

AXLES
SPINDLES
RADIUS RODS
LEVERS

FORTY YEARS EXPERIENCE
Anything that can be Drop Forged up to 300 lbs.
Any Analysis of Steel
Drop Forgings are made from Structural Material Uniform in Quality, Chemical and Physical Properties.

CRANKSHAFTS
CAMSHAFTS
CONNECTING RODS
GEAR BLANKS

DROP FORGINGS
UNION SWITCH & SIGNAL CO.
PITTSBURGH DISTRICT SWISSVALE, PA.

Union Drawn Steel Co
Beaver Falls, Pa.
Manufacturers of
BRIGHT FINISHED STEEL SHAFTING, SCREW STEEL CHROME NICKEL and CHROME VANADIUM STEELS in FLATS, SQUARES, ROUNDS HEXAGONS and SHAPES; also ELEVATOR GUIDES
BRANCH OFFICES: Boston, Buffalo and Cleveland
BRANCH OFFICES AND WAREHOUSES: Chicago, Cincinnati, Detroit, New York and Philadelphia

SHARON
PRESSED STEEL
MOTOR CAR and TRUCK FRAMES AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.
SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
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TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS
NATIONAL
TWIST DRILL & TOOL CO.
DETROIT, U.S.A.



SHEET METAL STAMPINGS
From Steel, Brass, Bronze, Copper and Aluminum.
We also specialize in Case Hardening and Tool Tempering.
THE CROSBY COMPANY
Buffalo, N. Y.
New York Office: 30 Church St.
Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building

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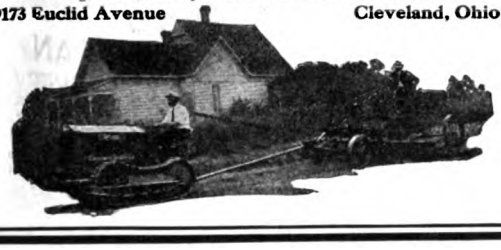
Opportunity in The Cletrac Line

THE complete Cletrac line offers the progressive dealer an unusual selling opportunity because of its *unequalled range of work-ability* and its *double* market. The new Model F cares for all jobs on the farm — even cultivates row crops clear through the growing season. And there is a great and steadily growing demand for the Model W in industry as well as on larger farms. "The Word of Men Who Know" is a folder describing the year-round activity of Cletrac selling. Write for it.

THE CLEVELAND TRACTOR CO.

Largest Producers of Crawler Tractors in the World

19173 Euclid Avenue **Cleveland, Ohio**



Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

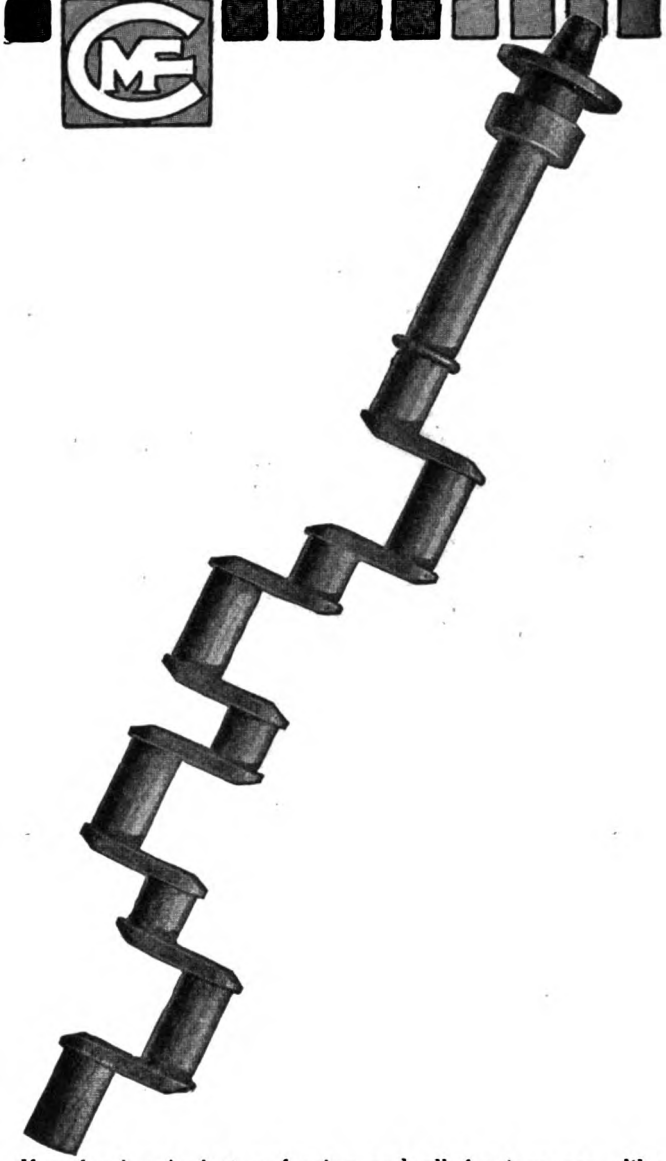
Hoping for an opportunity to serve you.

EDMUNDS & JONES CORP.

Buchanan & Lawton Avenues

DETROIT, MICHIGAN

CHAMPION



If a forging is just a forging and all forgings are alike why do your factory cost recorders vary for the various stages of production thru which a forging must pass? Time study, an exact operating schedule and Champion Drop Forgings not only reduce cost but control it. There is no time waste, no labor waste, no material waste, no money waste because Champion Drop Forgings work thru the processes of production with a minimum of supervision, machine adjustment and tool breakage. In their unvarying accuracy to blue print specifications, uniformity of metal and perfect alignment is the true economy that a price buyer loses. Add to this, their incomparable repute among makers of exceptional motor cars and trucks and you may be influenced to submit to us your specifications.

The Champion Machine & Forging Co.

3699 East 78th St. **Cleveland, Ohio**

New York Office—30 Church St.
Philadelphia Office—Bourse Bldg.
Detroit Office—705 Ford Bldg.

DROP FORGINGS

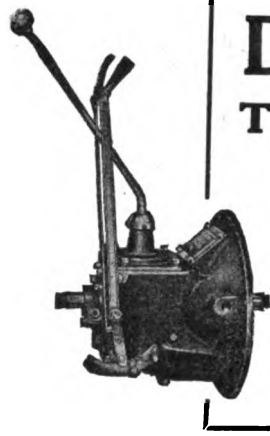
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Most of the best cars of all classes use

Morse Silent Chains

Refer your cam and accessory drive problems to Morse Engineers

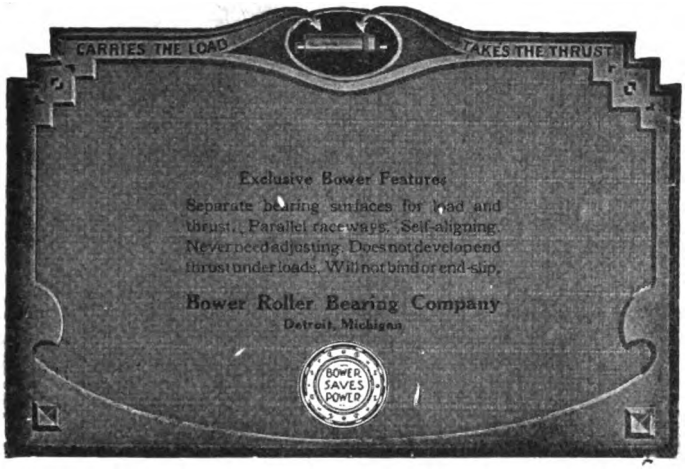
MORSE CHAIN COMPANY
ITHACA, N. Y.
Engineering & Sales Office
COR. 8TH & ABBOTT STS. DETROIT, MICH.



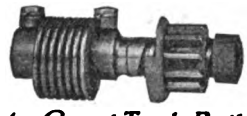
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For trucks up to one-ton capacity, and Passenger Cars.

DURSTON GEAR CORPORATION
13 Maltbie St. Syracuse, N. Y.



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ECLIPSE
for ELECTRIC STARTERS DRIVE AUTOMATIC ENGAGING & DISENGAGING



194 Motor Car and Truck Builders Use It
ECLIPSE MACHINE CO. ELMIRA N. Y.



PERFECT REGULATOR

Standard Equipment for America's Leading Automobiles

PERFECT WINDOW REGULATOR CO.
20 Exchange Place New York City



The Saving Pays for It

The amount of oil saved by the installation of a Wayne Oil Storage Tank will pay for the tank in the first year. After that, the saving hits the balance sheet as an item of lowered costs. Bulletin 35-AT gives the whole story. Write for it.

WAYNE TANK AND PUMP CO.
783 Canal Street Fort Wayne, Ind.
An International Organization With Sales and Service Offices Everywhere

Wayne

51 6/10 MILES ON A GALLON OF GAS

It is the official world's record breaking test with Ford Touring car. The 1922 Stromberg Carburetor and Hot Spot did it—made this marvelous mileage possible.

Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

Live dealers are requested to write for facts pertaining to territory.

Stromberg Motor Devices Co.
64 E. Twenty-fifth St., Dept. 19 Chicago

WARNER GEAR COMPANY
MUNCIE, INDIANA

WARNER GEAR CO

CLUTCHES, TRANSMISSIONS, CONTROLS, DIFFERENTIALS

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The Vacuum Cup!

Because of this ingenious device the Silencer fits so snug to the hood and holds so tight that all hood rattles are eliminated —that's one of the features that has sold in the past 5 months 140,000

Jorgensen

Silencers

DEALERS—Nice profit being made from this wonderful little accessory—write us, right now, for our proposition.

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Hampton Road, Erie, Pa.

Grant Six

—an excellent car

OVER 50,000 MILES

now reported on "Whitney" High Efficiency Front End Motor Chain Drives and still in good condition.

THE WHITNEY MFG. CO.
Hartford Conn.

Six body types, from $1,395 to $2,165

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Dealers — Write for "Courier" literature

A GOOD HUSKY SIX
COURIER

"The Most Completely and Conveniently Lubricated Car in America"

THE COURIER MOTORS CO., Sandusky, Ohio

BROWN-LIPE-GEAR
TRANSMISSIONS
BROWN-LIPE-CHAPIN
DIFFERENTIALS
Both at Syracuse, N.Y.

The Coachbilt
ANDERSON
LIGHT ALUMINUM SIX

Touring Car
$1195
Coach
$1450
F.O.B. Factory



Is there an Anderson dealer in your town?—if not, write us.

Anderson Motor Co., Rock Hill, S. C.

"Air-Bag Cured"

Firestone Cord Tires are cured on air-bags. Internal expansion during this important operation aligns and straightens each separate cord, insuring equal distribution of strain under load.

Most Miles per Dollar

Firestone
GUM-DIPPED CORDS

GABRIEL
SNUBBERS

Save springs, gasoline, tires, depreciation — and give a *better riding* car.

GABRIEL MANUFACTURING CO.
1421 East 40th Street CLEVELAND, OHIO

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PRESSED STEEL FRAMES
The largest and best equipped
frame plant in the world
A·O·SMITH CORPORATION
·MILWAUKEE·

AUTOMOTIVE CABLE
The vital nerve system of a motor car. Nowhere is recognized merit of greater importance.
The Packard Electric Company
WARREN, OHIO

Highest Quality—Correct Finish
AUTOMOBILE
Body, Hood and Fender
Sheets
This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

DOEHLER DIE-CASTINGS
A product whose uniformly high quality contributes largely to the high quality of the better class of motor cars and trucks. Send us your specifications.
DOEHLER DIE-CASTING CO.
BROOKLYN, N.Y.
CHICAGO, ILL. TOLEDO, OHIO.

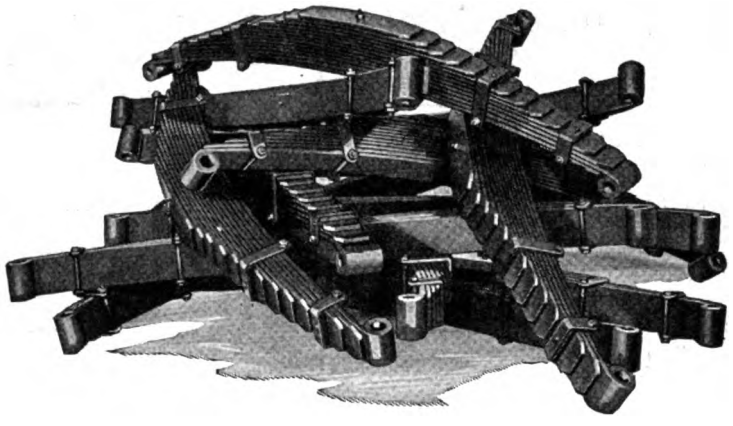
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on what is going on in the trade by reading
Automobile Topics
$3.00 PER YEAR
1790 Broadway New York

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The Crankshaft Makers
Worcester Division
WORCESTER, MASS.
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HARVEY, ILL.

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Standard of the World



The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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$340,000 Worth of Carelessness

It is a striking commentary upon the carelessness of investors in looking after their own interests, that holders of $7,690,000 Northern Pacific —Great Northern 6-½s bonds neglected to exercise either of two valuable conversion privileges and permitted their bonds to be redeemed at 103½.

This carelessness cost the holders in excess of $340,000.

Advising clients when their bonds have been called for payment and informing them of their rights and privileges in this connection, is only one detail of our service.

Our business is to help business men invest conservatively.

Particulars on request.

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc..... 863
American Sheet & Tin Plate Co. 904
Anderson Motor Co. 903

B

Bearings Company of America 898
Bearings Service Co. 896
Bethlehem Steel Co., Inside Back Cover
Bowen Products Corp. ... 882
Bower Roller Bearing Co. 902
Briggs & Stratton Co. ... 883
Brown-Lipe Chapin Co. .. 903
Brown-Lipe Gear Co. ... 903
Budd Wheel Co. 865
Buick Motor Co. 821
Bunting Brass & Bronze Co. 888

C

Cadillac Motor Car Co. .. 840
Central Steel Co. 878
Chalmers Motor Car Co. .. 816
Champion Machine & Forging Co. 901
Cleveland Tractor Co. 901
Columbia Motors Co. 876
Continental Motors Corp., Inside Front Cover
Courier Motors Co. 903
Crosby Co. 900

D

Dayton Engineering Laboratories Co. 884
Detroit Carrier & Manufacturing Co. 900
Detroit Pressed Steel Co. 810
Dodge Brothers 822
Doehler Die-Casting Co. .. 904
Dura Co. 892a
Durston Gear Corp. 902

E

Earl Motors, Inc. 859
Eclipse Machine Co. 902
Edmunds & Jones Corp. .. 901
Electric Auto-Lite Co., The, 818, 819

F

Federal Bearing & Bushing Corp. 809
Ferry Cap & Set Screw Co. 861
Firestone Tire & Rubber Co. 903
Fisk Tire Co., Inc. 817
Flint Varnish & Color Works 815
Forsyth Brothers Co. 814
Frenchtown Porcelain Co. . 898

G

G & J Tire Co. 895
Gabriel Manufacturing Co. 903
Goodrich Rubber Co., B. F. 823
Grant Motor Car Corp. .. 903

H

Hayes Wheel Co. 892
Haynes Automobile Co., Back Cover
Hess-Bright Manufacturing Co. 908

J

Johns-Manville, Inc. 876a
Jorgensen Hood Silencer Co. 903

Digitized by Google

INDEX TO ADVERTISEMENTS

L

Laminated Shim Co., Inc. . 890

M

Mather Spring Co. 905

Morse Chain Co. 902

Motor Wheel Corp. 887

N

Nash Motors Co. 824

National Twist Drill & Tool Co. 900

New Departure Manufacturing Co. 898

Norma Company of America 811

O

Oakley Chemical Co. 899

Olds Motor Works 866

P

Packard Electric Co. 904

Park Drop Forge Co. 900

Perfect Window Regulator Co. 902

Perfection Heater & Mfg. Co. 879

Plunkett & Co., Paul 906

Prest-O-Lite Co., Inc. 889

R

Republic Rubber Co. 886

Rickenbacker Motor Co. .. 877

S

S K F Industries, Inc. ... 908

Saal Co., H. G. 891

Schrader's Sons, Inc., A. 874, 875

Sharon Pressed Steel Co... 900

Smith Corp., A. O. 904

Soss Manufacturing Co., Inc. 899

Stephens Motor Car Co., Inc. 885

Stevens-Duryea, Inc. 881

Stewart-Warner Speedometer Corp. 894

Stromberg Motor Devices Co. 902

Studebaker Corp. 813

T

Ternstedt Manufacturing Co. .....Front Cover

Thermoid Rubber Co. 880

U

Union Drawn Steel Co. .. 900

Union Switch & Signal Co. 900

U. S. Ball Bearing Manufacturing Co. 812

United States Rubber Co. 857

V

Vanadium Corporation of America 893

W

Warner Gear Co. 902

Wayne Tank & Pump Co. 902

Whitney Manufacturing Co. 903

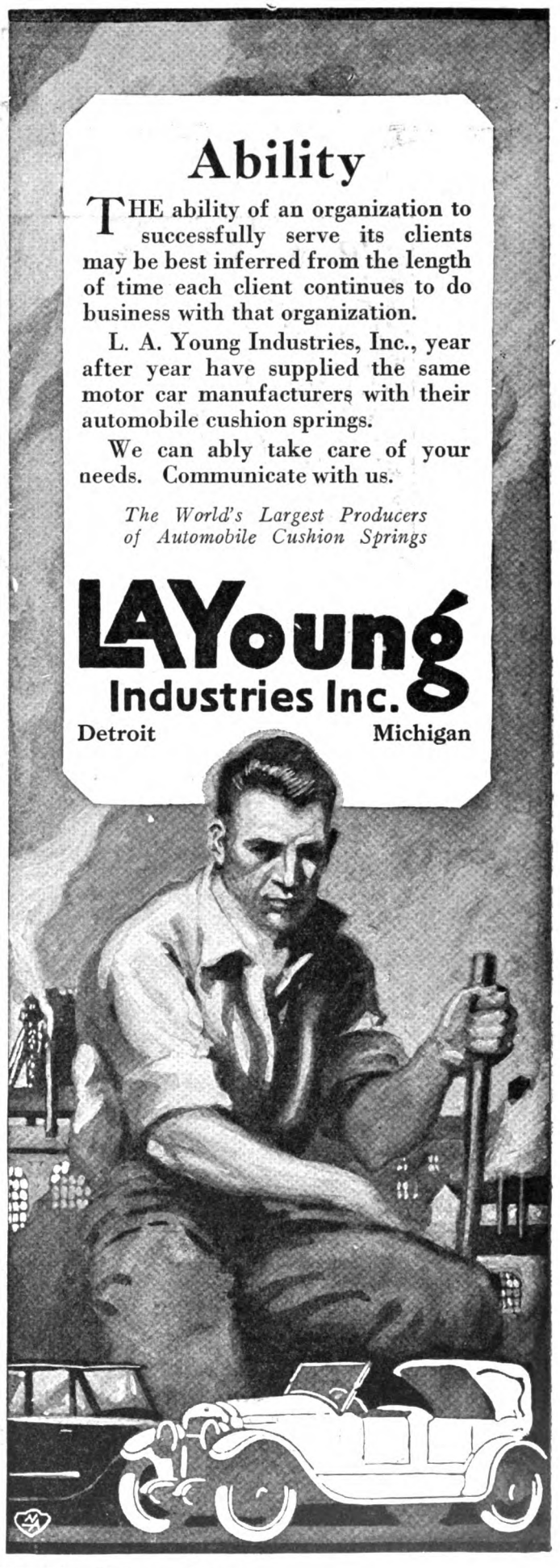
Willard Storage Battery Co. 897

Wyman-Gordon 904

Y

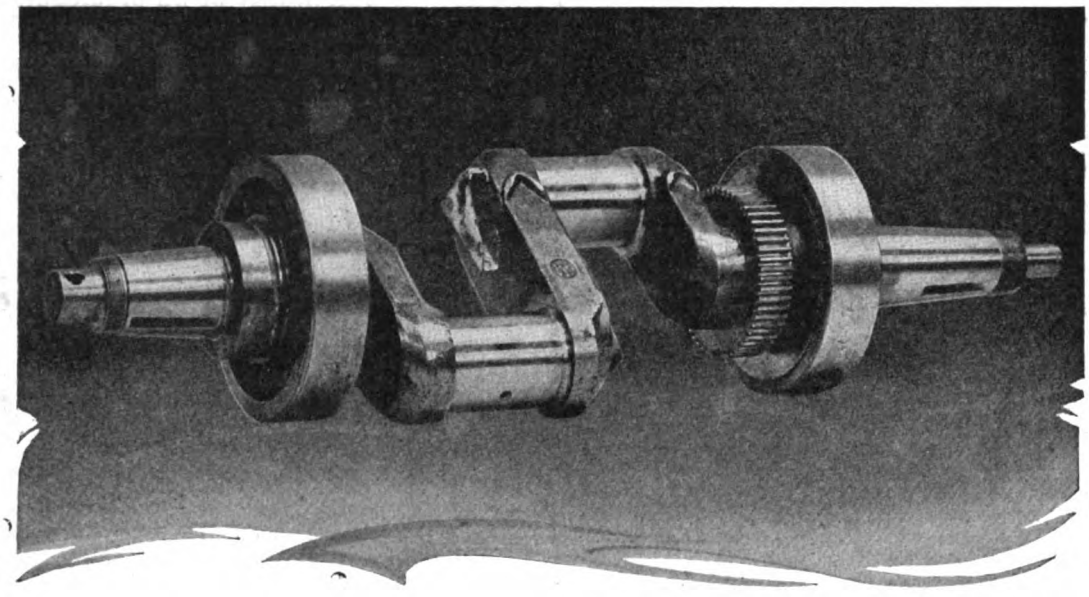
Yale Storage Battery Co. . 820

Young Industries, Inc., L. A. 907



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SKF



Ball Bearings on Crankshafts Eliminate
The Heavy Cost of Bearing Adjustment

SO SUCCESSFUL has been the application of deep-groove ball bearings on crankshafts that they are not only used extensively in automobile engines but on the crankshafts of Diesel engines up to 500 H. P. as well.

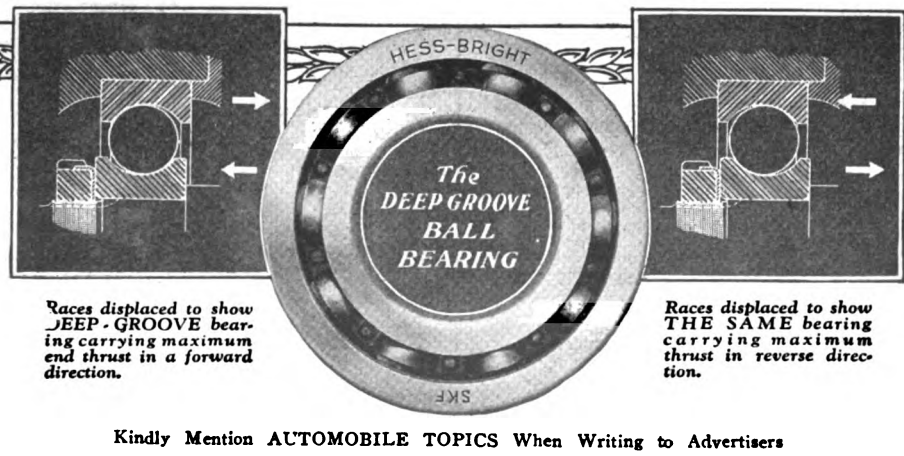
Experience has shown that ball bearings properly applied to crankshafts will operate with practically no wear over a period that should be equivalent to several years of truck operation. Even if after this period it should be considered necessary to install new bearings, this replacement can be done readily without necessitating the regrinding of crankshafts, scraping-in of bearings and careful adjustment as is necessary with plain bearings. This means that the car owner is saved the cost of the heavy dismantling expense that is necessary when making bearing adjustments or renewals.

Insure the reputation of your car by equipping crankshafts with deep-groove ball bearings as made by The Hess-Bright Manufacturing Company.

THE HESS-BRIGHT MANUFACTURING COMPANY

Supervised by SKF INDUSTRIES, INC., 165 Broadway, New York City

817



BALL BEARINGS
The Highest Expression of the Bearing Principle

Races displaced to show DEEP-GROOVE bearing carrying maximum end thrust in a forward direction.

Races displaced to show THE SAME bearing carrying maximum thrust in reverse direction.

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Specify Bethlehem Wheels

—*for better service, greater economy!*

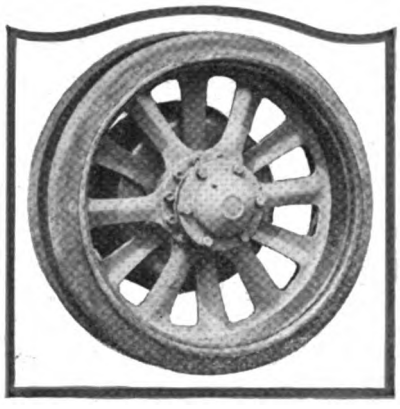
WHEN you buy a truck, make certain that it comes to you equipped with Bethlehem Rolled Steel Truck Wheels.

Bethlehem Wheels combine exceptional serviceability with exceptional economy. They are strong enough to carry your truck through the hardest service, and are guaranteed for the life of the truck. They are never injured by the pressing on of tires —yet, with their tremendous strength, Bethlehem Wheels are light enough to reduce your gasoline costs and repair bills.

Best of all, despite their greater servicability and economy, Bethlehem Wheels cost no more!

Quantity production and unusual manufacturing facilities underlie the low cost at which Bethlehem Wheels are furnished to truck builders.

When next you purchase a truck, specify Bethlehem Wheels, and get the benefit of their better service and economy!



The Bethlehem wheel is simple in construction and strong and durable in service.

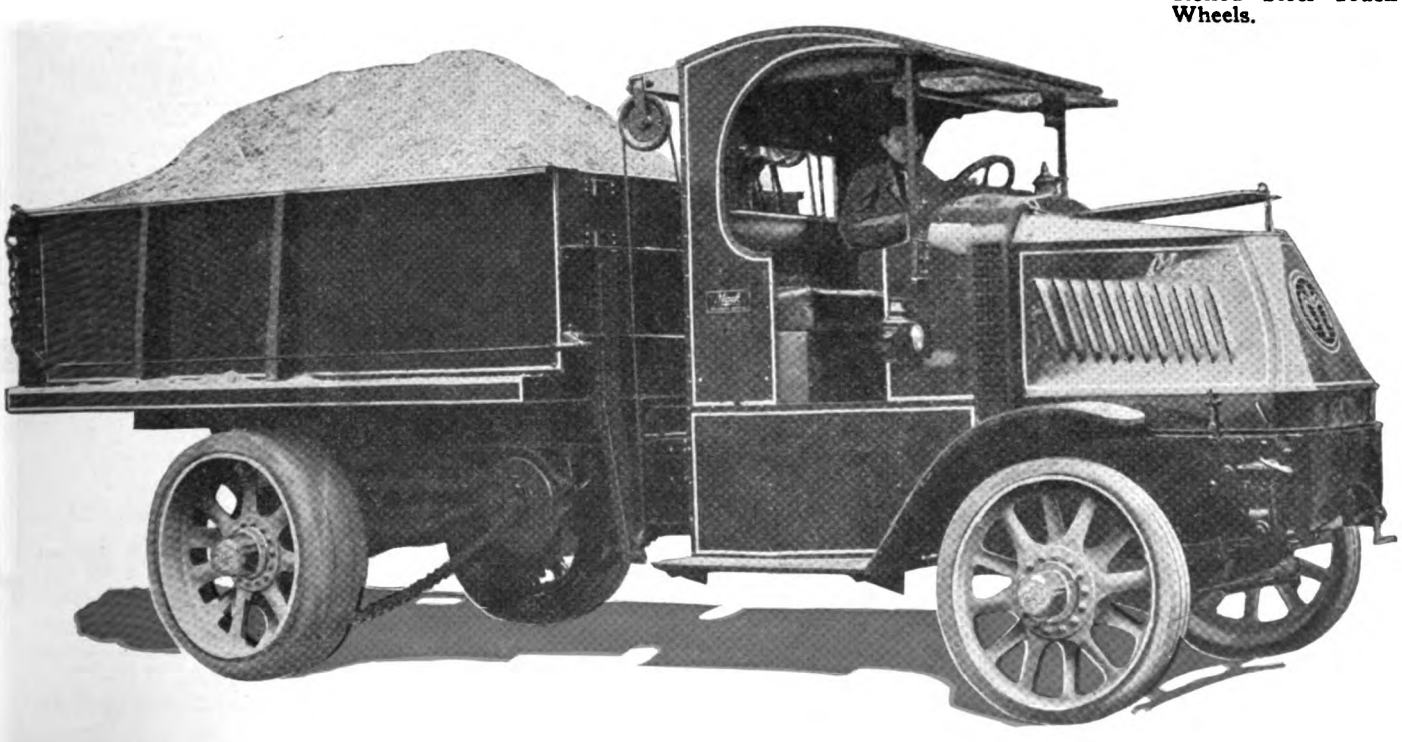
BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

Sales Offices in the following cities:

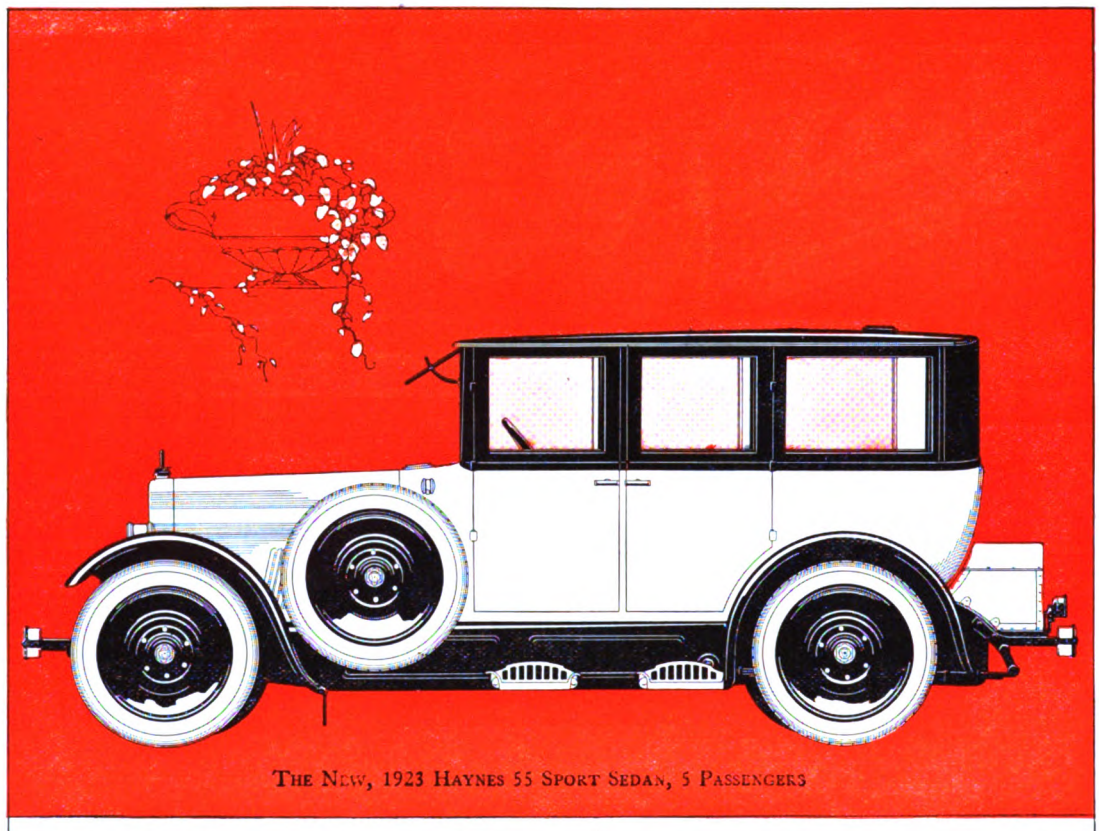
New York Philadelphia Washington Pittsburgh Detroit St. Louis Boston
Baltimore Atlanta Cleveland Buffalo Chicago San Francisco

BETHLEHEM
ROLLED STEEL TRUCK WHEELS

Mack Trucks can be obtained equipped with Bethlehem Rolled Steel Truck Wheels.



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THE NEW, 1923 HAYNES 55 SPORT SEDAN, 5 PASSENGERS

ANNOUNCING THE 1923 HAYNES FOUR SPORT MODELS

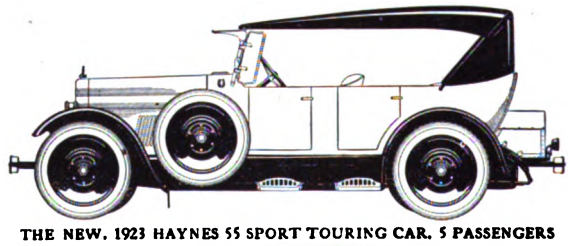
THE vogue of the sport-model car is established. Haynes has been responding to it, and now meets it completely with four new models of this type of car for 1923. They are cars for those who love the thoroughbred—who want strength with beauty and power with comfort.

THERE ARE NO EXTRAS TO BUY. Each of these cars is fully equipped. The newest accessories are standard equipment. Front and rear bumpers, a spacious trunk, six disc wheels with six 32 x 4½ cord tires, sun and vision visor, polished protection bars at the rear of the body, handsome individual steps—everything that you naturally expect as an essential feature of a sport car. The open models are equipped with new design windshield wings and are trimmed in beautiful Spanish leather. All of the new 1923 Haynes 55 sport models have a 121-inch wheel base and are finished in a pleasing shade of deep maroon.

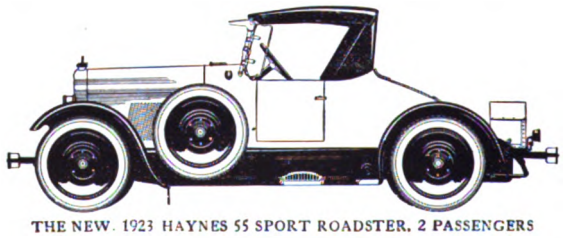
Graceful in design, they have the outstanding attractiveness of real individuality. Beneath their attractiveness is the famous Haynes-built six cylinder motor and the sturdy mechanical perfection which characterizes the Haynes. The demand will be great without a doubt. We suggest that you get in touch with us immediately regarding attractive territories. Write, wire or telephone. Communications will be held in confidence. Address Dept. 1051.

THE HAYNES AUTOMOBILE COMPANY, *Kokomo, Indiana*

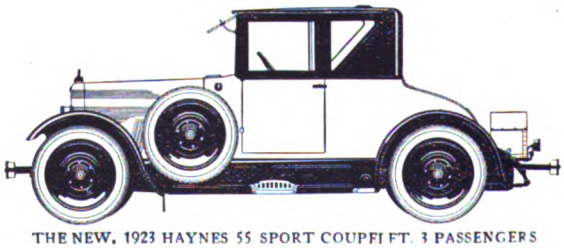
EXPORT OFFICE: 1715 Broadway, New York City, U.S.A.



THE NEW, 1923 HAYNES 55 SPORT TOURING CAR, 5 PASSENGERS



THE NEW, 1923 HAYNES 55 SPORT ROADSTER, 2 PASSENGERS



THE NEW, 1923 HAYNES 55 SPORT COUPE FT. 3 PASSENGERS

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 10 | PUBLISHED WEEKLY NEW YORK, OCTOBER 21, 1922 | FIFTEEN CENTS A COP $3.00 A YEA

Entered as second-class matter August 14, 1913, at the post office at New York, New York, under the act of March 3, 1879.



Every Wills Sainte Claire dealer has an unearned asset of great value in the engineering and metallurgical perfections of the car he sells. This value is contributed through a tremendous investment in manufacturing skill by C. H. Wills & Company. To represent the Wills Sainte Claire means that you may employ this gift of Wills Sainte Claire excellence for your own merchandising advancement. Make sure your territory is not closed.

C. H. WILLS & COMPANY
Marysville, Michigan

WILLS SAINTE CLAIRE
Motor Cars



©C. H. W. Co. (9)

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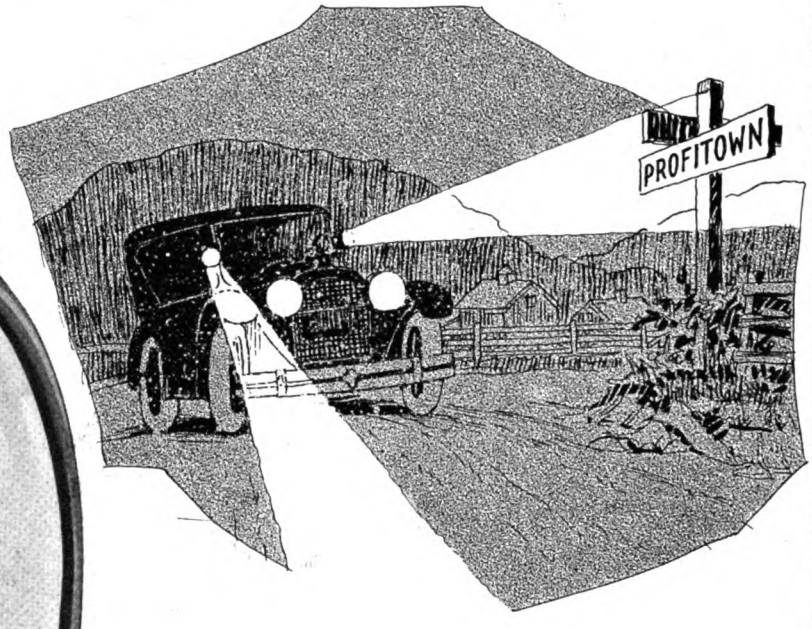
LAIDLAW
CLOSED CAR UPHOLSTERY CLOTH

THERE is to be considered the all important factor that stamps any closed car as being in the quality class in the opinion of the buying public—that factor is the use of a Laidlaw Closed Car Upholstery Cloth.

THE LAIDLAW COMPANY, INC.
16 West 60th Street
New York

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Shows the Road to Bigger Profits





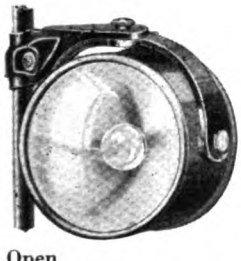
Model 176

BRIGHTEN up your sales—dispel overhead gloom. The only accessories you can make money on are those that sell. The only accessories that sell are those that are advertised, that have a reputation, that are popular.

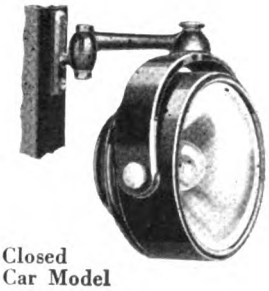
You know Stewart Searchlights. They are on cars everywhere. Build up your profits by handling them.

Model 176 . . . . . $ 7.50
Model 179 . . . . . $ 5.00
Model 182, De Luxe Miniature, $12.00

Stewart-Warner Speedometer Corporation
CHICAGO, U. S. A.



Open Car Model

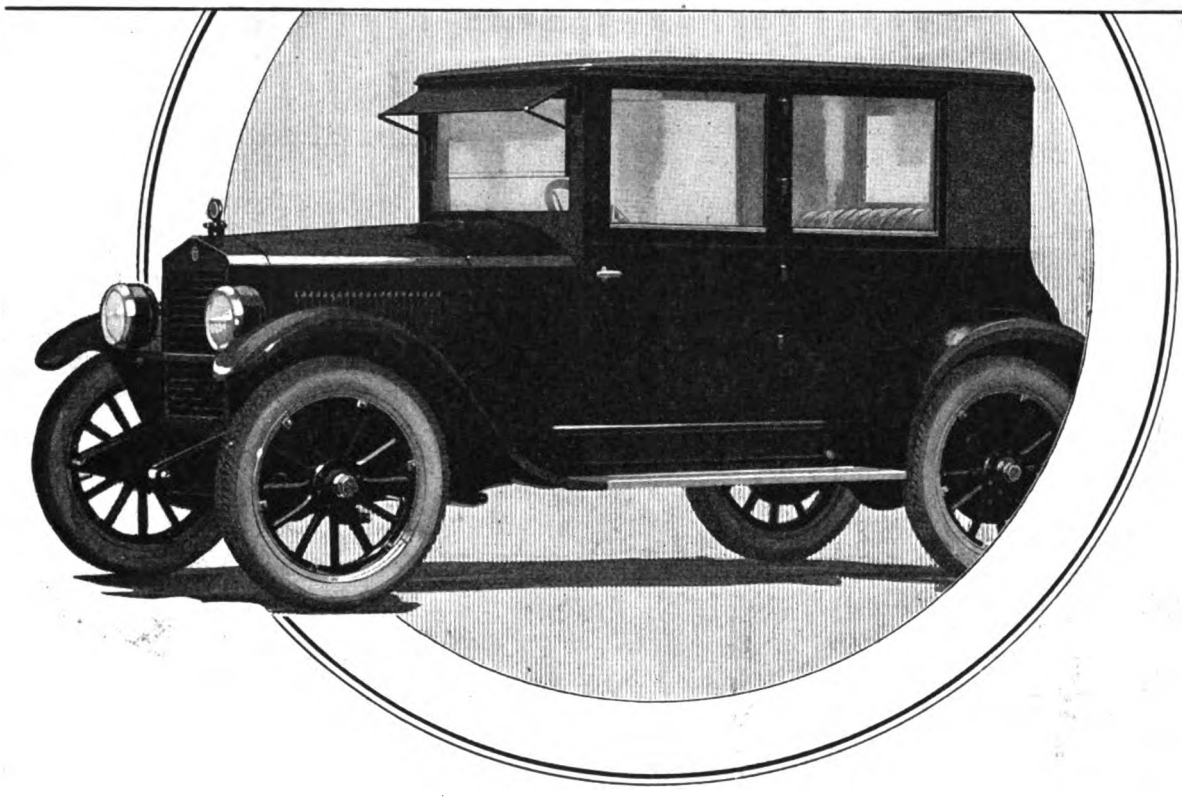


Closed Car Model

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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ESSEX COACH $1245



Sell a Car That Sells All Winter

The Essex line means active business all year round. No need to store a lot of cars through the winter. That is the season when the Coach and the Cabriolet are most wanted. They give closed car comfort at almost open car price.

Essex builds but one other model —the touring. Thus dealers need not invest in a large variety of models. No slow sellers to load up on. That is why Essex dealers are making money—and will continue to make money all winter.

Nothing like the Coach sales has ever been experienced in closed car marketing. For no other closed car gives what it does—utility and comfort for all weather the reliability and performance of a famous chassis —a price advantage of from $500 to $800 over cars of comparable qualities.

If you want to sell the Essex—either as Dealer, Sub-dealer or Resident Dealer—write today.

Touring, $1,045 **Cabriolet, $1,145** **Coach, $1,245**

Freight and Tax Extra

ESSEX MOTORS, DETROIT, MICHIGAN

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCT. 21, 1922 No. 10

TABLE OF CONTENTS

Ford Startles Trade with $50 Reduction 925
2,400,000 Output in 1922, Reeves Asserts 925
Col. Clifton Names 1922-1923 Committeemen... 926
W. M. Sweet Named Klaxon General Manager.. 926
Swayne on National Industrial Board 926
775 Buicks Born on "Red Letter Day" 927
Packard Orders to Carry Into November 927
Tremaine at Grant-Lees Head in Sweeping Shift 927
Hupp Turns 30,000 Mark 927
Rubber Prices Rise to Valuation Plan 928
New Cleveland Cars Carry Lower Prices 929
Star Intimates It Will Not Cut Price 929
Maxwell-Chalmers Paths Now Cleared 930
125 M. A. M. A. Members to Be in Big Shows .. 931
Hoffmann Bearings Acquired by Norma 931
U. S. Census Reveals State of Industry 932
Four-Wheel Brakes to Become a Factor 932
Moon "6-40" Touring Now $1,195 932
Tire Dealers Find Makers in Accord 933
Flood of Rubber in September Reported 933
Electric Taxicab Shown at N. Y. Show 934
Detroit Closed Car Show May Be Annual 934
Salesmen's Competition Held at Car Show 934
Rates on Carloads to Hawaii to Be Cut 935
Loose-Leaf Form for Foreign News Urged ... 935
Uncle Sam to Spend Huge Sums on Roads 936
Program Filled for Highway Conference 937
To Invoke Bay State Laws on Tail Lights 937
Penn. Rubber to Let Jeannette Have Homes .. 937
California Studies Licensing Mechanics 938
Dealers Asked to Aid N. A. D. A. Fight Taxes 938
"Keep Government Out by Organizing"..... 938
Ontario Surveys Its Automobile Markets 939
"Campaigns Needful to Sell Used Cars" 939
Extravagance Not Style, Kemp Says 939

FEATURES IN THIS ISSUE

Struggling for Ideal Transportation 943
Selling Goods at Retail 947
"Ask 'em to Buy for Christmas" 948
$1,500 for Your Opinion, Mr. Car Owner 951
Automotive Products That Are New 952
If the Buyer Can't Come to You—Go to Him.. 954
Products That Aid in Quick Repairs 955
With the Wholesalers and Retailers 957
Calendar 964
Table of Passenger Car Selling Points (copyrighted) 969

Alphabetical Index to Advertisers 1014

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
WORCESTER, MASS. CHICAGO, ILL. CLEVELAND, OHIO

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No Automobile Man Should Overlook These Facts

READ the list printed below. Note how many passenger car and truck manufacturers here and in Europe standardize on Zenith Carburetor equipment. Manufacturers, automobile and accessory dealers should not overlook this evidence of Zenith preference. A Zenith fixed adjustment carburetor will give greater economy, better acceleration, easier starting, more uniform operation, and added power to any motor vehicle,—facts a demonstration will prove.

Irrefutable Proof of Zenith Supremacy

PASSENGER CARS

United States
Anderson
Brewster
Chalmers (export)
Chevrolet
Comet
Crow Elkhart
Daniels
Driggs
Elgin
Fox
Hatfield
Kurtz Automatic
Maxwell (export)
Meteor
Monroe
Noma
Norwalk
Oldsmobile
Ranger
Romer
Standard Eight
Tulsa
Wills St. Claire
Washington
Yellow Cab

France
Alba
Aries
Ballot
Beck
Bazelaire
Bedelia
Bellanger
Benjamin
Bignan
Brasier
Bugatti
Charron
Colda
Corre-la Licorne
Cottin Desgouttes
Crespelle
De Dion Bouton
Delage
Delaugere Clayette
Doriot-Flandrin & Parrant
Farman
Gobron
Gregoire
Hotchkiss
Irat
La Buire
Leon Bollee
Lorraine Dietrich
Mors
Motobloc
Mourre
Paquis
Paulet
Peugeot
Philos
Rauch Lang (Taxi Cab)
Rochet Schneider
Rolland Pilain
Roy
Salmson
Th. Schneider
Sidea
Sigma
Slim
Soriano-Pedroso
Turcat Mery
Vermorel
Vinot-Deguingand
Voisin
Zebre
Zedel

England
A. B. C.
Angus Sanderson
Argyll
Arol Johnston
Austin
Beardmore
Belsize
Blackburn
Briton
B. S. A.
Calcott
Calthorpe
Charron Laycock
Cluley
Enfield Allday
Ensign
Galloway
Guy
Hampton
H. E.
Hillman
Jowett
Lagonda
Orpington
Palladium
Phoenix
Ruston Hornsby
Standard
Star
Swift
Talbot
Vauxhall
Vulcan
Waverly

Germany
Adler
Audi
Beclowen
Benz
Benz-Sochne
Dux
Elite
Horch
Joswin
Ley
N. A. G.
N. S. U.
Protos
Richard & Hering
Simson
Steiger
Stoewer
Szawe
Wanderer

Belgium
Abadal
Belga
d'Acoust
Dasse
F. N.
Metalurgique
Minerva
Niesse
Nagant
Pipe
Somea

Italy
Alfa Romeo
Ansaldo
Bianchi
Chiribiri
Diatto
Isotta Fraschini
Itala
Lancia
Nazzaro
S. C. A. T.
Spa

TRUCKS

United States
Abbot-Downing
Acme
American
American Motorbus
Armleder
Atlas
Atterbury
Beaver
Belmont
Bethlehem
Biederman
Bridgeport
Buffalo
Casco
Clydesdale
Collier
Commerce
Dart
Day Elder
Dearborn
DeMartini
Dependable
E. A. Denz
Double Drive
Eagle
Elgin St. Sweeper
Facto
Fageol
Federal
5th Ave. Coach Co.
Forschler
Gotfredson-Joyce
Hahn
Hall
Harmer-Knowles
Hawkeye
Hercules
Higrade
Huffman
Hug Co.
H. R. L.
Huron
Indiana
J. T. Tractor
Koehler
Kelly-Springfield
Kerns Dughie
Keystone
Kimball
Krebs
Larrabee-Deyo
Maccar
Mack
Massey-Harris
Moreland
Municipal Supply Company
National
Nelson
New England
Northway
Norwalk
Oklahoma
Olympic
Oshkosh
Penn
Perfection
Power
Rainier
Ranger
Rowe
Samson Tractor
Sanford
Schacht
Southern
Sterling
Stewart
Stoughton
Sullivan
Tower
Towmotor
Traylor
Veteran
Vim
Wachusetts
Walker Johnson
Watson
White
Witt-Will

England
A. E. C.
Albion
Austin
Beardmore
Belsize
Daimler
Enfield Allday
Guy
Halley
Hallford
Karrier
Marathon
Mandslay
McCord
Pagefield
Palladium
Scrammell
Star
Tilling Stevens
Vulcan

France
Aries
Cottin Desgouttes
DeDion Bouton
Peugeot
Rochet-Schneider
Saurer

Italy
Spa

Switzerland
Berna

Germany
Adler
Benz
Horch
N. A. G.
Richard & Hering

ZENITH CARBURETOR COMPANY, DETROIT, MICHIGAN

Factories at: DETROIT LYONS LONDON TURIN BERLIN

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A Dozen Reasons Why Studebaker Is the Preferred Line

1. Studebaker builds a complete line—three distinct models and fourteen body types—a car to appeal to every market. Each a Six and each the dominating value in its field.

2. Studebaker territory allotments are liberal.

3. Studebaker does not require dealers to contract for a year's supply of cars.

4. Studebaker ships no cars without signed orders from dealers.

5. Studebaker protects its dealers against price reductions on current models.

6. Studebaker co-operates liberally on advertising.

7. Studebaker offers its dealers the benefit of a strong financing plan for wholesale or retail business, or both.

8. Studebaker gives the dealer constructive assistance through a staff of capable, experienced road men.

9. Studebaker dealers have a consistent sales story because Studebaker specializes on the manufacture of Sixes exclusively.

10. Studebaker always offers the greatest dollar-for-dollar values because middlemen's profits are practically eliminated through the Studebaker system of complete manufacture; because the quality of materials and workmanship are unexcelled; because fair prices are the invariable rule.

11. Studebaker's policy is to make every dealer prosperous. Studebaker is building for the future today, just as it was seventy years ago when the business was founded. There are a number of Studebaker dealers whose fathers handled Studebaker products before them. One, in fact, continues a Studebaker contract begun by his grandfather in 1878.

12. Finally, the Studebaker dealer has an advantage—a powerful advantage—which is open to no other dealers. This is the honor and integrity of the name Studebaker, which for seventy years has stood for unfaltering devotion to the highest ideals of manufacture and business dealings.

These are some of the points that make the Studebaker franchise the most attractive and the most desired in the industry. There are many more. They're worth knowing.

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Passenger, 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Passenger, 119" W. B., 50 H. P.*	BIG-SIX *7-Passenger, 126" W. B., 60 H. P.*
Touring ..... $ 975	Touring $1275	Touring $1650
Roadster (3-Pass.) 975	Roadster (2-Pass.) 1250	Speedster (4-Pass.) 1785
Coupe-Roadster (2-Pass.) 1225	Roadster (4-Pass.) 1275	Coupe (4-Pass.) 2275
Sedan 1550	Coupe (4-Pass.) 1875	Coupe (5-Pass.) 2375
	Sedan 2050	Sedan 2475
		Sedan (Special) 2650

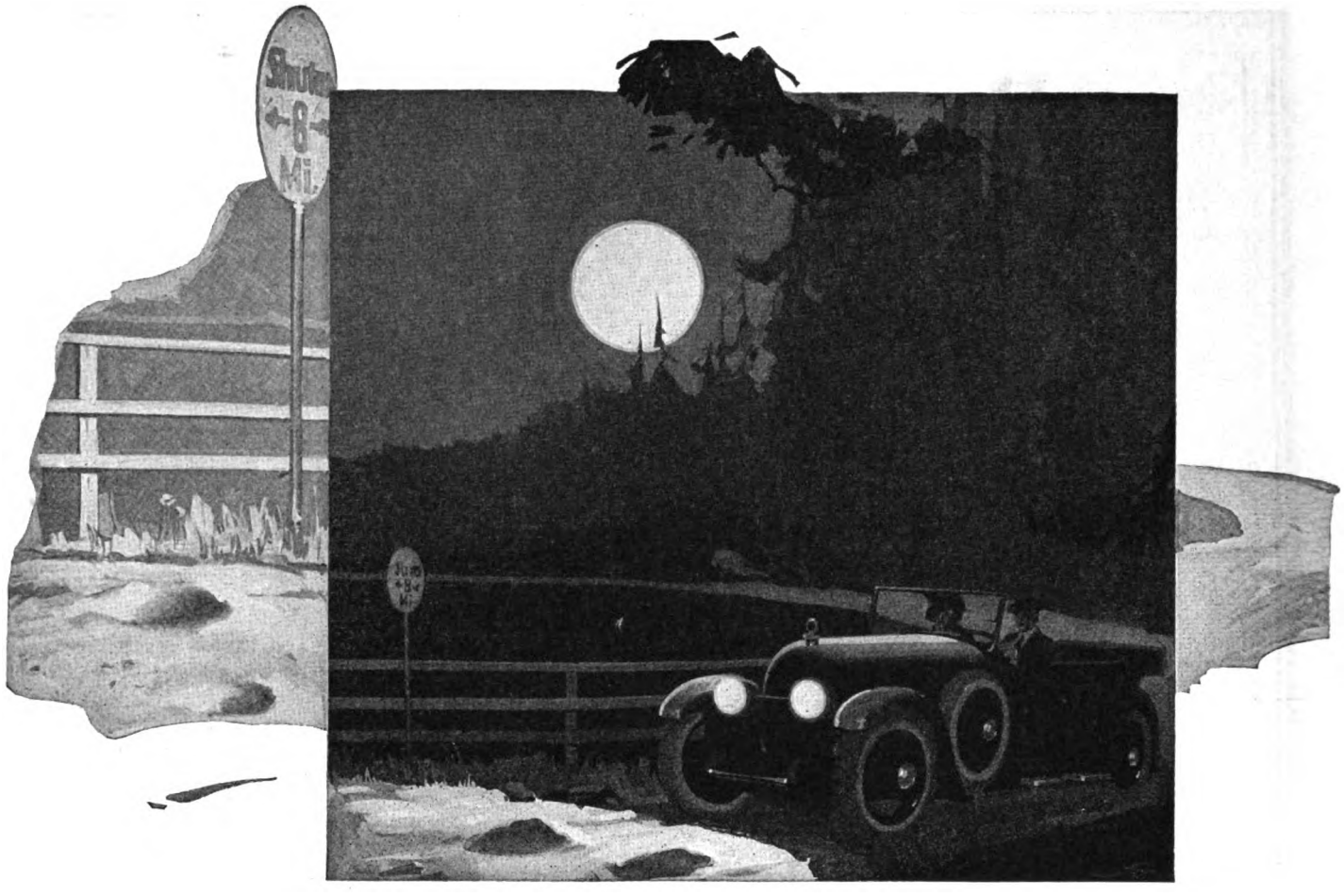
Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

Studebaker

THIS IS A STUDEBAKER YEAR

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All Bumps Look Alike At Night



—but Gabriel Snubbers enable you to roll along with comfort and safety. They take the jolt out of the bumps and keep you on the seat.

Best for results—regardless of price.

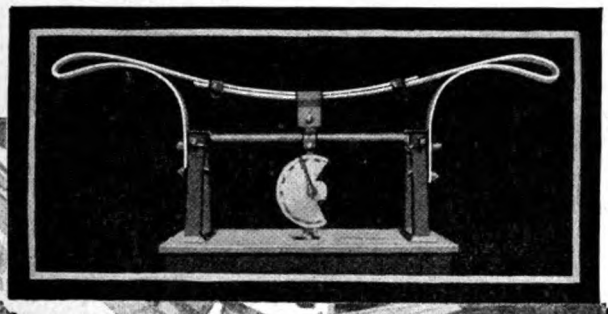
GABRIEL MANUFACTURING COMPANY, 1421 E. 40th St., Cleveland, Ohio



GABRIEL SNUBBERS

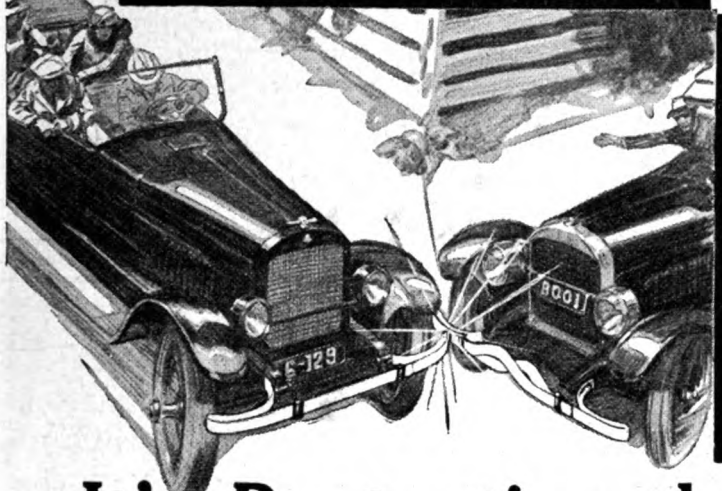
65 Leading Cars Equipped With or Drilled for Snubbers at Factory—

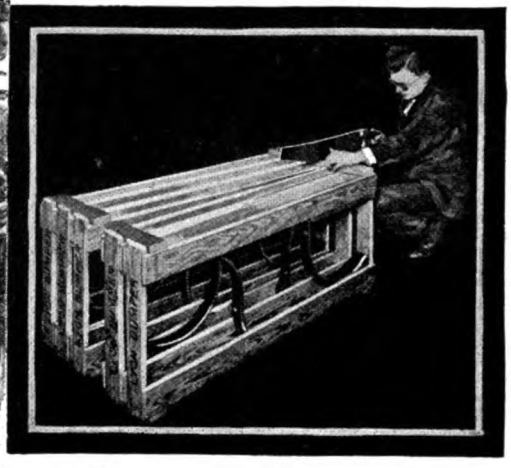
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This factory testing machine is shown putting a Lyon Spring Bumper under a strain of 2,200 pounds—equal to the most severe bump of a car in motion.

Lyon Spring Bumpers are packed and shipped in unit crates, cleated together in lots of five. Photo shows how, by cutting cleats, distributor may reship one or more without unpacking the whole crate.





It's *Protection* they're after!

SOUND judgment will tell you that a bumper is only as good as its ability to stand up to severe punishment.

More than a million Lyon Spring Bumpers are in service to-day—they have proved that they can stand the gaff. No other bumper has such resiliency! Here's why!

Lyon construction is patented—it can be imitated, but it can't be equaled. The two-piece overlapping front bars are shaped with the Lyon-patented open "looped-ends" that take the shock of every blow.

This "looped-end" construction and the overlapping bars is the secret of the resiliency of Lyon Spring Bumpers. That's why every one will take a severe blow without damage.

Each Lyon Spring Bumper is built to protect as well as beautify; all are designed for a lifetime service! Each one is profitable to the dealer who sells it.

Retail prices, $10 to $25

DEALERS: Write your jobber for our dealer proposition. Lyon Bumpers offer every dealer quick profits. Use the "ask 'em to buy" idea!

JOBBERS: We make no sales direct. Credit and profits go to our jobbers. Lyon Bumper sales are steadily increasing. Write for our proposition.

METAL STAMPING COMPANY, Long Island City, N. Y.



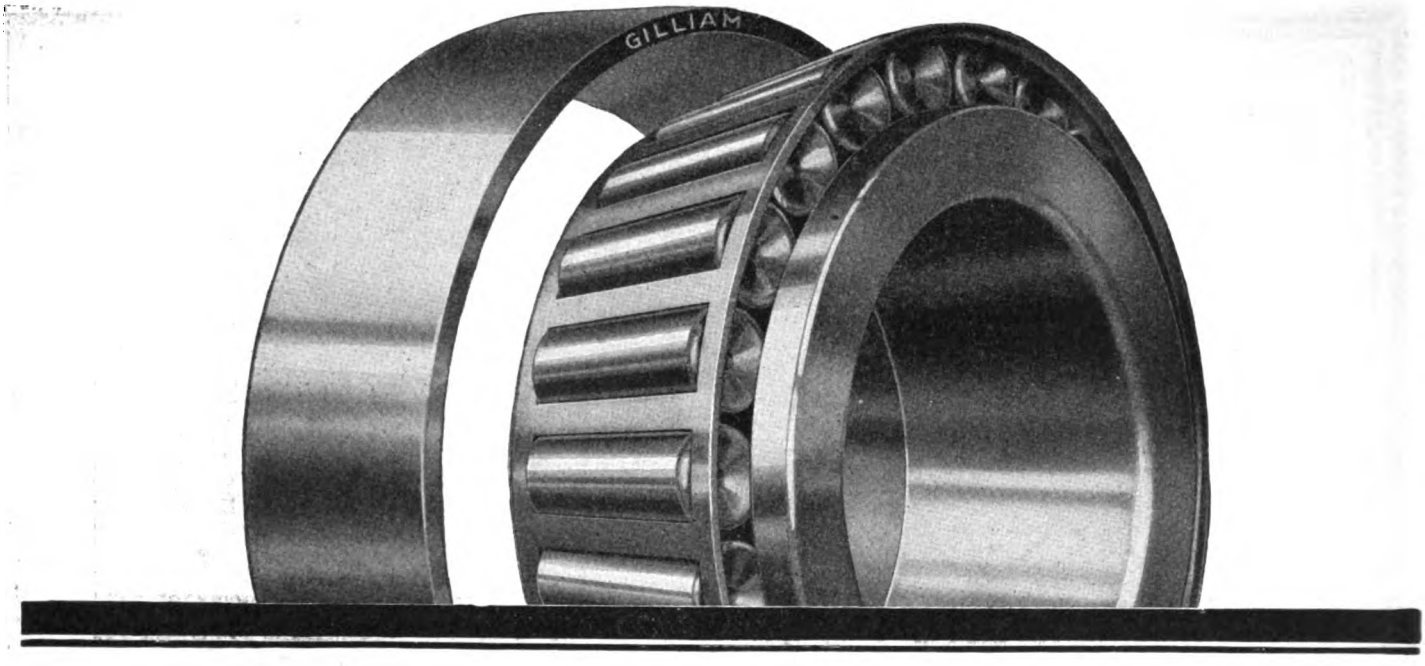
Lyon Straight Bar Bumper



Lyon Convex Bumper

LYON RESILIENT BUMPERS

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You can always recognize the GILLIAM TAPERED ROLLER BEARING by its clean-cut, one-piece steel stamped cage and its maximum number of rollers, without nibs or projections at either end. Remember they are made of Alloy steel throughout

GILLIAM TAPERED ROLLER Bearings

The Gilliam Mfg. Co. - - Canton, Ohio

More than 150 Service distributors in the leading cities in the United States

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Hite Sells Them—and Uses Them Himself

Here's a double-barreled boost for Red-Tops—Hite not only is sold on them for his trade, but he uses them on his own service car:—

THE HITE TIRE COMPANY

Russellville, Ky., July 6, 1922

The Fisk Tire Company, Inc.,
Nashville, Tenn.

Gentlemen:—

I have sold Fisk Red-Tops for four years; and think it is the best 30 x 3½ tire on the market regardless of price. I have four on my service car that have been in use for 19 months and it don't set around but very little.

Very truly yours,
HITE TIRE CO.

You build a substantial tire business only by selling tires which give sound, economical service, making customers out of buyers who will buy again where they get satisfaction.

The dealer who sells Red-Tops builds his business—the extra ply of fabric and the heavy red tread make good in longer life and greater mileage.

Brighten up your window with a Fisk Red-Top.

There's a Fisk Tire of extra value for every car, truck and speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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Announcing

The Good

MAXWELL

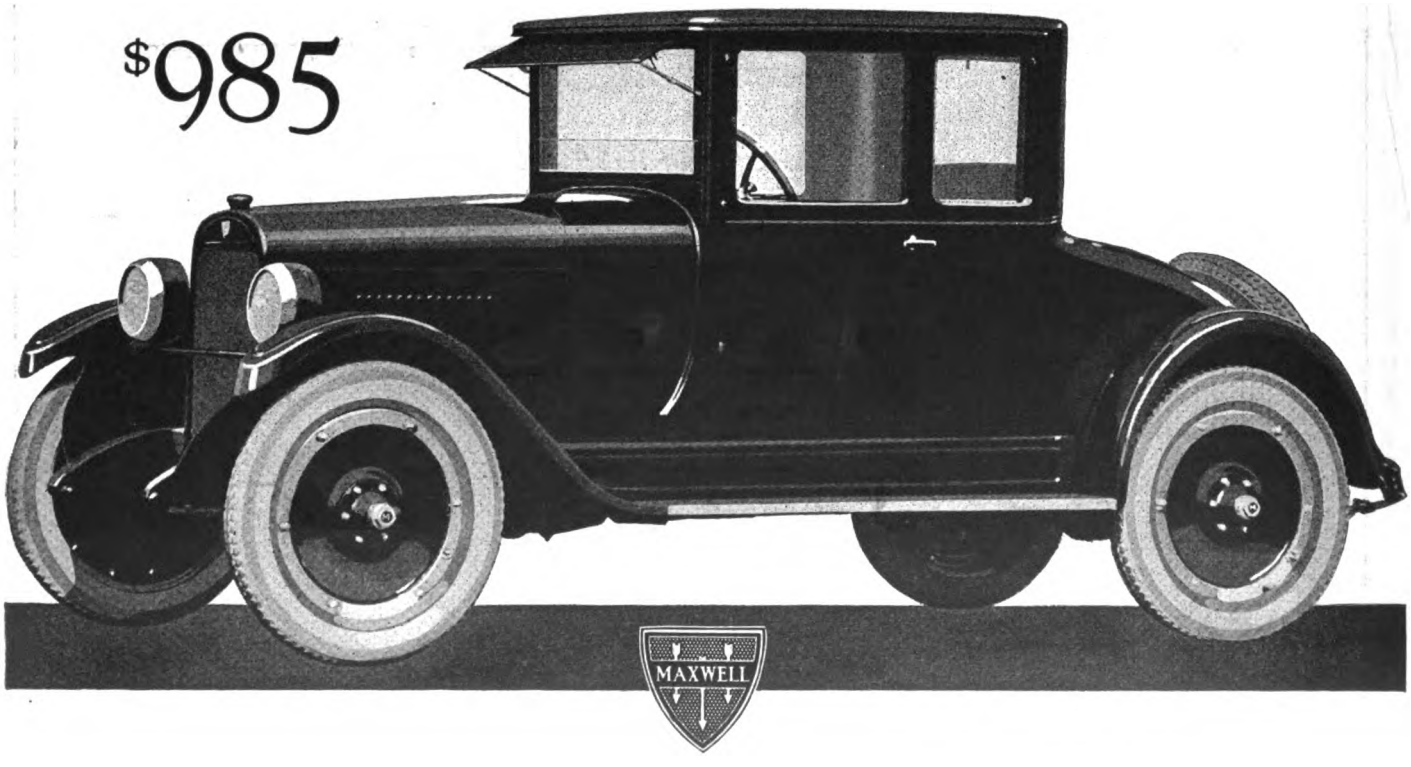
Club Coupe

So marked an advance in vehicles of this type that its superiority and greater value are recognizable almost at a glance.

Not merely a more practical two-passenger coupe in every way, but embodying substantial elements of comfort, convenience and actual elegance, unique in cars of this class.

Note in particular the singular *beauty* of the Club Coupe; the unusual quarter side windows, which can be lowered and raised; the larger window at the rear, with curtain; the advanced type of windshield; the visor, windshield wiper and rear vision mirror; the exceptional hardware; the leather upholstery, the devices for raising and lowering all windows; the comfort of the driving position; the ample leg-room and roominess of the seating arrangement; the convenient package compartment back of the seat, and the unusually large rear-deck compartment. Heater, disc steel wheels and cord tires are standard equipment. In view of these superiorities, *mark the price.* Prices F. O. B. Detroit, Revenue Tax to be added: Touring, $885; Roadster, $885; Club Coupe, $985; Sedan, $1335; Four-Passenger Coupe, $1235

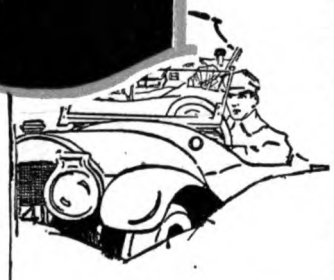
MAXWELL MOTOR CORPORATION, DETROIT, MICHIGAN
MAXWELL MOTOR COMPANY OF CANADA, LIMITED, WINDSOR, ONTARIO



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Set Wheel Play to Suit Every Driver







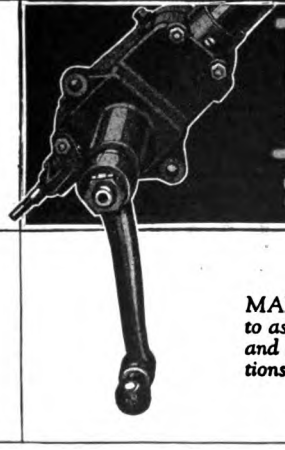
ANOTHER Lavine "PILOT" feature that is appealing to makers of America's fine cars is its simple and quick adjustment for any desired amount of wheel play—from zero to an inch and one-half.

Manufacturers appreciate what an important sales point this is. For many drivers want *no* wheel play whatever—while many others want the customary inch. To be able to please them all is an advantage.

In the Lavine "PILOT"—*the new standard of steering gear value*—the base of the worm shaft is supported by a small ball-thrust bearing and adjusting nut. This permits rapid and precise adjustment to suit the most critical driver.

Throughout the "PILOT", you will find many other niceties of construction and design that distinguish this gear from the commonplace. In fact, the "PILOT's" superior durability, safety, simplicity, smoothness of action and freedom from rattle are points far-sighted car manufacturers can capitalize on during the keenly competitive years now at hand.

LAVINE GEAR COMPANY
MILWAUKEE, WIS.



LAVINE "PILOT" STEERING GEAR

MANUFACTURERS: Why wait for your sales departments to ask you about the "PILOT"? You should know this gear and how reasonably it is priced. Let us exchange specifications. Send us your blue prints—no obligation, of course.

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Lost Control of His Car

He taught his wife to drive and two cars are now parking where but one parked before. But he has a satisfied wife—

AUTOMOBILES have probably done more to raise the American Standard of living than any other single contributing factor. They have brought the country man to the busy marts of trade—have taken the city man away from noise and dirt and the mad rush, out where birds sing and flowers grow.

But how about the woman? Has it been entirely fair to her? Suburban transportation is notoriously inadequate for these modern times. Suburban isolation is a bugbear to the woman, a bugbear which can only be dissipated by providing her with modern transportation. By every law of right and fair play it is her just due.

A very considerable percentage of car owners today need, and can afford to buy another car. An analytical survey of specific cases will usually disclose convincing reasons for the purchase of the additional car—not a trade-in either, but, the sale of a new car.

This vast potential market is waiting to be sold. Let it never be said, that the automotive industry failed to grasp the golden opportunity.

This is one of a series of messages addressed to every man who sells automobiles

The Packard Electric Company

WARREN, OHIO

MANUFACTURERS OF PACKARD AUTOMOTIVE CABLES

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Buick Quality is Unvarying

Year after year the continuously good performance of Buick Motor cars brings prosperity to Buick dealers. The unvarying quality of Buick manufacture and design provides the stable, profitable business that every retail automobile concern seeks to establish. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars ***Branches in All Principal Cities***

VALVE-IN-HEAD Buick MOTOR CARS

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DODGE BROTHERS
BUSINESS SEDAN

Exceptional interest has been aroused by the practical arrangement of the interior.

The entire rear compartment furnishings—seat, seat cushions, back cushions, seat frame, foot rest, carpet and all—can be removed from the car in a few moments.

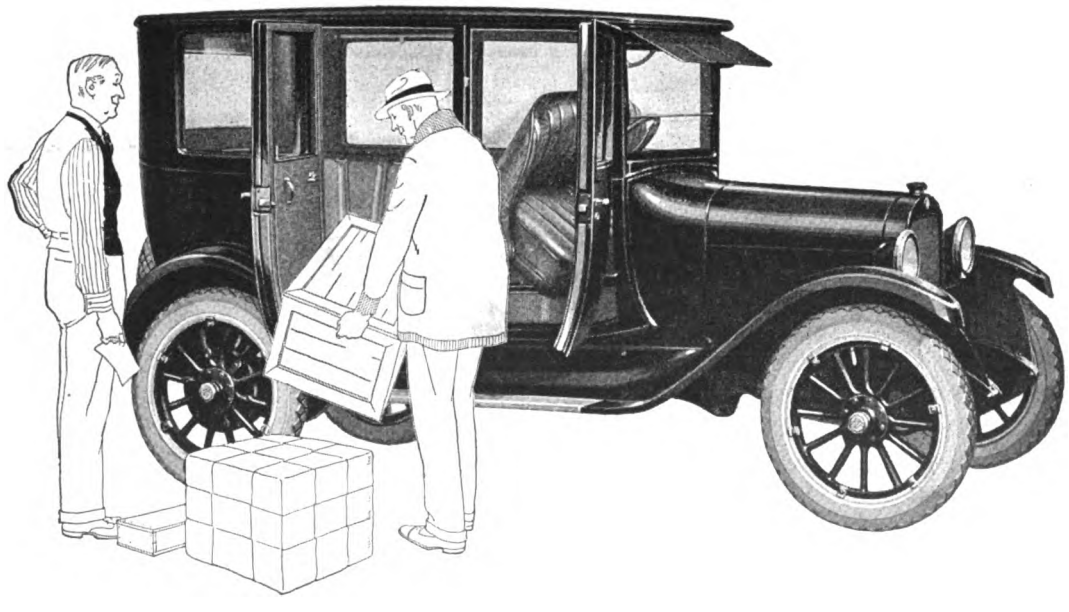
The front seat is then tilted forward, giving a gross clearance of twenty-two inches through the rear doors.

In this way, a space of sixty-four cubic feet in the rear compartment is made available for loading.

When the rear seat fixtures are back in place, the interior is complete and attractive in appearance. Its convertibility is not apparent to the eye.

Business men, farmers, salesmen, campers, tourists and everyone who has occasion, at times, to carry bulky articles or luggage, will readily appreciate the great utility of this construction.

The Price is $1195 f. o. b. Detroit



Patents Pending

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Goodrich SILVERTOWN CORD TIRE

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Nash Leads the World in Motor Car Value

$1240

f. o. b. factory
Six-Cylinder Touring

Five Disc Wheels and Nash Self-Mounting Carrier, $25 Additional



Now Comes

The Newly Improved Nash

Again Nash strengthens its franchise with a newly improved Nash Six.

A big selling feature of this car is the beautiful disc wheel equipment.

There are five disc wheels and a Nash self-mounting carrier for only $25.00 additional.

You know how the disc wheel vogue is growing. Only the price has kept it from a much wider popularity.

Now Nash offers such equipment together with the carrier for only $25.00 added.

Along with this are many other new developments and fresh attractions that are bound to stimulate even today's great demand for the Nash Six.

There's a new-type cowl ventilator. And there's a big, husky bar that anchors one side member of the chassis to the other at the front and gives the frame greater rigidity.

Oil kipp equipment is new, too. Just give the kipp a push and oil is force-fed into the steering knuckles and steering tie rod.

Then there's a new steering mechanism; a device exclusive to Nash for focusing the headlamps quickly at any angle; and other selling points that emphasize the progressiveness of Nash manufacturing.

Dealers who want good, money-making territory should write at once. A few places still to be closed.

FOURS *and* SIXES

Reduced Prices Range from $915 to $2190, f. o. b. Factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

(714)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCTOBER 21, 1922 No. 10

FORD STARTLES TRADE WITH $50 REDUCTION

Move Comes Without Warning—Places Competition in New Relationship By Widening Price Gap—Opens Tremendous Virgin Markets Is Belief.

Henry Ford, in the vernacular, made them all open their eyes, when, on October 17, he made a horizontal reduction of $50 on the entire line of Ford cars. The move came without warning, even to his dealers, but had been in a general way anticipated by business forecasters, who now look upon the Ford industries as one of the Country's leading trade indicators. Its amount, however, 11 per cent, was far greater than had been anticipated, and in sharp contrast to the merely nominal reduction of last January, which amounted to $7 on the touring car.

The immediate effect of the change is to place competition in an entirely new relationship by opening a relatively wide gap between the Ford and cars nearest it in price. At the new price, $393 for the touring car with starter and demountable rims, it is $50 under the Star and $97 under the Gray. Chevrolet and Overland sell for $525. Dodge Brothers price is $880. Buick Four, Chevrolet "FB-50," Dort and Maxwell all are listed at $885. The Durant Four, Gardner, Nash Four and Oldsmobile Four also sell for less than $1,000, and therefore, are influenced.

Naturally, the change immediately set in motion all manner of surmises. A reaction, popular in some quarters, was that Ford has begun to find himself pressed by competition and really felt the need of sales stimulus. Another was that he anticipated such pressure in the future, though not suffering from it now, and therefore purposed to head it off. A third was that he had at length been forced to take notice of those who have breathed defiance and was deliberately issuing a challenge to meet him in his own market.

As a matter of fact, none of these quite satisfies the requirement of an explanation that will hold water perfectly. It is true that Durant's Star, and also the Gray, fathered by Ford's old lieutenant, Frank L. Klingensmith, promise to become important contenders in the low-price car field. The Star, in fact, is already a big sales factor on the basis of advance orders. Gray, despite the handicap of being forced to create a new distributing system, is making remarkable headway.

Events of the past year have produced

(*Continued on page 928, first column*)

TOPICS' TOPICS

Stenographer wants to know how Ford can be richest man when John D. continues to sell gasoline. 'Twould seem oil magnate had bulge on car maker, Gwendolyn.

* * *

Hickory nut crop ruined by automobile demand for the wood—news item. How about squirrels—fuzzy and smooth?

* * *

America still in state of musical savagery, college professor opines. Yet automobile maker blows bazoo to effect "sensational" body "drapes" mechanical points of car, thus sounding new note.

* * *

Valve-handle wheeze revived by "released" publicity received that first describes new product then guesses salient points "better not be noted at this time." Announcement might read "New Skeezicks has four wheels an' everything."

* * *

National organization solemnly urges warning hand-signal to those ahead since "they cannot see automatic signal behind." Would person warned then run off in all directions, as Leacock suggests?

2,400,000 OUTPUT IN 1922, REEVES ASSERTS

All Indications Point to Greatest Year, N. A. C. C. Executive Believes—"U. S. 1921 Census Shows Manufacturers' Wisdom in Promptly Cutting Prices."

Reviewing the production records of the automobile industry so far this year, Alfred Reeves, general manager of the National Automobile Chamber of Commerce, believes total output for 1922 will be more than 2,400,000 cars. If this prediction is carried out, as, indeed, all indications lend assurance, the industry will have had its greatest year, only approached by 1920 when slightly more than 2,200,000 vehicles were made.

"For the first eight months we made 1,667,052 automobiles, which is 80,000 in excess of the full year of 1921," Reeves points out. "Of this, 159,553 were trucks. The best year on record was 1920, when we produced 2,205,197 vehicles, a figure that will be substantially exceeded this year when production will be more than 2,400,000. This presents a return to the automobile industry of prosperity which will be reflected in industries like steel, copper, rubber, leather, aluminum and paint."

These observations were called forth by the appearance this week of the United States Department of Commerce census of the automotive industry for 1921. Commenting on this report, a review of which appears elsewhere in this issue, Reeves said:

"The official census figures showing a decrease in automobile production for 1921 of 15 per cent in number and 23 per cent in value as against 1919 with the record production of the present time proves the wisdom of the manufacturers in promptly lowering prices of their prod-

(*Continued on page 929, second column*)

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COLONEL CLIFTON NAMES 1922-1923 COMMITTEEMEN

Roster Includes 19 New Members and Two Chairmanship Changes

Examination of the roster of 1922-1923 committeemen, as appointed by Col. Charles Clifton and made public this week, shows a number of changes in personnel and some rearrangement of the various line-ups. Among these, the Committee on Motor Fuels has been increased to eight members from seven, and the Passenger Car Standing Committee has been cut to three from five members. Changes in chairmanships are two, N. E. Wahlberg (Nash) now holding that office in the Passenger Car Standards body, and F. J. Wells (Pierce-Arrow) now being chairman of the Service Committee. Both, however, are old members of the committees they head.

The chairmanships of the rest of the fifteen committees remain as heretofore. The new members, their connections and the committee to which they are named are as follows: Wm. E. Betts (Studebaker) Advertising; R. C. Rueschaw (Reo) and Livingston Short (Buick) Insurance; Wm. Robert Wilson (Maxwell), Percy Owen (Liberty and C. F. Kettering (Buick), Motor Fuels; J. D. Mooney (Gen. Mot. Export) and Howard S. Welch (Studebaker), Foreign Trade; Robert O. Patten (Pierce-Arrow) and F. E. Smith (Republic), Motor Truck; George B. Allen (Liberty), Passenger Car Standing; James McEvoy (Chevrolet) and H. M. Jewett (Paige), Patents; F. J. Wells and W. M. Warner (Cadillac), Service; Fred J. Haynes (Dodge Brothers), Taxation; H. E. Derr (International) and F. W. Fenn (N. A. C. C.), Truck Standards.

Swayne on National Industrial Board

Alfred H. Swayne, General Motors Corp. vice-president, has accepted the office of representative of the National Industrial Conference Board and will, with A. J. Brosseau, of Mack Trucks, Inc., represent the National Automobile Chamber of Commerce in the deliberations of the Board. The news of the appointment comes in the listing of the 1922-1923 committees of the N. A. C. C. by Col. Charles Clifton.

Chapin Named by Clifton

Roy D. Chapin has accepted appointment to the Highway Education Board as representative of the National Automobile Chamber of Commerce. Col. Charles Clifton, in making known his slate of committeemen for the forthcoming year, disclosed Chapin's further identification with the activities of the N. A. C. C. looking towards wider public education on matters automotive.

Bray Joins Autocar Sales

J. B. (Jack) Bray, who for a number of years has been service manager of the Grant Motor Car Corp., has resigned and will join the sales force of the Cleveland branch of the Autocar Company on October 16. Bray is well known among service men the Country over. For two years he was a member of the Service Committee on the National Automobile Chamber of Commerce.

Packard Men Honor Harrington

Celebrating A. C. Harrington's twentieth year with the Packard Motor Car Co., of which he is now president, executives and heads of departments on October 13 held a dinner in New York city in his honor. Harrington's rise to the presidency was a series of successive promotions following his joining the factory when it was located at Warren, O., in 1902, four years after the first Packard was made.

Maclellan Leaves Nash Sales

H. W. Maclellan has resigned as vice-president, director and manager of the Nash Sales Co. of Syracuse, N. Y., effective October 15. The Sales company is an associate company of the Nash-Buffalo Corp. of Buffalo. Until a successor to Maclellan is appointed, W. L. Tenney of the Nash-Buffalo Corp. will be at Syracuse as acting manager.

Clifford Durant Sails

R. C. Durant sailed this month for Honolulu aboard his yacht, the *Black Swan*, to be absent from this Country several weeks. Members of the Durant organization in San Francisco chartered a tug and a band and accompanied the yacht out of the harbor as a farewell.

McDonough Now with Willys-Overland

C. G. McDonough has been appointed in charge of taxicab and commercial car sales for the Willys-Overland Co. He was formerly with the Templar Motors Co. in charge of eastern sales and prior to that district sales manager of the Clydesdale Motor Truck Co.

E. L. Vail to Visit England

E. L. Vail, manager of the automotive division of the Waltham Watch Co., is to sail for England to attend the Olympic Show. Vail expects to be absent from this Country several weeks.

Sherman Visits the West

Ray E. Sherman, merchandising director of the Automotive Equipment Association, is touring the Pacific Coast delivering his message of better merchandising to automobile and business organizations. He has spoken before many thousand men and everywhere his suggestions were hailed as an advance.

Murphy Manages Anderson Plant

J. G. Murphy has been appointed factory manager of the Anderson Motor Co., Rock Hill, S. C. Murphy was for some time assistant factory superintendent for the Pierce-Arrow Motor Car Co.

WILLIAM M. SWEET NAMED KLAXON GENERAL MANAGER

Adds New Capacity to Vice-Presidency and Directorship in Company

William M. Sweet, a director and vice-president of the Klaxon Co., has been appointed general manager of that concern with headquarters at Bloomfield, N. J. The addition to his activities is in line with his announced determination to devote all his time to the interests of Klaxon.

Sweet is a well known figure in the industry having been attached to the General Motors Corp. for several years. From 1907 to 1916 he was general manager of the Motor & Accessory Manufacturer's Association, resigning to become assistant to Alfred P. Sloan, Jr., then president of the United Motors Corp. In 1918, when United Motors was consolidated with General Motors and Sloan became vice-president of that corporation, Sweet continued as his assistant, later becoming assistant secretary of the Corporation.

Edgar G. Hunter

Edgar G. Hunter, well known to the automobile industry through his connection with the McCord Manufacturing Co. since the inception of that business in 1909, was fatally hurt and died on October 13 when, in swerving his automobile to avoid hitting a motorcycle-mounted State trooper who had stopped without signal directly in the path of the Hunter car near Oshawa, Ont., he was thrown into the ditch. Mrs. Hunter was in the automobile at the time but escaped injury. During the past year Hunter had been connected with the General Motors Truck Co., and more recently was factory sales representative of the Detroit Pressed Steel Co. attached to the Disteel wheel division.

Fillmore A. Drake

Fillmore A. Drake, in July given the title of director of warehouses by the Howe Rubber Corp., in addition to his office as district manager, died at his home in East Orange, N. J., October 14. He was for many years associated with the B. F. Goodrich Rubber Co. and with the old G. & J. Tire Co. He later became president of the Berrodin Rubber Co., of Philadelphia.

Frank Sherman Washburn

Frank Sherman Washburn, noted engineer and chairman of the board of the American Cyanamid Corp., died on October 9 of bronchial pneumonia. He was a pioneer in extracting nitrogen from the air and was born in Illinois in 1860. Not directly connected with the automotive industry, yet he was well known to the leaders in the engineering branch of the trade.

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PACKARD'S ORDERS TO CARRY INTO NOVEMBER

Those on Hand September 20 Totalled 2,557—New Ones Coming in at Rate of 50 Daily—Normal Winter Storage Will Take Winter Production.

Packard Motor Car Co. has now on its books a sufficient number of orders on which deposits have been paid to enable it to operate at present factory schedules until nearly the end of November, the Company announced this week. On September 20, 2,557 such orders had been accepted. This fact, together with the putting into operation in December the policy of "banking" cars against Spring delivery, will keep the plant humming until March 1, 1923.

New orders are being received, however, at the rate of about fifty daily and the Company points out that should this demand be maintained during the "banking" season, even the increased schedule of 2,000 cars monthly during December, January and February will not leave any surplus in March. Thus the 2,557 orders on hand September 20, together with an estimated 6,250, fifty daily from October through February, will total 8,807 orders by March. Against this the Company plans to produce 1,500 in October, the same number in November and 2,000 in each of the succeeding three months, or 8,500 cars altogether.

Between April 20, when the new single-six line was brought out and September 20, actual sales were 8,119 while deliveries totalled 5,562, according to the findings of the management. On the latter date there had been shipped 6,571 of the new line, leaving 1,009 in transit or dealers' floors. Since Packard has about 800 dealers and distributers, the average number of the floors is unusually low.

Meanwhile the Company reports earnings of $900,000 in September. On October 1, cash and marketable securities in the treasury reached the sum of $16,000,000. With October shipments likely to break all previous records those close to the management foresee a Winter season of great industry and profit.

TRUCK SALES CONTINUE AT SATISFACTORY RATE

G. M. T. President Sees Need for Restoring Confidence in Outlook

Sales of trucks are continuing in encouraging numbers, accordingly to W. L. Day, president and general manager of the General Motors Truck Co., although the volume of business is not quite as large at present as earlier indications had led the manufacturers to expect. The plant has had no shut-down and anticipates a steady run through the Fall and Winter if sales continue at the present volume. Retail sales throughout the Country are holding up well, the weekly reports of the plant show.

"The motor truck industry is feeling the effect, to some extent, of the uncertainty existing in the minds of many people because of the tense industrial situation this Summer," Day declares. "The coal and rail strikes have unsettled things in general so that the sales field which was opened up by the improved general conditions was agitated considerably. It is necessary to overcome this situation and restore confidence fully before the maximum business can be obtained. However, we are going along at a very nice pace."

TREMAINE AT GRANT-LEES HEAD IN SWEEPING SHIFT

Strong Interests Brought Into Company Strengthen Position All Around

Sweeping changes in the personnel of the Grant-Lees Gear Co., Cleveland, bring in H. E. Tremaine as the new president. Tremaine is well known to the trade through his connections as director of the Peerless Company and treasurer of the Standard Equipment Co., among other connections. At the same time other strong interests have been added which will both strengthen the financial and other ends of the business, and at the same time permit an extension of activities to other customers. With operations continuing for the present under the able direction of C. Klenk, treasurer, production is to be pushed immediately. Klenk, who has been with the Company a number of years on the financial end, and latterly on sales, is to be given a post as yet not definitely determined, where his valued services can be utilized to the fullest extent.

Elroy J. Kulas, associated with various Cleveland enterprises and Peerless sales manager nine years ago, replaces on the board Richard Ferguson, who has relinquished all connection with the Grant-Lees Company. New Vice-President Crouse succeeds F. E. Simons, who has also resigned as director. C. W. Blossom, of the Automobile Screw Products Co. and formerly Grant-Lees director and secretary-treasurer, returns to the board in the place of Simons. The directorate is now headed by G. B. Collins as chairman. Other directors in addition to those previously named include George E. Collins, Forrest A. Graves, John Mulligan and John Kreusler. The board was scheduled to meet late this week.

Pierce-Arrow Sales Gain

Vice-president Forbes of the Pierce-Arrow Motor Car Co., finds sales of that concern for September were the largest for any September since 1915 and 150 per cent ahead of a year ago. Orders during the month increased 10 per cent over those in August, which was the largest August in the history of the Company.

775 BUICKS BORN ON "RED LETTER DAY"

October 12 Sees Record of Factory Output Hung Up—September Average 748 Cars Daily—Demand Uniform Throughout the United States.

Thursday, October 12, 1922, goes into the records as the red letter day in the history of the Buick Motor Co. On that day, a total of 775 Buick cars were turned out in the Flint and Detroit plants, this figure exceeding by 23 cars, the best previous day's production of these two plants.

In September the average Buick production, including that of the Canadian factory, was 748 cars per day with a total for the month of 16,842. October, President H. H. Bassett declares, is practically certain to greatly surpass that accomplishment. A gratifying feature of the sales volume lies in that the demand seems to be uniform throughout the United States, for, as Bassett points out, it shows that all sections now have both the ability and inclination to buy.

On the day the record Buick production was made, the factory was visited by the distinguished group of British capitalists representing large General Motors holdings, whose arrival in America was noted in the AUTOMOBILE TOPICS under date of October 7. They were accompanied by executives of the Corporation.

Hupp Turns 30,000 Mark

Hupp Motor Car Corp. on October 17 was reported to have produced its 30,000th car since January of this year. This marks the attainment of its year's scheduled production approximately three months ahead of time. The figure is about twice the output total of 1921 and in spite of having thus early in the year reached that sum, the factory continues in operation on the same quantity basis.

Jordan Does Million and Half Monthly

Jordan Motor Car Co., Cleveland, for the first nine months of this year reports a monthly business close to $1,500,000 in volume on an average running inventory of $700,000. In excess of 7,000 cars were produced in that period.

American Motors Coming Along Nicely

American Motors Corp. of New Jersey, Plainfield, N. J., has been getting on well since the reorganization in January of this year, which brought the Company into new hands with Carl H. Page as president. It has anticipated maturities in meeting obligations on its property, and now has real assets with practically no liabilities. As a result of the financial improvement, the Company is now in a position to push the merchandising end of its business more vigorously.

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FORD STARTLES TRADE BY $50 REDUCTION IN PRICE

(*Continued from page 925, second column*)

a veritable revolution in automobile sales possibilities. The field formerly occupied by Ford alone has been invaded by others until there are now 18 other cars selling under $1,000. Dodge Brothers is doing a prodigious business. Chevrolet, the volume producer of the General Motors properties, is selling in quantities which, a few years ago would have been unbelievable. Overland's recovery from the general decline of last year has been remarkable, while the advances made by Maxwell have demonstrated, more than anything else, the extraordinary possibilities of a fashionable exterior in a small car in drawing trade away from higher-priced lines.

All this has had some effect on the Ford business, beyond a doubt, though the extent of this influence has been greatly overrated. Sales increases in the other lines named have been for the most part to purchasers who wanted a more elaborate car than the Ford, and were willing to pay for it. Ford's command of the market of new buyers has never been seriously challenged up to now, and it is unreasonable to suppose that the world's largest automobile maker would permit such a challenge to be issued, could it be avoided.

What Ford has done, therefore, is to open up a tremendous virgin market among people who have never owned automobiles before. Estimates, based on annual reports of Ford Motor Co., have indicated a possible profit margin approaching $100 per car. The extent of the cut, in a way, lends a certain amount of credence to these roundabout calculations. At all events, there is nothing to indicate that the move is desperate, or that it involves doing business on anything like a precarious basis.

In fact, a sufficient explanation is offered by the official statement credited to President Edsel B. Ford:

> Revision in prices is the result of increased volume of business which our company has enjoyed during present year. We own and operate many of our sources of raw material, which enables us to continue increasing the quality of our product and at the same time keep price so low that Ford cars are in reach of everybody.
>
> Our production for 1922 is already in excess of a million, which has been an important factor in bringing down costs. Our present daily output is averaging better than 5,000 cars and trucks.
>
> It is in anticipation of this continued demand that price adjustments are again being made, in order to keep in effect the policy of selling Ford products at the lowest price consistent with quality.

Henry Ford as an opportunist, may have no equal. This is invariably admitted when one of his spectacular exploits has been carefully examined. In this instance, he chose a moment when the trade was quiescent, and when sales were in the seasonal decline, to spring a reduction big enough to electrify his dealers and bring in business enough in all probability to keep his great group of industries moving at top speed all through the Winter.

"Ford is wise," said one of the industry's shrewdest critics, while discussing the effects of the change. "He grabbed onto the tail end of the coal strike to shut down his plants—which he was doubtless forced to do—thereby gaining a lot of favorable publicity, and incidentally affording his dealers an opportunity to get rid of accumulated stocks and pile up a nice little surplus of orders. Then, with the shelves bare, as you might say, he comes along with this cut."

Whether discounts as well as list prices are to be adjusted, is not known. Ford margins were quietly widened early in the year, when the dealers found the then new prices were not a great stimulus to new business. General belief is that these dealers are now getting a very comfortable margin of profit, considering the relatively small effort necessary to sell the cars, and that no further adjustment will be made.

FORD'S LOWEST PRICES

Model	Old	New	Change
Touring	$348	$298	$50
Touring (starter, dem. rims)	443	393	50
Roadster	319	269	50
Roadster (starter, dem. rims)	414	364	50
Coupe	580	530	50
Sedan	645	595	50
Chassis	285	235	50
Truck chassis	430	380	50
Four-door sedan*	...	725	...

*New model.

The present prices for the entire line are tabulated on this page. The four-door sedan, which is a new offering, remains at a higher level, being a more elaborate product. All other products come down, save the tractor.

It was pointed out this week that the tractor is selling for 11 cents a pound. "Eleven cents a pound for a finished machine of proven quality, selling in an established market, is an achievement the significance of which few realize," said an authority on manufacturing problems. "Why, many a manufacturer is tickled to death if he can get his castings for less than six or seven cents a pound, let alone finishing and assembling them!"

Influence of the latest Ford manoeuver on the so-called Ford competition is problematical. Eventually the larger and more successful manufacturers in the low-priced field are bound to reduce prices in consonance with lower costs. It is scarcely likely that any will be foolhardy enough to "go short" of their markets, however, because the investments involved are far too large to warrant rash speculation. The probability is, therefore, that further adjustments will be deferred.

RUBBER PRICES RISE TO VALUATION PLAN

Stevenson Committee's Report Accepted as Affecting Large Proportion of Plantation Capacity—Special Taxes Will Hold Back Production.

Crude rubber prices advanced sharply in New York this week, reaching 23¾ cents a pound for the finest plantation grades, in response to the expected influence of the British growers' plan for regulating future output by a special scale of duties, and thus turning their business into profitable channels. Present quotations represent a gain of about ten cents from the present year's bottom prices and exceed by more than four cents the previous high for 1922.

This reaction, while largely superficial, indicates the intense interest of the entire rubber industry in the efforts of the British growers to extricate themselves from a threatening and somewhat peculiar situation. Curtailment of production has been demanded by the continued accumulation of surplus stocks since the war, despite attempts at restriction during the period of world recovery. To date, these have failed, and new rubber has continued to come into the market until consumption has again risen almost to the level of production.

This has left the surpluses practically untouched, the only important result of much anxious discussion thus far having been that planting of new trees has practically ceased. As consumption of rubber all over the world is constantly increasing, therefore, it is not unlikely that a point may be reached within a few years, where supplies will be inadequate. This seems more likely when it is recalled that a period of five years is required to bring young trees up to the bearing point.

Despite the probability that the situation would cure itself with time, however, the British interests have been in really difficult straits. The enormous cushion of raw material in the market served as an effectual preventive of higher prices, while at current levels, production costs practically offset the returns from sale. Very marked economies have been put in effect by some of the estates, which it is said, in some instances might have faced the future with comparative calm, but many others, and perhaps a majority, were losing money and saw no way to turn the balance in their favor save by holding back production until the market had righted itself.

As a final resort, a committee representing the British interests was appointed under the chairmanship of Sir James Stevenson, which is author of the plan now proposed, and generally accepted by rubber men as potentially effective. This plan appears in the form of a recommendation by the British Colonial Secretary for a special sliding scale of export duties, the purpose of which will be to penalize excessive produc-

(*Continued on page 936, second column*)

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NEW CLEVELAND CARS CARRY LOWER PRICES

Touring Model Now Lists at $995 and Four-Door Sedan at $1,495—Two-Door Five-Passenger Sedan Replaces Coupe at Price $200 Lower.

Word of new models, which the Cleveland Automobile Co., Cleveland, started in production October 16, indicates that the new cars are priced from $90 to $200 lower than former corresponding types. Thus the new touring model is priced at $995, the four-door sedan at $1,495, and a two-door sedan, an entirely new body style with the line, $1,295.

New and old prices on the Cleveland line compare as follows:

Model	Old	New	Change
Touring (5)	$1,095	$995	$100
Roadster	1,085	1,085	....
Touring-sport	(new)	1,095	....
Chesterfield (sport)	1,260	1,260	....
Two-door sedan (5)	(new)	1,295	....
Four-door sedan (5)	1,585	1,495	90

The two-door sedan displaces the former coupe, and is priced $200 lower than was the coupe. The new body is offered to meet the demand for a five-passenger closed car more nearly approximating open car prices. It is built by Fisher.

It is characterized by a trunk rack at the rear, adjustable windows, dash-controlled ventilator and individual tilting front seats permitting ease of entrance and exit for rear-seat passengers. The color scheme throughout is gray.

The touring and four-door sedan bodies are also Fisher-built. Upholstery in the touring is in genuine hand-buffed leather and in the four-door sedan is plush. The touring-sport differs from the new touring only in equipment. The roadster and Chesterfield sport models are continued at the same price as formerly. There have been no changes in the chassis.

Proves Popularity of Disc Wheels

Indication of the strong favor with which the public looks upon disc wheels is found in the experience of one prominent car manufacturer which regularly equips its cars with disc wheels but at the same time gives an option on wood types. Since the adoption of the steel product, this company has had less than one per cent of its entire output specified for wood wheels.

TOLAND HEADS EASTERN THOMART TRUCK COMPANY

Former Hare's Motors and Packard Men Take Over Truck Distribution

Distribution of the Thomart speed truck in the Eastern territory has been taken over by Eastern Thomart, Inc., Newark, N. J. William G. Toland, former vice-president of sales for Hare's Motors, heads the new company and has associated with him several of his former aides. Among them are W. S. Hill, vice-president, formerly special representative for Hare's; William J. Foster, secretary and treasurer, one-time transportation engineer for both Hare's and Packard in New York; and William Carl Chapman, advertising and sales promotion manager.

The territory covered takes in New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia and West Virginia. Dealers have been established at New York, Syracuse, Rochester, Hornell, Newburgh, N. Y.; Newark, Bridgeton, South Amboy, Jersey City, Bayonne and West New York, N. J.; Hartford, Conn.; and Philadelphia, Erie, Sharon and Beaver Falls, Pa.

"OPTIONAL" AND "EXTRAS"

There seems to be some confusion as to just what "optional" stands for. This is due to an old-time and misleading application of the word as sometimes used in selling cars.

In AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted), the word stands for the only thing it accurately can be taken to mean. In other words, an item is only optional when a choice is given between it and one or more other items *without any extra charge.*

Any car manufacturer or dealer will supply at an extra charge most any equipment or specifications the buyer may specify. Such items are "extras"—not optional.

The Table this week appears on pages 969-71. It is revised to October 17.

2,400,000 OUTPUT IN 1922 IS REEVES' PREDICTION

(Continued from page 925, third column)

ucts to the public, in many cases going below pre-war figures. Motor transport for persons and merchandise was needed and makers lowered prices to meet the reduced purchasing power of the Country.

"Substantial losses were taken by every manufacturer, but the lowered prices, with many cars furnishing more and better equipment, brought the public into the market so that this year will be the greatest in the history of the industry. This, too, with exports only about five per cent although constantly increasing, with a certainty that eventually 20 to 25 per cent of our production will go out to the United States. In 1920 our export of automotive products totaled $320,000,000, going to 114 different countries.

"With 10,500,000 motor vehicles registered on January 1st, it is evident that this Country can use at least 15,000,000 motor vehicles, of which 3,000,000 probably will be trucks. This insures a renewal demand alone of from two to two and a half million power-driven vehicles.

"Gasoline, rubber, and everything needed by the motorist are in ample supply and at constantly reduced prices. The automobile industry, the third largest in the Country, continues to make remarkable progress."

STAR INTIMATES IT WILL NOT CUT PRICE

Downes Points to Scheduled Production Calling for 15 Months' Activity—After Year and Seven Months, Durant Becomes a Leading Producer.

With more business than it can take care of at present prices, there is no inducement for Star Motors, Inc., to meet the Ford cut by immediately reducing prices. If the Ford price reduction this week was Henry Ford's answer to W. C. Durant's challenge in bringing out the Star, as many suppose, then Durant's answer to Ford is sufficient and conclusive.

Naturally, the announcement of the Ford reduction brought forth immediate speculation as to what would happen to the Star. The latter line, offered at the same prices as the former, is generally regarded as the most formidable competition in the field. Besides, Durant is the most notable figure the automobile industry has produced, excepting only Ford himself.

Carroll Downes, president of Star Motors, when asked on behalf of AUTOMOBILE TOPICS what effect the Ford cut would have on his concern, answered directly: "We have at the present time 231,000 bona fide orders for Star cars, together with deposits. It is going to take us 15 months to build and deliver them. We are already shipping from Lansing, where two 500-foot assembling lines are now going up and we will be operating the big Elizabeth factory by November 15." It will be recalled these figures appeared in these columns under date of October 7.

Not only did Durant create tremendous interest when his program for the Star was announced, but that interest has been sustained to a remarkable degree. Since retiring from General Motors almost exactly two years ago, he has not only established a brand new producing group with lines covering the entire market, but has already made a big dent in the sales field. The achievement thus far has been made almost entirely with the cars that bear his own name. The first Durant car was exhibited in the latter part of March, 1921. Today there are but twelve manufacturers in the entire industry building more cars than he.

Falor Opens New Factory

Falor Rubber Co. has moved into its new plant at Bettes Corner, Akron's new industrial center, and begun operations there. While the structure itself was built five years ago, machinery had not heretofore been installed. Production schedule at present is 1,200 tubes a day but before November 1 it is planned to raise the figure to 2,000. The building is two-story, brick, 60 x 200 feet. Within thirty days a paved road will have been completed bringing the center of Akron within eight minutes ride.

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MAXWELL-CHALMERS PATHS NOW CLEARED

Success of Absorption Plan Removes Obstacles to Progress — Chalmers Losses of $1,000,000 Annually Expected to Be Turned Into Profits.

With the acceptance by the Chalmers' noteholders of the reorganization and refinancing plan of the Maxwell Motor Car Co., as reported in AUTOMOBILE TOPICS under date of October 14, the latter concern's chief problem is cleared up. There is no question that Chalmers is a tremendous potential asset to Maxwell but under the relationship existing since the reorganization and prior to the agreement to exchange stock there were many troublous points.

Maxwell owns 95 per cent of Chalmers stock and is also creditor to the extent of more than $4,000,000, but the consolidation thought desirable could not be consummated until the note holders had expressed consent. In the meantime there was uncertainty, dual operation, reluctance to make permanent improvements and an operating loss for Chalmers of $600,000 for the first six months which Maxwell with $1,700,000 net had to absorb.

One of the first effects of the new organization is expected to be the application to Chalmers production of the engineering and sales genius which brought Maxwell to the front this year. Instead of losing more than $1,000,000 annually on Chalmers through divided operation, unified control is expected to show an ultimate profit of at least $2,000,000 from the Chalmers division.

Fred E. Hummel in Charge of Elgin

Fred E. Hummel, a Chicago banker, has been placed in charge of the affairs of the Elgin Motor Car Corp. in an action for receivership. Three banks, each having claims in excess of $10,000, were the petitioners.

Russell Motor Profits Decrease

Profits of $117,499 were shown in the annual statement of the Russell Motor Car Co., Toronto, Ont., as of July 31, 1922, issued this week. This is a decrease of $40,625 from the previous year. The balance brought forward from last year was $1,071,618, making a total for various appropriations, such as dividends, reserve, and balance, of $1,189,118.

Delaware Incorporates Nineteen

Nineteen corporations to manufacture and deal in automobiles and parts and conduct various businesses in connection with the automotive industry were incorporated in Delaware in September. Total capitalization was $5,560,000. This marks a decided slump, there being 48, capitalized at $11,305,000, in August. The relative increase in capitalization in September is explained by the incorporation of a large sales and servicing concern and two taxicab companies. There were also four dealers, seven parts makers and several miscellaneous concerns organized.

Approve Locomobile Sale

Creditors of the Locomobile Co. of America at a hearing before a referee on October 16, gave unanimous approval to the receiver's proposal to sell the plant and assets of the Company at a private sale. Receiver Elmer Havens indicated that W. C. Durant's offer would be accepted.

Canadian Ford Pays 15 Per Cent

Ford Motor Co. of Canada declared a cash dividend of 15 per cent this week, payable October 20. Earnings are declared to be higher than ever before in the history of the Company.

Republic Rubber Progresses

September tire sales of the Republic Rubber Co. ran considerably ahead of any month this year save May and August, according to C. H. Booth, in charge of management. Gross sales, including mechanical rubber goods, were at the annual rate of $7,000,000. Tire sales in August established a new high monthly rate for the year. Operation of the Youngstown tire department is being planned for resumption during the Fall.

DIVIDENDS DECLARED

General Motors Corp.—Regular, quarterly dividend of $1.50 on the preferred stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.50 on the 6 per cent debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.75 on the 7 per cent debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

Fisher Body Corp.—Dividend of $2.50 on the no par common stock; payable November 1, 1922, to stockholders of record October 21, 1922.

Hupp Motor Car Co.—Regular, quarterly dividend of 2½ per cent on the common stock; payable November 1, 1922, to stockholders of record October 14, 1922.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8 per cent preferred stock; payable November 15, to stockholders of record November 1, 1922.

Kelsey Wheel Co., Inc.—Dividend of $1.75; payable November 1, 1922, to stockholders of record October 20, 1922.

Martin-Parry Corp.—Regular, quarterly dividend of 50 cents; payable December 1, 1922, to stockholders of record November 15, 1922.

Moon Motor Car Co.—Regular, quarterly dividend of 25 cents; payable November 1, 1922, to stockholders of record October 16, 1922.

Motor Products Corp.—Regular, quarterly dividend of $1.25; payable November 1, 1922, to stockholders of record October 20, 1922.

Mullins Body Corp.—Regular, quarterly dividend of $2 on the preferred stock; payable November 1, 1922, to stockholders of record October 16, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

United States Rubber Co.—Regular, quarterly dividend of 2 per cent on the first preferred stock; payable October 31, to stockholders of record October 16, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automobile securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended October 18. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	19	18
†Advance Rumely, preferred	54½	54
Ajax Rubber	16	14⅛
Allis-Chalmers	57¾	50¼
Allis-Chalmers, preferred	102	98¾
American Bosch Magneto	43¼	40¼
Case (J. I.) Plow	4⅞	4
Chandler Motor	65	61⅝
Chicago Pneumatic Tool	87¼	82
Cleveland Motors	29½	28⅛
Continental Motors, common	11⅜	10⅜
Daniels Motor	11¼	11
Durant Motors	53	50½
Durant Motors of Indiana	16⅛	13¾
Fisher Body	149½	132
Fisher Ohio Body, preferred	95½	95
Fisk Rubber, common	14	12¾
General Motors, common	15⅛	14⅞
General Motors, preferred	84½	83
General Motors, 6% deb	83½	83⅛
General Motors, 7% deb	96¼	96⅛
B. F. Goodrich, common	35¼	33⅝
B. F. Goodrich, preferred	86¼	84
Goodyear, common	10½	10¼
Goodyear, preferred	28⅞	28
Gray & Davis	12	11
Hayes Wheel	34¼	33¾
Hudson Motors	21½	21
Hupp Motor Car, common	22⅞	21¼
International Harvester, new	112¼	108½
*Kelly-Springfield Tire, common	45⅛	42
Kelly-Springfield, preferred (6)	82	82
Kelly-Springfield, preferred (8)	102½	102½
Keystone Tire	8¼	7⅞
Lee Rubber	27	26
Lincoln Motors	2¼	2
Mack Trucks, Inc	58¾	57½
Martin-Parry	30	28½
Maxwell Motors, Class A	57¾	54⅝
Maxwell Motors, Class B	18	16½
Mercer Motors	2⅞	2½
Moon Motors	17¾	16
Mullins Body	20	20
Parish & Bingham	11¼	11
Pierce-Arrow, common	14¾	13¼
Pierce-Arrow, preferred	35¾	35
Reo Motors	13¾	13¼
Republic Motor Truck	2½	2⅛
Saxon Motors	4⅞	3½
Stewart-Warner Speedometer	52¾	52
Stromberg Carburetor	57	55
Studebaker, common	139⅜	133⅜
Studebaker, preferred	115	115
U. S. Light & Heat	1¾	1⅞
U. S. Rubber, common	57¾	53¼
U. S. Rubber, 1st preferred	101½	99⅞
Westinghouse Air Brake	99½	99
Westinghouse Electric & Mfg	63⅝	62⅛
White Motors	51	50
Willys-Overland, common	7	6⅜
Willys-Overland, preferred	43½	41

†Par $50. *$25.

Prices for automobile securities quoted in Detroit during the week ended October 17 are as follows:

	High	Low
Auto Body	4¼	3⅞
Charcoal Iron, common	1⅝	1
Charcoal Iron, preferred	2¾	2⅛
Columbia Motors	3	2⅞
Commerce Motor	3	3
Continental Motor	11⅜	11¼
Edmund & Jones, common	25¼	24
Ford of Canada	425	395
General Al. & Brass	9½	9½
Motor Products	95	89
Motor Wheel, common	12¼	12
Packard Motor, common	18⅜	17¾
Packard Motor, preferred	93½	91
Paige-Detroit Motor Car, common	25¾	24½
Reo Motor (new)	13⅝	13⅛
Timken Axle, common	28½	27½
Timken Axle, preferred	91	89
Truscon Steel, common	17	17
Truscon Steel, preferred	10	10

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125 M.A.M.A. MEMBERS TO BE IN BIG SHOWS

Eighty-Two Plan Displays at Both National Exhibitions—34 at New York Alone and Nine in Chicago Only—Several Oldtimers Reappear on Roster.

One hundred and twenty-five representative manufacturers of units and equipment are on the list of exhibitors for the New York and Chicago national automobile shows, given out this week by the Motor & Accessory Manufacturers' Assn. Of these, 82 will exhibit at the New York show only and nine at the Chicago event exclusively.

In making known the list of those to whom space has been allotted, General Manager M. L. Heminway calls attention to the fact that several of the important manufacturers who have not taken space at the shows for a number of years past are now listed for the forthcoming events. This trend, he finds, indicates the value accessory and unit manufacturers attach to National Automobile Show weeks in the metropolis.

The roster of those allotted space contains names connected with practically every branch of the industry. A number of newcomers are listed and it is expected that the displays of all concerned will combine to place on view many revolutionary ideas heretofore not widely appreciated by the public although naturally well known to the trade.

U. S. Rubber Calls in Notes

United States Rubber Co. has called for redemption on December 1, all of the $6,000,000 principal amount of its five-year, 7 per cent, secured gold notes issued under the trust indenture of November 6, 1918. Payment will be made in "negotiable form."

Goodrich Bonds Admitted

B. F. Goodrich Co. $20,000,000 first mortgage, 25-year, 6½ per cent coupon bonds, due July 1, 1947, have been admitted to the list of the New York Stock Exchange. Authority to add $5,000,000 on or before July 1, 1923, was also granted. The bond issue was described in these columns under date of July 8 last.

Rubber Manufacturers Make Profits

Sixty of the 96 rubber producing companies made profits in 1921, the U. S. Department of Commerce asserts, despite cuts in the price of products. The showing was partly due to the influence of the forward contract.

Goodyear Answers Refinancing Suit

Goodyear Tire and Rubber Co., on October 13, filed answer to the three suits brought against it attacking the refinancing plan. The Company claims the plan's working has resulted in large savings, involving some $94,000,000 through adjustments. The plaintiff, report of whose suit appeared in these columns under date of August 12, allowed more than a year to elapse before filing suit, the answer states.

STUTZ PLANS REFINANCING TO EXTENT OF $1,500,000

Stockholders to Vote on Bond Issue and Increase in Shares

Stockholders of the Stutz Motor Car Co. of America have been called to a special meeting on November 1 to authorize an issue of $1,500,000, fifteen-year, 7½ per cent convertible sinking fund gold debentures, of which it is intended to issue $1,000,000. The share holders will also be asked to approve an increase in the authorized number of shares by 63,000, of which 33,000 are to be set aside to provide for conversion of the bonds. The remaining shares are to be offered to the stockholders at $20 each in the proportion of three shares of new for each 20 of old.

The convertible bonds will also be offered pro rata to the stockholders. The basis of conversion will be 33 shares of stock for each $1,000 bond. The proceeds of the new financing are to be used in a campaign of development and improvement of the property, details of which are to be announced later. Both the new financial projects will be underwritten.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week Ended October 17 are as follows:

	High	Low
Firestone	79	73
Fisher, Ohio	50	50
Goodyear	11	9½
Grant	½	⅛
Grant, preferred	5⅞	2½
Jordan, common	250	215
Jordan, preferred	85	80
Peerless	60	57¼
Standard Parts	3½	2
Standard Parts, preferred	20	17
F. B. Stearns	22¾	21½
Torbensen Axle	25	24½
W-S-M, common	37	34
W-S-M., preferred	75	65
Winton, preferred	35	28

Prices for rubber securities quoted in Akron during the week ended October 17 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	75	73
Firestone, 6% preferred	94	90½
Firestone, 7% preferred	88	83
General Tire, common	250	250
General Tire, preferred	97	96
B. F. Goodrich, common	35½	33
B. F. Goodrich, preferred (7)	86	82
B. F. Goodrich, preferred (6½)	102½	101¾
Goodyear, common	10½	9½
Goodyear, preferred	29	27½
India, common	90	85
Marathon, common	3	2¼
Mason, common	10	8½
Mason, preferred	52	50
Miller Rubber, common	75	70
Miller Rubber, preferred	100½	99
Mohawk Rubber	15	10
Mohawk Rubber, preferred	80	75

HOFFMANN BEARINGS ACQUIRED BY NORMA

English Products to Be Made in This Country—Line Includes Roller, Ball and Thrust Types—Being Imported Pending the Erection of New Plant.

American patents and business of the Hoffmann Mfg. Co., Chelmsford, Essex, England, manufacturer of roller, ball and thrust bearings, have been acquired by the Norma Company of America. A plant is to be erected for the American production of the Hoffmann products and these will be offered in addition to the Norma bearings line. In the meantime, the English bearings are being imported and sold through the regular Norma engineering service.

For the past year the Norma company has investigated the American market for roller bearings of the high quality for which the Hoffmann type has been reputed abroad for years. It reports having found "a distinct demand for high-grade units of the roller type, interchangeable as to dimensions with standard ball bearings, but having a much greater load capacity."

Experiments, tests and service applications in great diversity convinced the Norma company that the Hoffmann conforms with every requirement. The Company further states that the bearing offers distinct advantages where heavy loads are to be carried with high anti-friction efficiency.

Trexler Increases Capitalization

Capitalization of the Trexler Co. of America has been increased from $200,000 to $1,500,000 through a stock issue to that amount. The issue has been underwritten by New York brokers.

Keystone Offers Rights

Keystone Tire & Rubber Co. will offer to stockholders at the close of business on October 24 the right to subscribe at $6.50 per share for common stock to the extent of one share for each two held. The period in which to exercise "rights" expires November 8.

Three More Rubber Companies

Three rubber companies with a combined capitalization of $9,540,000 were incorporated in Delaware during September. They were the Congo Rubber Co., $1,000,000; the Intercontinental Rubber Products Corp., $6,040,000, and the United and Globe Rubber Corp., $2,500,000.

Continental Motors Meeting Postponed

Continental Motors Corp. stockholders' meeting scheduled for October 18 was postponed. October 25 is the new date set.

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FOUR-WHEEL BRAKES TO BECOME A FACTOR

Will Attain Importance in This Country Within Two Years, Is Prediction—European Example Has Weight—Engineers Strongly in Favor of It.

Four-wheel brakes are destined to become an important factor in the American automobile market within the next two years. Of this there seems small doubt in view of development work that has been going on for some little time. Naturally, the higher-priced lines will be the first to signalize the trend, but it is evident that before the movement stops it will sweep in cars in the medium-priced field. In fact, it would not be surprising if another year found this class of equipment specified on several of the leading lines selling as low as $2,000.

Racing experience, plus the vogue of front brakes among users of de luxe cars, has afforded the incentive on which a good many engineers have gone actively to work. Technical men believe braking all around is a good thing for a number of reasons, but heretofore have had difficulty in convincing sales departments that this feature would add enough to the value of the car to make it more salable, and so justify the added cost.

The turning point came when American engineers, in about the usual number, visited the Paris Salon and there found the front-wheel brake in the ascendant. "Front brakes dominate the show," one of them immediately cabled his factory. Features that really improve the performance of the car are in greater demand today than they have been since the war, especially for lines selling above the popular range. This is one reason why the front wheel brake is believed to be coming ahead in this Country.

Another reason for the more favorable attitude of engineers and executives toward it is the incontestable fact that the braking equipment of many cars leaves much to be desired. As braking effect depends on friction between the wheels and the road, and this, in turn, on the weight on the wheels, it follows that a car having two-thirds of its weight on the rear wheels can attain, with rear-wheel brakes, only two-thirds of the maximum possible retardation due to its weight. The same car with four-wheel brakes, would, therefore, possess fifty per cent greater maximum braking ability.

The considerable favoritism of the front brake among experienced users, however, is due to the better control which it affords on slippery pavement. Cars with four-wheel brakes not only pull up more quickly, but are easier to handle in awkward situations, and correspondingly safer. This, at least, is the argument of those who have been won over to them.

The idea is old, of course. England had a wave of enthusiasm for it some years ago, but manufacturers were reluctant to take it up, perhaps because the mechanical obstacles to be overcome are not small. The Italian engineers became enthusiastic about it, however, and the principal makes there, including Fiat, Itala, Isotta-Fraschini and Spa, boast of it today. Then it worked its way into France, where it is used on more than twenty per cent of the 1922 models, despite the very marked leaning of Continental designers to use a combination of rear-wheel and transmission brakes.

If all the models produced on the Continent at the present time were to be scanned, probably sixty per cent would be found to have one brake on the rear wheels and one on the gearset. Less than twenty per cent would have front-wheel brakes, and of these three out of five would have brakes on all four wheels. The remainder would have brakes on all wheels and a transmission brake besides. The 1923 lineup tells a different story.

Up to the moment, the Duesenberg Straight Eight has been the only American stock car to have standard four-wheel brake equipment. One new car, the Leon Rubay, has it. In addition, it has been applied on special order to a number of high-grade cars in the hands of particular owners. The real significance of what is going on, however, is said to be concealed behind the closed doors of experimental rooms.

Moon "6-40" Touring Now $1,195

Moon "6-40" five-passenger touring model is now listed at $1,195, or $100 lower than the previous list. Other types included in the smaller six line for 1923 by the Moon Motor Car Co., St. Louis, are: Tourlux (touring with California top and side enclosures), $1,445; coupe, $1,585; and five-passenger four-door sedan, $1,695. Five types are offered on the "6-58" chassis, they being: five-and seven-passenger touring, $1,785; sport-touring, $1,885; seven-passenger sedan and four-door Petite touring-sedan with trunk, $2,485.

U. S. CENSUS REVEALS STATE OF INDUSTRY

Automobile Business of 1921 Shows Contrast with 1919 Turnover—More Engaged in Trade Last Year But Output Was Less and Valuation Smaller.

Department of Commerce statistics forming the census of 1921 for the automobile industry, issued this week, form a basis from which to draw a considerable number of interesting comparisons, especially with the condition of the trade in 1919. While largely of statistical value only, the census forms one of the few reliable sources of information regarding any industry.

Thus it is shown that whereas in 1921 368 establishments reported, in 1919, there were but 315 manufacturers of automobiles, parts, accessories, etc., listed. Nevertheless, the assigned value of the products of the 315 was about $750,000,000 more than that given to the output of the 368. The 1919 figure is $2,387,903,287; the 1921 figure $1,666,140,189.

The number of automobiles decreased in 1921 as compared with 1919 and this partly explains the loss in valuation. In 1919 the makers of automobiles turned out 1,868,310 while in 1921 1,585,395 were placed on the market.

The distribution of manufacture is another interesting item in the lengthy review of the Department. Of the 368 reported in 1921, 64 were located in Michigan, 50 in Ohio, 39 in Illinois, 30 in Pennsylvania, 28 in Indiana, 26 in New York, 25 in California, 19 in Wisconsin, 12 each in Massachusetts and Missouri, 8 in New Jersey and the balance scattered through 21 States and the District of Columbia. Thus 32 States of the Union possess within their borders from one to 64 businesses engaged in production for the automotive industry.

The combined output of all establishments was approximately only 58 per cent of maximum capacity, based upon a demand requiring full running time. The accompanying table sets out the salient facts of the census.

THE AUTOMOBILE INDUSTRY, 1919-1921

	1921 (1)	1919 (1)	Per Cent of Decrease
Number of establishments	368	315	*15.4
Persons engaged	164,999	242,922	32.1
Proprietors and firm members	35	36	2.8
Salaried employees	22,061	32,327	31.8
Wage earners (average number)	142,903	210,559	32.1
Salary and wage payments	$278,912,691	$379,381,674	26.5
Salaries	57,972,175	67,215,804	13.8
Wages	220,940,516	312,165,870	29.2
Contract work	986,193	198,142	*397.7
Cost of materials	1,104,497,012	1,578,651,574	30.0
Value of products	1,666,140,189	2,387,903,287	30.2
Value added by manufacture (2)	561,643,177	809,251,713	30.6

*Increase.

(1) Figures for 1921 do not include establishments reporting products under $5,000, thus excluding 9 establishments which employed 13 wage earners, and in the aggregate reported products to the value of $34,819. The figures for 1919, however, include 7 establishments of this class which employed 6 wage earners, and reported products to the value of $24,652.

(2) Value of products less cost of material.

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TIRE DEALERS FIND MAKERS IN ACCORD

Conference Between Dealers' Body and Rubber Association Irons Out Problems—N. T. D. A. Appeals to Dealers for Fullest Cooperation.

Fullest cooperation between the National Tire Dealers' Assn. and the Rubber Association of America towards solving the problems of the tire industry has developed, if indeed it did not already exist, at the committee conference between the two bodies in New York last August. This is revealed for the first time officially in a report issued this week by R. F. Valentine, president of the dealers' organization.

Having at last established a representative medium through which to meet with manufacturers, the N. T. D. A. is now appealing to dealers for support. The response to the questionnaire sent out by the association outlined in AUTOMOBILE TOPICS under date of July 1, has been gratifying, Valentine declared, interest expressed by those consulted being in excess of expectations.

Turning to the negotiations themselves, Valentine points out that one of the necessary steps towards stabilizing the industry is the weeding out of the "crooks and gyps," There is an equal supply of "dirty linen on both sides," he declares, and the time is not far distant when the manufacturer will look more closely into the integrity of applicants for dealerships and when the reputable dealer will want to "know the manufacturer he represents." Except in a few cases, territorial restrictions will become more rigid and the tire makers will demand exclusive representation, he predicted.

Continuing to the effect that never before has opportunity been so great, Valentine urged a firmer grasp of future possibilities. Expressing the gratification of the leaders of the movement in the culmination at Cleveland, he sketched the progress of the negotiations, from the August meeting in New York city, when the following committees "freely and openly" discussed their problems: R. F. Valentine, Frank Zeman, R. J. Walters, George J. Burger, representatives of the tire association: Messrs. Shugart, Mowe, Broadwell, Miller, Plumb, Duncan, Phelps, De Lisser and Fairbanks, representing the tire makers.

At the meeting it was agreed that the dealer was not only essential to the tire industry but that with "proper regulation and cooperation he was eminently the most satisfactory and economical method of distribution." The points discussed and the results of the deliberations may be summarized as follows:

Adjustments: Rubber Association assured that every legitimate means would be used to educate public to new policy and persuade companies to stop advertising mileage.

Equipment: Makers report taking all precautions to prevent purchase of larger equipment quantities than actually required and to discourage resale of equipment stocks.

Car Manufacturers: Future contracts probably to be based on four tires, leaving fifth to dealer. Only few makers now on five-tire basis.

National and Commercial Accounts: Makers' sales organizations to consider ending of such accounts.

Price Lists: Dealers urge discontinuance of all but consumers' list. Consensus of opinion that if makers found issuing of other lists necessary, distribution should be carefully controlled.

Distribution: Dealer practices to come under closer scrutiny and flagrant abuses would not be tolerated. Cooperation to this end mutually agreed.

Production: Dealers question practice of any one company producing more than one grade and line of tires and marketing same under separate agreements and contracts. One maker replies that all such products soon would be offered through one channel.

Meetings: To be held whenever thought necessary.

Valentine, in closing the meeting, put the work squarely up to the dealers. Complimenting them on their work in the past, he declared the N. T. D. A. had aided and urged—sale of seconds to bona fide dealers only; basing of equipment on four tires; absorption of war tax; reducing direct sales to commercial and national accounts; increasing profit margin; ending mileage adjustments and mutilation of tires returned for adjustment. Dues remain at $6 yearly, until November meeting when recommendation to raise them to $15 and heighten standards of membership qualifications will be made.

Tire Dealers Set Convention Date

Dates for the third annual convention of the National Tire Dealers' Assn. have been chosen. The meeting will be held at Milwaukee, November 14, 15 and 16 at the Hotel Pfister. R. F. Valentine, president, has accepted the program arranged by the Wisconsin Tire Dealers' Assn., of which Herbert Runkhe is president. Tire changing contests will be a feature of the meeting, and Western "Champion" Carl Metz is planning to beat the record of 3 2/5 seconds for applying a Ford casing recently hung up by C. A. Paine of Philadelphia.

Hubbell Tire in Receivership

Hubbell Tire & Rubber Co., Newton Falls, O., has been placed in receiver's hands. Announcement was made Oct. 6.

FLOOD OF RUBBER IN SEPTEMBER REPORTED

Almost Unprecedented Figure Causes Concern Both Here and Abroad—Total of 28,288 Tons Only Exceeded Twice in Past Five Years.

Imports of crude rubber into the United States during September reached the highest figure for any one month in five years, with only two exceptions. Only exceeded by February and March imports in 1920, and otherwise not even approached, save in December, 1921, the total was 28,288 tons. Furthermore the September sum added to the preceding eight months of 1922 results in a total for the year to date greatly exceeding any entire year in the history of the industry. The exact figure for the first nine months is revealed to be 205,655.

The new flood of raw rubber has added to the seriousness of the problem affecting the users of the material, both in this Country and abroad. As recorded elsewhere in this issue, the British government has at last taken steps to curb the production of crude, tentatively agreeing to establish a sliding scale of duties which is only to be curtailed or expanded if the resultant market prices are considered fair. American consumers and growers are likewise contemplating plans for restriction of the big tide of rubber reaching these shores, although nothing definite has been announced as to a working scheme as yet.

CRUDE RUBBER IMPORTS

Month of September

	1922 Tons	1921 Tons
Plantations	27,899	14,653
Paras	342	416
Other sources	47	19
Totals	28,288	15,088

Returning to September's almost unprecedented figures, it is found that the increase is largely explained by receipts from plantations hitherto somewhat inactive.

For example, Batavia, Belewan-Deli and Sourabaya each exported more than 1,000 tons to the United States while Malacca, Penang and Port Swettenham each exceeded the 2,000-ton mark. These together with Colombo, with 2,695, and Singapore with 13,214, a new high mark, made up a total of 27,899.

Brazilians fell off again. Whereas in August Brazil sent 1,175 tons, in July 575, and in June 861, it touched the low mark of only 342 tons, mostly from Para, in September. Africans were about normal, 47 tons.

For up-to-date and accurate car information consult the weekly-revised Table appearing on pages 969-971.

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ELECTRICAL TAXICAB SHOWN AT N. Y. SHOW

Exposition at Grand Central Palace Serves to Introduce Model Soon to Appear on Streets—30 Classes of Vehicles Take Part in Parade of 150.

Displays of electric trucks, passenger cars and industrial trucks made up one of the important departments of the New York Electrical and Industrial Exposition, held during the week of October 7 to 14 at the Grand Central Palace. Occupying more than half the second floor of the building, they formed a distinctive exhibit.

The show served to introduce to New York its first electric taxicab. The vehicle, one of fifty being built by the Rauch and Lang Corp. for the Electrotaxi Corp., will go into service on November 1. The first ten have been completed and the balance will follow as the business increases. The cabs are painted a combination of two tones of grey. Wheel base is 102 inches and the control is entirely by means of a hand-operated lever. Their maximum speed is twenty-five miles an hour. Operating radius of 120 miles a day is accomplished by means of an interchangeable battery system. The battery cradle is especially designed for rapid changing, and it will be possible to remove an exhausted battery and replace it with a fresh one in about the same time that would be required to fill up a gasoline tank. The insurance companies have given a 25 per cent reduction in the premium for liability insurance on these vehicles.

On Tuesday, October 10, the exhibitors held an electric truck parade, the first ever undertaken in New York. More than 150 vehicles participated, rolling down Fifth avenue in a column that extended nearly a mile. Although the parade was held under the auspices of the manufacturers, the trucks themselves were entered by users and owners. Eighty different owners representing thirty different classes of service put their delivery equipment in the parade. Several years ago Fifth avenue placed a ban on commercial vehicles of all sorts and restricted itself exclusively to passenger cars. This ban was temporarily lifted to permit the holding of the parade. Following the parade there was a perceptible increase in interest in the vehicles shown at the Electrical Show.

Among the vehicle exhibitors at the show were the Milburn Wagon Company, the Baker, Rauch and Lang N. Y. Corporation, the Commercial Truck Company, O. B. Electric Vehicle, Inc., the Walker Vehicle Co., the Ward Motor Vehicle Company, the Steinmetz Electric Motor Car Corporation, and the Kelland Motor Car Co. Storage batteries, motors, charging apparatus and accessories were exhibited by the Cutler-Hammer Mfg. Co., the Edison Storage Battery Co., the General Electric Co., the Philadelphia Storage Battery Co., the Westinghouse Co., and the Electrical Repairs Co.

S. A. E. Western Sections Meet

C. F. Kettering addressed the joint meeting of the Mid-West Section of the Society of Automotive Engineers and societies of mechanical, civil and electrical engineers at Chicago on October 20. George M. Graham, vice-president of the Chandler Motor Car Co., the same night was before the Cleveland section of the S. A. E., stressing, in a speech, the necessity of close contact between the sales and engineering branches of the automotive industry.

Engineers Study Weight Reduction

Laurence H. Pomeroy, the famous British designer, presented to the Society of Automotive Engineers' Buffalo Section on October 19, a paper on theoretical considerations which are fundamental in obtaining light engines and chassis. Pomeroy has specialized in the design of engines and cars employing aluminum alloys of light weight and great strength, his work leading him into developments far ahead of current practice which have already stimulated wide interest among engineers and manufacturers.

SALESMEN'S COMPETITION HELD AT CLOSED CAR SHOW

Four of Those Acting as Judges of Merits Become Purchasers of Cars

Putting into effect the system of awarding prizes to salesmen who, in the opinion of sundry purchasers and visitors, were best qualified, proved a success at the New York Closed Car Show, according to Tom Moore, show manager, and executive secretary of the Automobile Merchants' Association, New York. Moore, in putting into effect the scheme, which originated at the Chicago national show last year, stood by the entrance and prevailed on visitors who appeared to him to be possible buyers to act as judges for each particular night.

Salesmen winning the prizes during the seven nights of the show included members of the forces of Jordan, Gray, Peerless, Bay State, Kissell, Durant, Stutz, Oldsmobile, Maxwell, Hudson, Nash, Oakland, Cunningham, Stanley, Buick, Cadillac, Marmon and Chevrolet in that order, three to the evening. Four of the twenty judges bought cars.

Pickens Joins Tuscora Rubber

B. F. Pickens has been appointed sales manager of the Tuscora Rubber Co., Dover, O. He was formerly connected with the Amazon Rubber Co.

DETROIT CLOSED CAR SHOW MAY BE ANNUAL

D. A. D. A. Finds Exhibition Popular and Considers Holding It Every Year—Thirty-Eight Makers Display 110 Models in General Motors Building.

Thirty-eight makers of automobiles exhibited their closed models this week at the Detroit Automobile Dealers' Assn. closed car show which opened in the General Motors building on October 17. The demand for space was greater than had been anticipated and Manager H. H. Shuart was forced to add one of the annexes to accommodate the more than one hundred cars displayed. Large attendance rewarded the efforts of all concerned.

The show of the Association comes as the outgrowth of the closed car week put on by the dealers a year ago, when exhibitions were given in the private salesrooms. The interest aroused at that time convinced the participants that a "regular show" would be found practical and profitable. Three years ago the D. A. D. A. staged a closed car salon but the conditions prevailing at the end of 1920 forbade its repetition. Shuart now believes the event will be held every year in the future.

One feature of the show this year was that all conversions and so-called makeshifts were barred. No California-top types were permitted. Altogether 110 individual models were displayed. Many showed the soft-top construction and dealers reported unusual interest in these. Several models built for traveling and other business men were shown.

Akron Stages Closed Car Show

Edward S. Jordan, president of the Jordan Motor Car Co., formally opened Akron's first closed car exhibit and "Fall Automobile Style Show" on October 18. More than 40 models were on exhibit when the show, which closed October 21, was opened. Twenty-one dealers participated in the event.

Hardware Jobbers Optimistic

Hardware jobbers dealing in automobile accessories expressed unanimously an optimistic view of future sales in that department of their trade when the annual convention of the Automobile Accessory Division of the National Hardware Assn. was convened at Atlantic City, N. J., this week. A. H. Decatur, of Boston, president of the Division, declared every hardware store in the Country should have a department devoted to sales of automobile accessories and that there should be maintained a school of education for salesmen who have charge of such departments.

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RATES ON CARLOADS TO HAWAII TO BE CUT

Trans-Continental Freight Bureau Proposes Increasing Carload Minimum—New Charge to Be $3.15 Per Hundred Instead of $3.65 as It Is at Present.

Proposal of a decrease in rates on automobile shipments from eastern points in the United States to the Pacific Coast ports for the Hawaiian Islands, has been made by the Trans-Continental Freight Bureau. The plan, which has received the attention of the Department of Commerce and the approbation of such manufacturers as have been notified, calls for an increase in the minimum carload weight to 16,000 pounds from the present 10,000, and a reduction in the rate per hundred pounds.

At present the carload rate is $3.65 per 100 pounds. The proposed cut is to $3.15. A separate rate is provided for automobiles, freight, k. d., boxed; for automobiles, chassis, freight or passenger, k. d., boxed; and for tractors in the same classification. On these commodities, the minimum weight is 20,000 pounds per carload and the rate $3.05 per 100 pounds. These changes will not be effective until they have been published legally, it is pointed out by the Department, in its bulletin.

Surveying the foreign field this week, the Department's findings may be summarized as follows:

France: Automobiles imported into France during the first seven months of 1922 totaled 2,388, of which 1,986 were from the United States. The total weight exceeded 5,143 metric tons, which, compared with 2,219 metric tons imported during the same period in 1921, reveals a renewed demand for foreign-made automobiles in France. Exports of motor cars from France have fallen off somewhat, the total weight for the first seven months being 11,472 metric tons, as against 14,829 for the same period in 1921. For the same period this year, motorcycles valued at 1,814,000 francs were imported, while for the first seven months of 1921 their value was 1,598,000 francs. On the other hand, motorcycles exported during the same period in 1922 were valued at 2,237,000 francs, as compared with 6,310,000 francs for the first seven months of 1921.

Great Britain: The Society of Motor Manufacturers and Traders are now making plans for the 1922 motor car exhibition to be held at the White City and Olympia, in London, November 3-11. Owing to the fact, it is said, that the general industrial situation of the country does not warrant a commercial motor exhibition this year, the usual October commercial show will not be held; instead, manufacturers will concentrate upon the November display, and no efforts will be spared to make this the most interesting and comprehensive of any show so far held in the United Kingdom. Prices will be lower and in some cases will nearly approach the pre-war figures. Special attention will be given to the latest developments for eliminating weight of engine and at the same time increasing its capacity and speed, for increasing the comfort and smoothness of running and for reducing the consumption of gasoline, and the wear on the tires. Only those firms holding membership in the Society of Motor Manufacturers and Traders, which includes practically all representatives of American motor vehicles in the United Kingdom, are eligible to exhibit.

Spain: The storage-battery business in Spain is largely in the hands of two well-known American battery manufacturing companies. A French battery offered has not proved to be very popular, and the Germans have just entered the market with a product whose price is so high that it is doubtful if they can make any headway. Although the entry of a new battery into the Spanish market is rendered difficult by the fact that when an old battery is used up it is generally replaced by a new one of the same kind, frequently with a discount on the return of the old one, there is a market for an American storage battery in Spain, provided the field is properly approached. The best method undoubtedly would be for the manufacturer to send a representative rather than to attempt to get orders by correspondence.

Mexico to Tax Automobiles

Automobiles, which had not been taxed heretofore, are now subject to a 10 per cent ad valorem import duty. The tax exemption had been decreed several years ago by Carranza in the belief that it would help the farmers and business in general.

British to Restrict Rubber Output

Government intervention to assist the rubber trade in Ceylon, the Malay States and the Straits Settlements by graduated measures of restriction has been approved by the Colonial Office Committee of Great Britain. The scheme would allow the export on minimum duty of 60 per cent of the standard production as the first stage, provided extensive technical detail in regard to results in market prices is fulfilled.

Mexicans Like Buicks

Buick Motor Co. has received an interesting sales report from Leishman & Co., distributers for Mexico. This concern delivered at retail 43 Buick cars within a period of 25 days. It adds that there is no letup in demand and expectations are for an even larger sale in October.

LOOSE-LEAF FORM FOR FOREIGN NEWS URGED

N. A. C. C. Asks Hoover to Provide Commercial Information in Shape to Be Saved—Pay Compliment to Secretary's Improvements in Publication.

Systematizing of "Commerce Reports" by adoption of loose-leaf manual form has been suggested to officials of the Department of Commerce by the National Automobile Chamber of Commerce. J. Walter Drake and G. F. Bauer, chairman and secretary, respectively, of the Foreign Trade Committee, and Gordon Lee, chief of the U. S. Automobile Division, presented the matter.

"This change, if effected, will be a distinct advantage to business men generally," the N. A. C. C. points out. "Valuable information, now perishable in many instances, could readily be stored for future use in devising foreign sales campaigns that, based on facts, would be directly reflected in domestic prosperity. Commerce Reports in its present form, represents a material advance over the publication issued prior to appointment of Secretary Hoover. This advantage has resulted from the grouping together of all foreign trade information that pertains to a certain class or classes of commodities.

"Much more, however, can still be done to make the publication of increasing value to American business. Timeliness, accessibility of information and saving in effort by subscriber to keep material available for future use, are factors still needing consideration. Loose-leaf manuals issued by the different commodity and economic divisions of the Bureau of Foreign and Domestic Commerce offer the solution. By their use, a report on a specific subject received today at the Department of Commerce from an American trade official abroad, could be condensed at once, edited, multigraphed and mailed to subscribers before the day is over. The report, because of its timeliness, becomes of greater value to business, than if it were retained and published at end of the week and is therefore the thing to be desired.

"Accessibility to information for future use, would be also readily afforded under the manual method. On each loose leaf appears information pertaining to but one country and one main phase of an industry. When the country differs, or even the subject of the report begins to change, additional sheets are prepared to afford segregation of material according to different countries and character of information. The sheets, before being sent out would be indexed by country and subject, and thus given a fixed place in the manual where it may always be consulted as occasion demands."

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UNCLE SAM TO SPEND HUGE SUMS ON ROADS

Three Billion Dollars in Twenty Years Will Help Build 180,000 Miles, It Is Planned — One-Third of Proposed System Now Under Construction.

Fifteen to twenty years of building good roads lie ahead of the United States. Under the program which the Country has adopted there will be built, during that time, 180,000 miles of improved highways which will constitute the Federal-aid highway system and an equal or greater mileage of State and local roads. When the great job is done, the transportation facilities of the Country will far exceed those of any other nation, past or present, in the world.

Officials of the Bureau of Public Roads place the aggregate cost of the Federal-aid program alone at about $3,000,000,000, spread over the twenty-year period. They base this estimate on an average cost of $17,000 per mile. The average cost, in turn, takes into consideration all classes of improved roadways from the cheapest to the most expensive types. Approximately one-third of the proposed system, or 60,000 miles of improved highways, already are either built or building.

The program is a new one. Up to comparatively recent years, road-building in the United States had been conducted without special regard to a national system. Highways had been constructed where needed without considering whether they would link up in the most effective manner with the whole network of roads to be spread over the Nation. Engineers had sought more to meet immediate and local demands than the broader requirements of the States and nation.

The present Federal-aid road-building program, officials of the bureau state, will contemplate the construction of only such roads as fit into the national program and contribute to the national system. At the same time the roads will be so selected as to serve the most important local requirements. With marked modifications, the system adopted in building the railways of the Country will be borne in mind in the construction of the Country's new highways. There will be main lines of highway communication between centers and thousands of miles of feeder roads, reaching back into the more sparsely settled regions and into the rich agricultural sections, to tap areas whose population and products will flow over the new system.

Strikes Delay Model Lincoln Way

Progress in the construction of the ideal section of the Lincoln Highway has been materially delayed by the strike of railroad men and the resultant delay in receiving material shipments. This bit of road, between Dyer and Schermerville, Ind., is being built to demonstrate the latest theories in road construction. It was reviewed in AUTOMOBILE TOPICS under date of August 26. Great care is being taken in the work and cold weather may delay completion until Spring.

Gardner Arrives in Cincinnati

Signalizing the arrival of Harry T. Gardner in Cincinnati as general manager of the Cincinnati Automobile Dealers' Assn., comes an announcement this week from that organization regarding its activities in attractive bulletin form, evidently the first of a series and typically Gardner-ish in "bright quip and merry jest." Gardner, former general manager of the New York Automobile Trade Assn., and passenger car sales manager for the New York Packard distributers, is well known to the trade and his former associates in the Metropolis regret his leaving though congratulating him on his new connections.

RUBBER PRICES RISE TO SCHEME FOR VALORIZATION

(Continued from page 928, third column)

tion and at the same time stabilize prices.

The plan is based upon the assumption of a total world consumption of 350,000 tons. Upon quantities up to 210,000 tons, or 60 per cent of the total amount, an export duty of a penny a pound would be levied. On each additional five per cent another penny would be added to the duty, up to the full amount, which would take a duty of one shilling a pound.

The plan has been devised with the idea of stabilizing prices in the equivalent of 25 cents a pound or thereabouts. It also has the merit of offering large additional revenues to the Eastern producing countries, which are at present sadly in need of them. Before the war the Federated Malay States and Dutch East Indies, where most of the plantation rubber is grown, had attained great wealth through the production of both rubber and tin. With the war, however, their fortunes turned, the result being serious economic disturbances, in consequence of the depletion of their principal industries.

Great Britain's interest in the project thus comprehends both the stabilization of a very important branch of her own domestic trade, since a large proportion of the world's rubber is bought in London, and also in some degree the advancement of her East Indian Colonies. So far as the British interests are concerned, therefore, the Stevenson plan, as it is called, practically ceased to be a project and became a fact.

Cooperation with the Dutch was sought, but various considerations intervened. However, British-owned estates in Dutch possessions are favorable to the plan and may be counted as practically in accord with it. Thus, it is said that probably 60 or 65 per cent of the world's rubber growing capacity will be directly affected. Nevertheless, in its actual application, it is pointed out that long-time commitments may figure, and that doubtless some of the estates will be found to have contractual obligations which they will set up as a pretext for evading the new duties. In other words, the full effect of the plan is somewhat difficult to forecast.

Apart from the many technicalities involved, American perspective shows the project open to several objections, though it should not be supposed that any sort of opposing influence has been brought to bear through the enormous consumers in this Country, which have been entirely neutral. In the first place, it is pointed out that the rubber business is recovering far more rapidly than had been anticipated, thus tending to shorten the time until need for restrictive measures will be abolished by the complete absorption of existing rubber stocks.

The ultimate solution of the problem is assured, as already indicated, by the continued rise in consumption of rubber, not only in tires, but other uses as well, including many new ones. Furthermore, the cessation of plantation development by many, though not all of the estates, indicates a possible reversal of conditions before 1930.

Total consumption of rubber in the United States during the first half of 1922 was indicated at about 114,000 long tons. Of this some 94,000 tons went into tires and tire sundries, according to the figures of the Rubber Association of America, summarized in these columns on September 23. Imports for the first eight months of the year exceeded 177,000 tons, being greater by 3,000 tons than last year's total.

Outside of the physical relations involved, however, it is observed that intervention by the Government, as in all such cases, will tend to establish it as a sort of refuge to which the British growers can fly whenever their problems become at all pressing. This relief of direct responsibility, it is thought, may tend to discourage economical management and invite reckless administration.

Both of these tendencies are recognized as working toward higher prices for rubber in the more distant, as well as the immediate future. The prospect, however, is viewed with equanimity, especially by those interests in this Country whose foreign relations are permanently established, and therefore reasonably secure.

As a matter of fact, the existence of the heavy stocks which have so burdened the British constitutes an abundant safeguard against a rise to prohibitive levels during the next few months. Furthermore, higher prices would aid in stabilizing the business, because with prices practically even with costs rubber has been too cheap for the good of the industry. Its very cheapness has invited great numbers of small and inexperienced manufacturers to spring up, having few resources and no established aims. The demoralization of the tire trade during the past year, of course, was largely ascribed to this cause, and its removal is viewed by the older and better established interests as a necessary step in the restoration of a proper industrial balance.

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PROGRAM FILLED FOR HIGHWAY CONFERENCE

Industry to Take Prominent Part in Three-Day Meeting at Washington—Jordan and Graham Among Speakers to Discuss Engineering Education.

Speakers have been named for the second national conference on education for highway engineering and highway transport, to be held in Washington October 26-28 under the auspices of the Highway Education Board, as noted previously in these columns. Prominent on the program are Edward S. Jordan, president of the Jordan Motor Car Co., and George M. Graham, vice-president of the Chandler Motor Car Co. They, as representatives of the National Automobile Chamber of Commerce, will present the industry's side of the highway question.

Senator Pat Harrison from Mississippi will open the conference on Thursday morning, October 26, at the New Willard with an address on the relation of adequate highway transport facilities to national progress. Major General Lansing H. Beach will follow with the twin subject, the relation to national defense. Thomas H. MacDonald, chief of the U. S. Bureau of Public Roads, and Edward S. Jordan will discuss highway engineering and highway transport fields and their need for trained men.

MacDonald, who as chief of the Bureau is charged with the administration of Federal-aid road funds, is one of the foremost planners for a vast system of national highways. Jordan, of course, will speak for the industry which manufactures the vehicles that will use the roads. Dr. C. F. Scott, Yale University, president of the Society for the Promotion of Engineering Education, will close the morning session with a talk on education for leadership.

Lending an international aspect, A. W. Campbell, commissioner of highways for Ottawa, will tell of the trend of education for highway engineering and transport in Canada. Arthur H. Blanchard, professor of highway engineering and highway transport at the University of Michigan, and T. R. Agg, professor of highway engineering at Iowa State College, will discuss the trend of similar education in the United States.

At the evening dinner, Dr. John J. Tigert, U. S. Commissioner of Education and also chairman of the Highway Education Board, will preside. Among the speakers at this session are George M. Graham and Dean A. N. Johnson, College of Engineering, University of Maryland.

Although the three-day conference is planned largely for educators concerned with the problems of revising courses of study for the young engineer about to enter highway and automotive fields, there will be ample interesting features for laymen concerned in the proper construction and financing of highways. Among one of these will be an address by W. H. Lyford, vice-president of the Chicago and Eastern Railway, on co-operation versus competition between motor truck and railroad transportation. Another fact which lends importance to the meeting is that it is estimated there will be $742,000,000 available this year for highway construction and maintenance.

Teetor Mfg. Co. Changes Name

To avoid further confusion between its firm name and the product of the Indiana Piston Ring Co., makers of "Teetor" piston rings, the Teetor Manufacturing Co. has changed its name to the General Piston Ring Co. The General Company has been making rings for twelve years and merchandises to manufacturers only.

PENNSYLVANIA RUBBER TO LET JEANNETTE HAVE HOMES

Houses Built for Employees Offered to Relieve Housing Congestion

Housing conditions in Jeannette, Pa., have become so acute that the Pennsylvania Rubber Co. has decided to open to the general public for either rental or purchase, the sixty houses originally built in Paruco Park, a suburb, to take care of its own employees. Jeannette looks upon the rubber company's decision with high favor as it will immediately relieve its housing congestion and at the same time provide a new outlet for expansion of the community.

All of the houses in Paruco Park are detached, with front and back yards, and are built of brick, stucco and wood. They contain modern plumbing, hot-air furnaces, gas and electric light. The houses are of varying designs and are placed at angles with stretches of grass sward in the manner of tiny parks. The architectural and landscape effects have won for the colony the local reference "Picture Suburb."

Steel Makers Rely on Trucks

Use of motor trucks as emergency haulers for the iron and steel makers has reached the proportions obtaining during the outlaw railroad strike of 1920, an authority in that field reported this week. Shipments by truck have been made as far as Detroit from the steel making centers.

Harvard to Study Automobile Trade

John C. Long and O. P. Pearson will represent the National Automobile Chamber of Commerce at the fourth annual conference of the Harvard University Committee on Economic Research, to be held at Cambridge, Mass., October 20 and 21. The relation of general business to the automobile industry will be one of the subjects brought out in the discussions.

TO INVOKE BAY STATE LAWS ON TAIL LIGHTS

Not One in a Hundred Motorists Observe Statute, Registrar Finds—January 1 to See Drive Against Violators—Owners Must Be Educated.

Not more than one driver in a hundred in Massachusetts is now observing the new tail light laws, according to Frank A. Goodwin, registrar of motor vehicles for that State. Goodwin accordingly plans to stage a drive against violators in an effort to educate them on the new statute, put into effect as a result of the recommendations of the Conference of Motor Vehicle Administrators, held in July and recorded in AUTOMOBILE TOPICS under date of September 16.

"The new law requires that the number plate must be plainly visible at a distance of sixty feet," Goodwin explains. "Not more than one per cent of the automobiles now operating on the Massachusetts highways are within the law in this respect. I should advise all owners to see that their cars are properly equipped before January 1, under penalty of being prosecuted.

"The maximum price of proper adjustment should not be more than $1.50 for any car. If the owner objects to this small sum he does not deserve consideration and should not be driving.

"There were 69,000 more automobiles on the State's highways last year than the year before. But there were only 393 persons killed as against 407 in 1920. And many of those killed at night were the victims of violators of the headlight laws then in force."

D-A-C to Start January First

Detroit Air Cooled Car Co., Detroit, has obtained a plant. The Company expects to start production on the D-A-C air-cooled twin-three car not later than January 1, 1923.

Fuller Offers Light Transmission

Fuller Transmission Co. has re-entered the passenger car field with a new light transmission. W. F. Fuller, secretary of the Company, reports that the new product is being employed in the taxicabs made for the Checker and other companies in Chicago, in the new Barley car and will, after November 1, be employed by the Chalmers.

Ford Closes Virginia Mine

Nuttallburg, W. Va., coal mine of Henry Ford has been dismantled and all properties sent away. The reason given is inability to compete in present market. The mine was acquired two years ago.

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points appears on pages 969-971 of this issue.

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CALIFORNIA STUDIES LICENSING MECHANICS

Automobile Trade Assn. Considers Plan to Educate Garage Workers—"Drifters" Born During War Should Be Eliminated—Owners to Benefit.

Aiming a drive on the incompetent, alleged garage mechanic whose inability to perform honest work is costing motorists of the Country big money, the California Automobile Trade Assn. is studying the plan of licensing such workers. The scheme, as now under consideration, would call for an examination after a course of education and the granting of a certificate to those who deserved such distinction.

"The same principles will be applied to the men who work on automobiles as those who become physicians," the Association explains. "In this way it is hoped to eliminate the men who know nothing about their work.

"During the war many young men entered the automobile business in various garages without training and became so-called mechanics. The men who owned the automobile repair shops had to put up with them because they could not get any better. Then, as the real mechanics returned from France, they were put to work and the '1918 mechanics' drifted. Many of them caught on at various second rate places and started fussing with cars. Few of them learned much about their work because they did not care to.

"This type of man is the kind who tells the car owner all about his car and wants to perform a major operation on every machine that comes into his place of business. By licensing mechanics and checking on them constantly, these drifters will be eliminated and motor car owners assured expert work."

New Chicago Liberty Distributer

Sales of the Liberty car for Chicago territory has been given the John Nichol Co. Nichol is one of the "old timers" on the Michigan avenue row.

Plans Truck Body Works

T. D. Whiteborn, of Atlanta, Tex., plans to establish at Sweetwater, Tex., a factory for the manufacture of truck bodies. The plant will be opened October 16, according to Whiteborn's plans.

Parsons Opens Chicago Office

Parsons Manufacturing Co., Detroit, has opened an office in the Mallers building, Chicago, in charge of C. P. Kniseley and W. M. Townsend. The new Parsons window regulator has proven popular, the Company finds, and has led to plans for plant expansion and to the opening of the new office. The Chicago branch will serve the territory embraced by Wisconsin, Illinois, Indiana, St. Louis and Ohio, not including Cleveland and Toledo.

Woman Protests U. S. Stock Tax

Owners of automobile stocks whose present holdings were acquired through exchange of old for new shares in refinancing operations, are watching with interest the legal battle being waged by a Detroit woman who is protesting against the collection of $106,000 tax by the Government in connection with such a conversion. She had held old stock in a corporation and exchanged it for new, under a conversion plan, receiving five for one of common and 1 1/3 on preferred. The Government claims excess shares of new are in reality dividends and demands payment in income tax on their valuation. The defendant claims the transaction merely changed the form of her holdings, aggregating well over $1,000,000. A temporary injunction against the Government is returnable to the Detroit U. S. court on October 30.

"KEEP GOVERNMENT OUT OF BUSINESS BY ORGANIZING"

Such Is Hoover's Suggestion to Avoid Unpleasant Interference

Unpleasant Government interference with business can best be avoided by voluntary organization on the part of business men, says Secretary of Commerce Hoover. In a letter to Ernest T. Trigg, president of the National Paint, Oil & Varnish Assn., Hoover says, "It seems to me that the whole development of American business must be through voluntary organization, for the common advancement of fundamentals of increased efficiency and higher business standards, and the best way to keep the Government 'out of business' is directly along this line."

In his letter, Hoover praises the demonstrated success of the paint industry in scientific research into methods of marketing, maintaining, high grade and quality standards, in trade statistics and in simplification of practices. He also urges that trade interests allied with the paint industry be invited to attend the forthcoming paint trade congress at Atlantic City, November 13-17 so that they may learn about what cooperative efforts have accomplished for the paint industry and may be induced to undertake similar activities in their own branches of trade.

Leach Joins Buick Distributer

W. H. Leach has been appointed assistant sales manager of the Pence Automobile Co., Buick distributer for Minneapolis and the Northwest. Leach has accordingly resigned his position in the factory sales department of the Buick Motor Co.

DEALERS ASKED TO AID N. A. D. A. FIGHT TAXES

Points Out Discrimination Favoring Railroad Transportation—Wants Solid Body of Members Back of It When Congress Reconvenes.

Every "substantial" automobile dealer in the United States has been addressed this week by the National Automobile Dealers' Association in an effort to arouse concerted action on their part in the organization's drive for the repeal of what it terms discriminatory taxes on the automotive industry. The taxation on transportation as applied to railroads has been repealed, the N. A. D. A. points out, but the heretofore discriminatory impost on transportation by motor vehicles still remains in force.

The Association has asked the dealers to write personal letters to congressmen and senators setting forth their views and urging repeal of the "war taxation." It is also urged that the same type of letter be sent to candidates for office. The letters and the replies to them are to be forwarded to the N. A. D. A. which then proposes to map out a campaign of action.

The burden of taxation on the automotive industry amounts to $100,000,000 a year in addition to all other taxes upon the sales of automotive products, according to the Association. This constitutes a very real menace, it is pointed out, and should be removed.

C. E. Erskine Changes Position

Clyde E. Erskine has been promoted to manager of the St. Louis branch of the Mack International Motor Truck Corp. He was formerly connected with the Chicago branch house and in his new position succeeds James C. Smith who has been advanced to the sales promotion department at Chicago.

J. D. Cole Joins Monogram Cap Makers

Jirah D. Cole has been appointed supervisor of merchandising by the General Automotive Corp., Chicago, manufacturer of "Monogram" self-locking radiator caps. Cole has been field secretary of the Automotive Equipment Assn., and at one time was division manager for the Pyrene Mfg. Co.

Gillette Adds Geisler to Staff.

Max Geisler has been appointed secretary and general manager of the Gillette Rubber Sales Co., which has just opened offices at 2721 South Michigan avenue, Chicago. Geisler is well known through the Middle West. He will be in charge of sales and advertising. The Gillette Rubber Sales Co. acts in the capacity of wholesale distributer for the Gillette Rubber Co.

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ONTARIO SURVEYS ITS AUTOMOBILE MARKETS

Finds Farmers Own More Than Third of Cars in Province — Storekeepers Rank Second and Merchants Third—Canada's Registration Grows Large.

Importance of the farmer as an automobile market in Canada is well illustrated by the latest figures released by the provincial government of Ontario. This class of buyer owns more than one-third of the cars registered in that district and constitutes the largest single market for automobiles. Statistics compiled by the government show that of a total of 181,978 passenger cars listed last year, 64,045 were the property of the farming populace.

Storekeepers constitute the second largest class with 23,680 cars and merchants rank third, owning 16,700. Commercial travelers have 5,311 cars; doctors, 3,934; real estate agents, 1,098; contractors, 2,961, and drovers, 651. Any idea that the motor car is a source of class distinction is shattered by figures showing laborers as owners of 4,059 cars.

The growth in the number of automobiles in Canada in the last ten years has been phenomenal—as was pointed out in AUTOMOBILE TOPICS under date of October 7. At the beginning of 1912 there were 21,682 passenger cars and trucks in the whole of the Dominion. At the beginning of 1922 this total was increased more than twenty-fold, to 454,049. A conservative estimate places the number of passenger cars and trucks in use in Canada today at 500,000.

Canada ranks second to the United States in the proportion of cars to population with one to every eighteen persons. In the number of cars in use, Canada is exceeded by only two other countries, the United States and Great Britain. The country ranking next is France, with 236,148. The next in order is Argentine, with 70,000, a total about equal to the registration in the province of Saskatchewan.

Wilber Reports Sales Good

Returning from a trip through the eastern territory, G. R. Wilber, vice-president and general manager of the United Motors Products Co., reports sales of the concern's trucks as pushing the factory to the limit in the way of output. Carload shipments have been ordered by many dealers, he declares, from specifications alone.

Westcott Business Sales Large

Analyzing sales of the Westcott Motor Car Co., E. H. Gilcrest, sales manager, finds that 27 per cent of the total have been made to concerns and individuals for strictly business purposes. Gilcrest deduces that the relatively large percentage indicates that business houses are coming more and more to purchase higher grade cars for the use of their salesmen and officials whereas heretofore only the cheaper machines were bought for these purposes.

Petrie Finds Outlook Excellent

F. A. Petrie, president and general manager of the Mission Motor Car Co., Los Angeles, Dort dealer, visiting the factory at Flint, reports conditions as pointing to an excellent season for the Pacific Coast. He believes 1923 will be the best year the Coast has ever experienced.

Salesmen Using More Cars

Analysis of State registration cards shows that in Massachusetts about nine per cent of passenger car sales are made to business houses, the Olds Motor Works finds. Mercantile concerns report salesmen's sales increase from 40 to 100 per cent as soon as they begin to operate automobiles.

Olds Service Managers Meet

Service managers connected with the Olds Motor Works organization met in convention at the factory, Lansing, October 16. A display, to remain permanently in place, was set up including a chassis, cutaway model, wheels, axles, etc., and model examples for stock bins and stock record card systems, arousing considerable favorable discussion.

EXTRAVAGANCE NOT STYLE KEMP, AUBURN CHIEF, SAYS

"Extras" Confuse Minds of Some Buyers, He Asserts, Praising Body Lines

"Extras" that have but little to do with the actual appearance of an automobile, are mistaken for style quite frequently by the car-buying public, according to A. P. Kemp, president and general manager of the Auburn Automobile Co., who takes occasion to warn against confusion in this regard. The really stylish features of motor car design are expressed in the body lines, he believes, and in the arrangement of the seating space, the design of the top and other outward features.

"If these are correct then the style of the car will be satisfactory," he continues. "The little 'extras' have practically nothing to do with style and consequently contribute but little to the permanency of the satisfaction the owner obtains. The buyer should not be confused with arguments about the many so-called 'features' of equipment. First of all, he wants a good car mechanically; second, good style; then third, if he wishes to add to his investment, he should consider the 'extras.' But if he allows these non-essentials to confuse him in selecting a car of good style, then they become extravagance."

"CAMPAIGNS NEEDFUL TO SELL USED CARS"

Radoye, of Haynes, Urges Dealers to Build Up Reputation for Reliability—Is Individual Problem, He Asserts—Proper Advertising an Aid to Sales.

Thorough knowledge of his business and the application of that knowledge together with a sound judgment of used-car values is the only way in which the individual dealer may escape trouble in handling the problem of the second-hand automobile, according to Gilbert U. Radoye, director of sales and advertising of the Haynes Automobile Co. The used car problem is an individual one each dealer must solve for himself, Radoye points out, discussing the matter this week.

"The dealer who consistently takes in used cars at the market value, and carries on an active used car campaign all the time so as to keep his stock of used cars down, will generally keep out of trouble on this score," Radoye advises Haynes dealers. "Every dealer can build up a reputation for being a reliable person from whom to buy a used car and profit accordingly.

"He can do this, first, by taking the used car in at the correct price; second, by putting the car in good running condition (without great expense); third, by placing a sale price on it moderate enough to be attractive and high enough to insure him against loss on his original sale. This he can do if he appraised the car correctly when he took it in. Used car newspaper advertising and price tags on each used car, carrying a statement that the purchaser's guarantee is the reputation and reliability of the establishment selling the car, will go a long way towards keeping the dealer's stock of used cars down to a minimum."

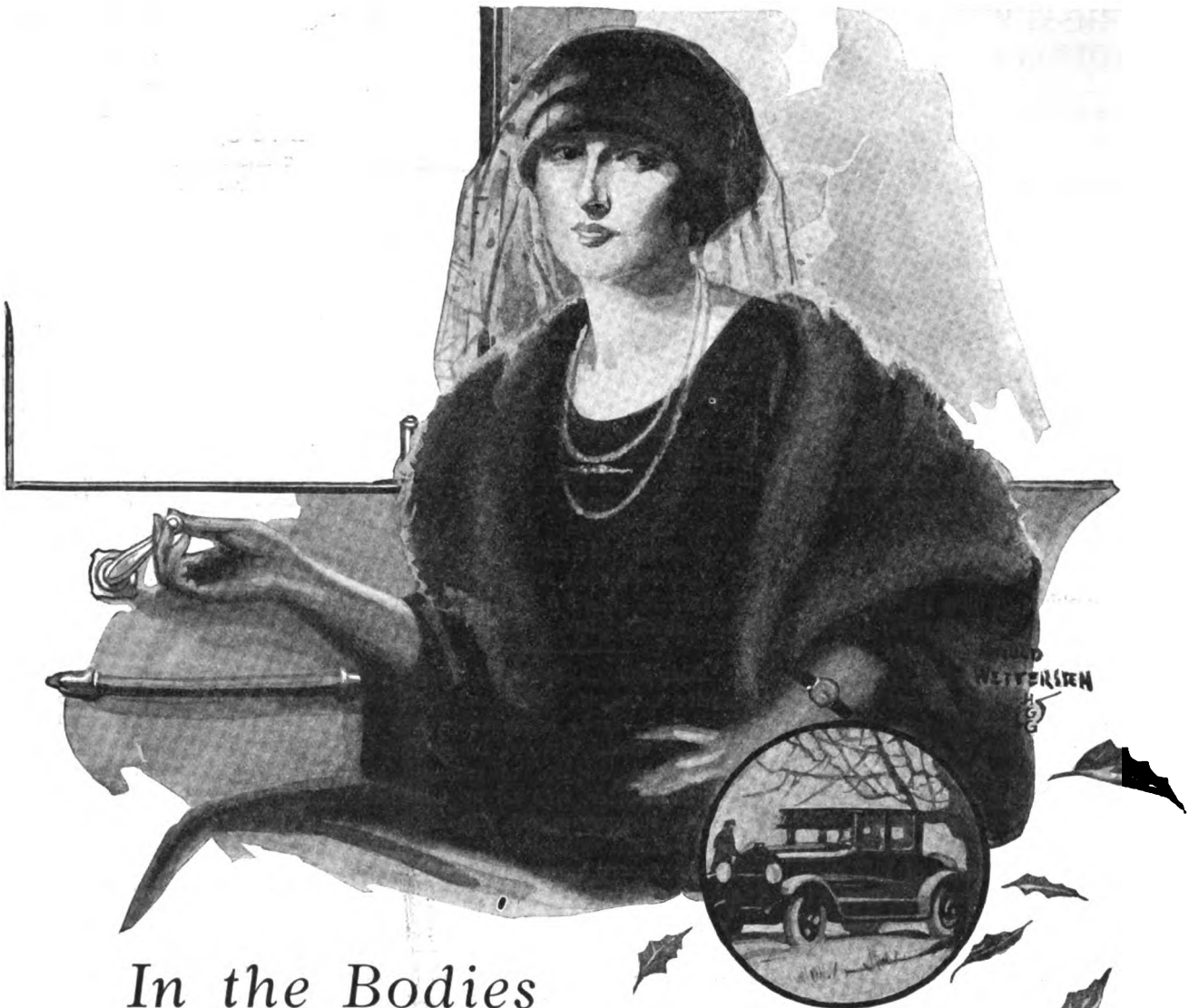
St. Louis in Favorable Position

Because of its favorable situation, St. Louis will suffer less in regard to shipments than any of the automobile manufacturing centers when Winter closes in, according to J. F. Culver, general manager of the Dorris Motor Car Co. Due to the presence of the large railroad yards in the city he predicts plenty of cars for deliveries.

South Carolina Cars Increase

Registration of passenger cars and trucks in South Carolina continues to grow. In September 84,857 of the former and 7,259 commercial automotive vehicles were added to the list registering, 899 being new passenger cars. South Carolina devotes all fees collected, now amounting to $725,699, to road building and improvement.

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

MOTOR TRADES PUBLISHING CO.

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Secretary

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Tire Profits in Savings

"A dollar saved in expenses is equivalent to $6 made in sales," one of the larger tire concerns recently advised its various branches. Not only this one, but other big companies are watching their costs with the utmost vigilance, seeking in every way to eliminate those countless avenues of needless outgo that eat up the profits of corporations so rapidly and effectually.

This bears out the assertion of a tire man that the only money being made today in that line is made through economies. Tonnages are large, and the business outwardly prosperous, but profits are small. In other words, the parings are so thin that there is not much nourishment in them.

Decapitation

Dealers often wonder why they are not making more money. Occasionally one here, or another there, puts in a new cost accounting system, only to find that instead of making only a little, he is actually losing a whole lot. A concern in this unfortunate position happened to be in the hands of wise and prudent men at the moment when the sad discovery was made. Consequently, instead of taking on more lines, or increasing their capital they put their heads together to see what could be done about it. The oldest partner had other interests which were absorbing a good deal of his attention anyway; consequently he decided that he could afford to dispense with the really handsome salary which he was actually doing practically nothing to earn, thereby enhancing the earning power of his stockholdings. The second partner thought he could exist on $10,000 a year, instead of $15,000, while the third, after a struggle, saw how he could do with $7,500, instead of $10,000. The net result of this and other cuts was to reduce a $40,000 burden to something like $20,000. Now the business is on a paying basis.

Bus Sales

Is the rapid development of the motor bus of interest to the automobile dealer? Constructively, and sometimes vicariously, yes. The automobile dealer will profit by any and all developments tending to draw the public into more frequent and varied uses of the motor vehicle. The automobile dealer will benefit in countless ways through the popularization of the highway and of highway travel. But if the advent of the special bus chassis spoils the demand for clap-trap bodies mounted on second-hand truck chassis, and so robs the local dealer of an occasional, if somewhat doubtful time sale, he may lose a little something, yet he should not weep.

The probability is that motor bus sales will be largely negotiated through district agents on a quantity discount basis. In many instances too, if not in most, maintenance and overhaul work will be performed by the operators' own organizations. Better face the probability at once, however, than permit the idea to go forth that this class of business will ever reach a sustaining volume for automobile dealers of the old school.

Names of Things

Some printer's ink has been wasted in criticism of the choice of the word "phaeton" to describe what it is alleged the automobile trade knows only as a "touring car." Some typewriter ribbons, moreover, have been worn threadbare in defense of this selection. Obviously, a bitter controversy is in the making. But why? Clothes must fit, or they are never worn. This is true whether they are exclusively tailored or cut up by the bolt, stitched in sweatshops and sold under a national, and therefore, standardized brand. With words, and especially names, it is much the same.

Mail-Order Stuff

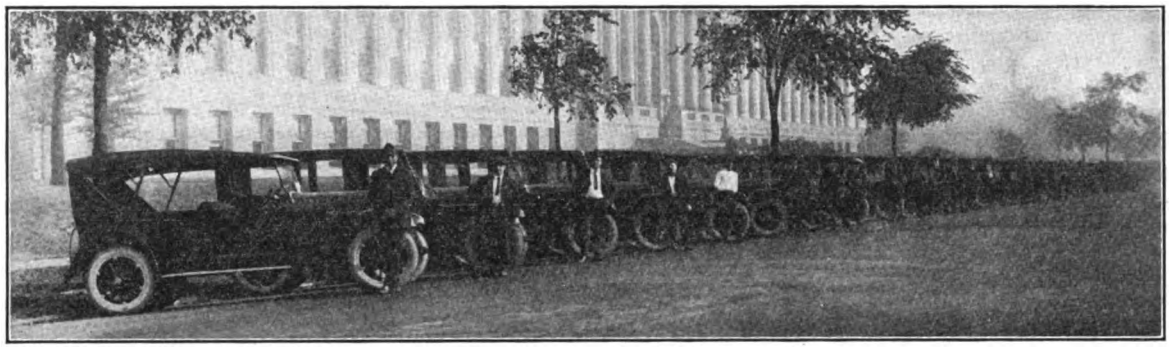
Business men never cease to wonder at the achievements of mail-order houses, which seemingly have accomplished the impossible in building up a prodigious volume of trade in localities already served with more or less efficiency by direct merchandising methods. But very often men who would scorn to be classed in the mail-order category unconsciously stultify themselves by seeking to make a postage stamp do the salesman's work.

"I heard from those people once," said a gentleman who had been asked for his opinion of a certain enterprise. "They wrote us a letter offering to do certain things, but that was about all. In the first place, they promised what we believe to be the impossible, but outside of that, I thought that kind of a thing too big a proposition to be put into a letter, so I turned it down cold."

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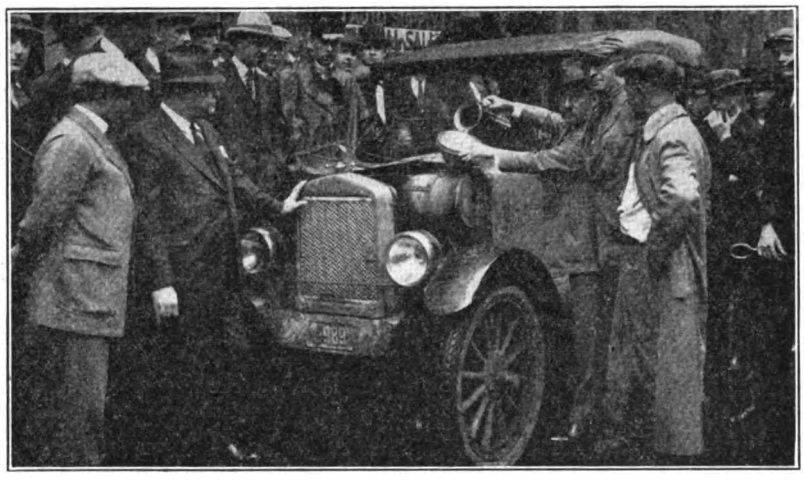
Outcome of Three Winks of the Camera's Eye

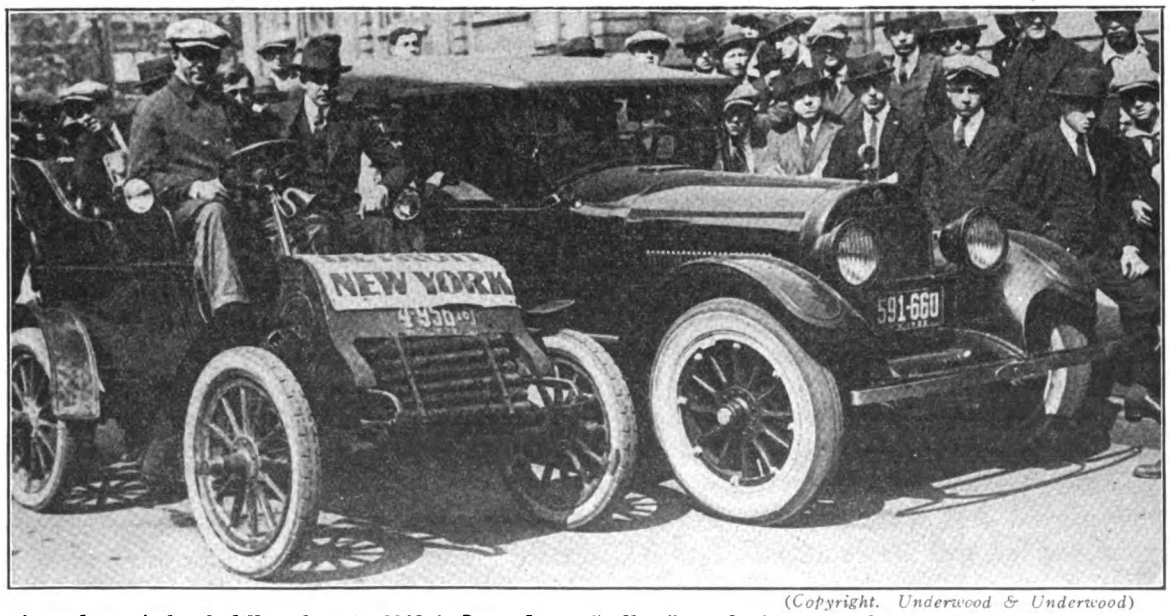
Just a Glimpse of a Few of Motordom's Activities



A driveaway of thirty Willys-Knight cars was staged by the Buffalo, N. Y., dealer. The cars are shown while still at Toledo, Ohio, the home of the manufacturer, all lined up and ready for action

AVERAGING 33.8 miles to the gallon, the cross-country Gray car terminated its economy run from San Francisco to New York city, arriving on October 10 at the salesrooms of the Albert Hirst Motor Co. The gasoline tank, which was sealed September 13, by the American Automobile Assn. at San Francisco, was unlocked in New York by Chairman F. A. Croselmire of the contest board





(Copyright. Underwood & Underwood)

A product of the Cadillac shop in 1902 is here shown "calling" on the Mayor at the New York City Hall, after ending an 800-mile trip under its own one-lunged power from Detroit. Beside it is the newest Model Eight

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Struggling for Ideal Transportation

Differences Between Steam and Electric Lines and Buses and Trucks Grow—Fairness to All Must Rule

LONG a source of mutual recriminations and accusations, the "difference" between the railroads, steam and electric, and the motor buses and trucks is rapidly reaching a state that may with due conservatism, be called a downright fight. California is the scene of the skirmishes—particularly bitter ones—which may lead eventually to a situation fraught with some peril and certainly boding no good for the industry.

For in California the quarrel has reached the point where the "power of labor" becomes a participant. Thus it is learned that the railroads, struggling at every turn so to burden the motor bus with taxes and weight restrictions that strangulation will kill off the competition, has told its employes that the bus and truck spell unemployment to rail workers. And one union, at least, has boycotted several bus lines, imposing a fine on members who have the temerity to use the transportation thus offered.

The Golden State is seemingly being chosen for the preliminary battles, for California employs the motor bus to a greater extent, perhaps, than any other Commonwealth in the Union. More than 200 towns in that State are entirely dependent on motor transportation. There are city, inter-city and long-distance lines. Twenty-two of the 260 runs exceed 100 miles in length. This latter type—long distance—is perhaps the most distinctive of California bus operation. Climatic and topographical conditions in California perhaps account for the wide use of the bus over roads once traversed by the picturesque stage-coach. Almost everybody in the State has an automobile. The ratio is 4.61 persons to every passenger car. But motor stages are patronized by many who own cars because they feel safer in thus negotiating the many rugged and dangerous passes through the hills and mountains.

California, to put it briefly, is thoroughly covered with a network of bus lines. And as a result, the railroads are feeling the competition to no mean extent and they, naturally, resent it. Long noted for the railroad domination of earlier days, the State is again feeling the iron hand of those who direct the destinies of the steel highways.

Petitions have been circulated among the merchants in smaller towns, asking them not to ship goods over the motor vehicle routes under the implied penalty of a boycott by the railroads. When an applicant appears before the Railroad Commission—a public utility control body—the railroads leave no stone unturned to make it a hard job for the petitioner to get a franchise. Railroad representatives are hired to do nothing but address Chambers of Commerce and other similar bodies with the intent of pounding home the "evil" of the motor bus and transport lines.

The cry of the railroads is ever the same. The railroads, they say, have been responsible for the growth of the community—a truth, of course. The freight hauling of the truck lines now jeopardizes their business, they declare. If the business of transporting freight is cut, the rail lines profess inability to pay present wages. Workers will have to be laid off. Since many California towns' sole industry, sole means of support, comes through the presence of large railroad terminals and shops, unemployment of railroad workers means lessened income to the community. The merchants must suffer. Ergo, do not patronize the motor bus and freight lines.

Perhaps the most typical example of such propaganda is given by Roseville, a small town kept alive by the large shops of the Southern Pacific. The merchants of Roseville have been talked to by the railroad representatives and petitions have been circulated among them. The merchants, incensed at what they assert were high-handed tactics, have signed a sworn statement to the effect that one G. O. Steward, who represented himself as being president of the Brotherhood of Railway Clerks No. 1044, and a committeeman from the Roseville Labor Council, called on them at their places of business and asked them to sign an agreement not to patronize motor truck hauling freight into Roseville and not to patronize the passenger stages. The reason assigned for the request was that Roseville was

WHY FIGHT AGAINST REASON?

ENGAGED in wordy arguments, pro and con; worried because of unsatisfactory financial statements, depressed because of many seemingly unjust conditions, the steam and electric lines on one side and the bus and the truck lines on the other are greatly concerned over the question "Who shall transport America's people and freight?"

No one, perhaps, can give an answer to the question thus brought to the fore. At least, no one can do so now. The gasoline driven vehicles in their relation to and ultimate place in the scheme of things are still in the primary stage of development. There was a period when no regulations covered the operation of the railroads. Time has changed that. From the zenith of almost undisputed power, they have ridden the pendulum back to over-regulation and even now are not in balance as they should be.

While 21 States now have regulatory legislation designed to curb to some extent the activities of "wild-cat" bus and truck operators, there is little national uniformity. The transportation systems—real systematized operation of buses and trucks—are not as yet organized to the extent that the States may step in to protect those it should.

However, that time is not far distant. Certainly both sides have cause for some complaint. The railroads try to throttle the bus and truck lines on one hand while the unrestrained and favored operation of gasoline-driven vehicles is not fair to long-established and worthy competitors.

The accompanying article attempts to present both sides of the question in as far as is possible. It is a fact that the steam and electric railroads have on their side the invaluable aid of great systems of publicity and highly organized cooperation throughout the Nation. The bus and truck men, on the other hand, hardly know what their compeers in the next State are doing, not to speak of trying to get into nationally effectively organized condition

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largely supported by the railroad and that the members of the railroad forces were union men.

In addressing a meeting of the Progressive Business Men's Club of Bakersfield, Cal., recently, R. E. Kelly, representing the executive department of the Southern Pacific, protested bitterly against the motor carriers. After reviewing the railroad statistics on the matter, Kelly said:

"You are business men and know how much you benefit from the payrolls of the railroad companies and from their purchases of supplies here. Southern Pacific men and their families buy their groceries, their clothes and other necessities of life here. They buy or build their own homes and pay city taxes. When the railroad business prospers they prosper, and the city and other citizens benefit thereby. When the railroad business suffers, as it has in the last year, fewer men are employed, the payrolls shrink and this has a depressing effect on other business. The motor transportation problem is your problem. It is an important problem because it deals with dollars—your dollars."

Protests Without Avail

Protests have been made to the Railroad Commission by the bus men, but without avail, since the Commission declares itself without jurisdiction in the matter. Other means of bringing the bus' side of the contention to the fore have likewise proven ineffectual.

The point of divergence between the electric railways, of which there are many, and the motor lines, aside from the question of unfair competition which is constantly being used, is the matter of taxation. The railroads have maintained that failure to place taxes on bus lines is tantamount to giving them subsidies. The motor vehicle men reply that they are paying city, county, State and Federal taxes and license fees and see no reason why they should pay other imposts.

Then, of course, both steam and electric rail lines resort to the argument that they must build and maintain their right of way, whereas the bus uses a highway built and maintained by the people. This plea is of long standing and difficult to combat, the bus people find.

The facts in the case are hard to get at, beneath the mass of excess verbiage and spurious argument. In relation to the railroad as a long distance carrier, the motor truck has no comparison. The costs of moving a rubber-tired vehicle over long distances—and by long distances those over 400 to 500 miles are contemplated—will ever forbid any sort of keen competition with the steel lines.

What a Rail Chief Thinks

In its relation with the railroad the truck can be and is of great and lasting aid. This thought has been clearly and convincingly illustrated throughout a statement made by Elisha Lee, vice-president of the Pennsylvania Railroad some time ago:

"The railroads are evolving into wholesale transportation machines," says Lee. "They are becoming more and more adapted to the handling of goods and commodities in bulk—to the movement of full carloads and long trains. This development is a natural response to the needs of a Country having such enormous quantities of freight to transport over such vast distances.

"The reason why less than carload traffic, especially on the shorter hauls, is becoming a growing burden upon the railroads is that we are obliged to use in it terminal facilities and rolling stock which are too expensive for the purpose, and which of necessity must be primarily planned and adapted to the handling of bulk traffic, mostly moving over the longer hauls."

In this Lee offers a very sound and logical reason why the railroads cannot afford to spend money, time and effort, equipment and facilities on "outgoing income." And that is really what short hauling amounts to to them. It is an unreasonable expectation, yet it is one, few really appreciate. Further, Lee says:

"It is possible to imagine an extension of the same ideas by which long distance, less-than-carload freight can also be handled, with increased efficiency over present methods, through a plan of combined truck and railroad service. This would involve detachable bodies on freight carrying trucks. The bodies would be so constructed as to be used as containers for less than carload freight, and when loaded would be placed upon suitably equipped railroad cars for the intermediate journey between the rail terminals, including 'storedoor,' collection and delivery being performed by trucks.

"The advantage of this service lies in using both the trucks and the railroads for the portions of the through service which they are best fitted to perform. The railroads can do the long distance hauling between terminals better than the trucks, and the trucks can do the work between the shipper, or consignee, and the terminal better than the railroads.

"The shipment of freight from one station to another, within the same terminal area or city, is a form of service from which the railroads should, as nearly as may be possible, be entirely relieved save that small portion which, by reason of excessive weight or bulk, requires railroad equipment and road beds for its proper transportation.

Handling L. C. L. Loads

"Similarly, the interchange of less-than-carload through freight between the terminals of various railroads coming into a given city constitutes another field in which motor trucks may prove valuable helpers of the rail lines as less costly substitutes for interline switching. In this case the proper development calls for the use of a large number of detachable bodies in connection with a relatively small number of chassis to perform the interchange service. The plan is being tried out with some success in several middle western cities and may later be found capable of further extension."

Now, in these remarks is seen the germ of the idea that must eventually burgeon into the solvent for the bus-railroad imbroglio. For it is in a combination of rail and motor service that both industries will find their best activities.

The motor truck's greatest service will come with the hauling of freight on short runs. The passenger carrying vehicle must have limits to its operations as far as cheapness and economy are concerned—cheapness and economy as compared with rail travel. But when the motor vehicle runs over the rails of the steam railroads in sufficient numbers to warrant comparisons, a surprising result will be broadcast. Unknown, or rather, unnoted, by many, the progressive work being done along the lines of fitting the gasoline motor driven coach to the exigencies of rail travel is promising far-reaching results.

Already, several western and many eastern lines have installed tentative schedules for gasoline coaches they have purchased. The experiments have hardly progressed to the point where valuable analyses can be obtained—analyses as to costs and results. Ever present in the minds of those

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directing the destinies of the gasoline driven car is the question of future fuel. Will the supply of gasoline be sufficient to warrant changing over to gasoline burning engines? That can be answered only by time and close figuring.

There seems to be little doubt, however, that for short runs the gasoline coach is acceptable if not preferable. The sponsors of electric motor trains point to an inexhaustible supply of water power for current to be transformed into propulsive energy.

The prospective values of the gasoline coach are well set out by David S. Ludlum, president of the Autocar Co. In a recent statement he put the matter thus:

"I know of no other medium today which can do so much to speed up transportation and relieve congestion as the motor truck. I could give detailed figures extensively, but I don't think that would interest you. The whole Country is studying this problem and looking into it from many different angles. For example, we shall probably soon have many motor vehicles running on the railroads. This method has already been tested out by some of the short spur lines. It is my personal opinion, however, that in many cases this will not prove to be an economy. Up in Vermont they are working on a development which is intended to help both the railroads and the trucks so that towns which are not reached by the railroads can be given adequate service by the combination of the two.

"At the 1920 Republican national convention in Chicago we were trying to get into the platform a plank concerning highway development. In connection with this endeavor I inserted in the Chicago newspapers an advertisement stating in effect 'The next President of the United States must be a man who realizes our transportation necessities—first, building of highways; second, railway requirements; third, waterways usefulness; fourth, air possibilities.'

"Unquestionably our highways have been abused. Many motor trucks also have been sold for a higher loading capacity than they possessed, others have been overoperated by their owners—overloaded to the damage of the highways and overloaded to the danger of the public at large. I believe that the method of eliminating these evils has already been found in the work conducted by the Society of Automobile Engineers and by the motor truck industry acting in cooperation with the highway officials in a number of States. The time is at hand when the man who tries to operate a truck at more than its rated capacity or who sells one for more than its rated capacity or with the capacity rated at more than it should be, will be put out of business, and I think that this is as it should be.

Little Headway in Permanent Road Construction

"Road construction that is really permanent has not progressed very far in the United States, but I believe it will. Plans that are sensible, sane and comprehensive and which look forward over a great many years of the future are already being formulated, and the men who are working on them are going to present them fully to our legislators."

Leaving for a time the question of the attitude of steam and electric railway men towards the bus, what can be said of the situation between the street railway managements and the bus? Here is a quarrel that started with the inception of the "jitney" and continues on to the bus.

The attitude of the electric railways to the motor bus was more or less set out in full at the forty-first annual convention of the American Electric Railway Assn., at Chicago, October 4 to 6, inclusive. Happily it seemed to develop that the spirit of cooperation, the seeming desire to have fair and effective motor truck and bus regulations set up, was and is present in the minds of those directing the destinies of the street railways of the Country. Of course, this applies equally well to the interurban lines.

W. H. McGrath, of the Puget Sound Light & Power Co., which owns the Pacific Northwest Traction Co., operating in and around Seattle, brought out the fact that the attitude that must be taken by electric railway men if they are to succeed either in regulating or aiding the motor transports is one of business and not of sentiment. Viewed from the standpoint of profits, McGrath pointed out a motor system, properly handled as an adjunct to the electric railway means much. In addition to putting money into the stage business itself and in addition to whatever benefits may be derived therefrom, the greatest, judging from experience around Seattle, is that from cooperation with the stage men themselves.

Less Competition in California

D. W. Pontius, vice-president and general manager of the Pacific Electric Railway, Los Angeles, declared the competitive situation in his State was gradually clearing up. Much is yet to be accomplished, however, in the way of regulation of the bus, he maintained, since favorable climatic conditions made bus operation extremely attractive to those outside the electric railway field.

"I want to say that it is my opinion that bus transportation will never successfully supplant the electric railway; it is here to stay in one form or another," Pontius asserted, thus setting out the opinion of the average fair-minded executive in the street railway field. "There is no doubt that in many instances, such as feeders, and when other forms of transportation are not provided, for service to partially developed sections, the bus can render a useful service, both to the public and to the electric railways.

"In the end, with the present favorable trend of public opinion toward reasonable regulation for common carrier automobile buses and trucks, and the field so definitely defined, the present unfair competition will be greatly restricted. The problem of the electric railway is not to endeavor to put the buses and trucks out of business, but to endeavor to see that their service is rendered in districts not adequately served by rail transportation, and to forestall the uneconomic, unfair, and in some cases cut-throat, paralleling of railways."

Perhaps the best illustration of the consensus of opinion among the street railway executives is embodied in the report of the Committee on Uniform Motor Vehicle Regulatory Law, which made its report to the convention. The committee undertook to study motor bus and motor truck operations with a view to recommending a uniform regulatory law that might be useful in formulating fair and effective motor bus and motor truck regulations. The proposed bill requires a certificate of necessity and convenience before a motor bus company can commence operation.

"The study shows that there was no uniform method of taxing motor vehicle common carriers or of securing permits for operation," the report reads. "The committee held that inadequate taxation for the use of public highways results in a public subsidy for such carriers. With this viewpoint the committee determined that a ton-mile tax for all motor vehicle common carriers, whether passenger or freight, would provide funds of an amount that would represent the actual deterioration of the highways caused by this class of carriers.

"The bill as drafted first defines a motor vehicle, then a

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motor carrier and a public highway. It vests the state utility commission with power to supervise the rates, accounting practices, schedules, etc., for all motor carriers. A certificate of convenience and necessity must be secured from the commission before any motor carrier can start operations. Revocation of certificate can only be made by the commission after a hearing. It may be suspended, altered or amended, however, without a hearing.

"Special rules are laid down for applicants filing petitions for a certificate. Taxes for the use of the highway are suggested on a ton-mile basis, the rate being lower for pneumatic tired vehicles. For purposes of assessing this tax, motor carriers are required to keep a daily record of vehicles in operation or laid up for repairs, as well as the ton-miles of travel for both passengers and freight. These records are to be filed monthly under oath.

"The bill also requires that liability insurance be taken out before a certificate is granted, in such sum as the commission may determine, adequately to protect the interests of the public with due regard to the number of persons and amount of property involved. A bond is also required conditioned on the payment of all fees, taxes or charges which may be due the State.

"The commission can promulgate such safety rules and regulations as it deems necessary to govern and control the operations of motor carriers in the State and to enforce them by penalties. Motor carriers are required to maintain their vehicles in a safe and sanitary condition. Drivers shall be at least twenty-one years old, of good moral character and competent to hold a regular chauffeur's license from the State motor vehicle department. The speed of operation of passenger buses is limited to 25 m. p. h., and the freight trucks to 20 m. p. h. Accidents must be reported to the railroad commission. Violations of the law will be considered as a misdemeanor and punishable by fine not exceeding $1,000 or one year imprisonment or both."

Such, then, is the means of regulating motor transportation as best conceived by the electric railways. Whether it is just and worthy is a matter no one may determine at present. Only a trial, and a thorough one, would make possible fair judgment.

Street Railways and Jitneys at Odds

Meanwhile the long-drawn-out battle between the street railways and the jitneys and, to a lesser extent, the buses, continues. J. C. Thirlwall, railway engineer, General Electric Co., an authority in his field, believes, after reviewing the situation critically and carefully, that for all routes extending into the business center of large or medium sized cities, the rail car offers the most efficient and most economical form of transportation. He does believe, however, that for suburban feeder and cross-town service, the "trackless-trolley" bus will be the most suitable vehicle. He condemns the use of gasoline buses inside the city limits unless special conditions prevent the hanging of overhead wires for the trackless trolley.

On the side of the motor bus owners, operators and manufacturers there is much more that may be said. It is pointed out that eighteen States now require either a certificate of public convenience and necessity or some form of permit to be issued by the State regulatory body. Three States, in addition require rates to be filed with the Commission, as well as their schedules, and one more asks that the routes be filed. Thus there are twenty-one States that have some form of bus regulation.

It is true, of course, that it is possible to transport in practically all cases passengers and freight at less cost by electric motor power than by gasoline. Electric and steam railways, too, have the enormous advantage of being first on the ground. Some of them have had great vision and foresight, having taken steps as long as five years ago in motor vehicle development because they realized the transportation possibilities. It is unfortunate that in many places the men directing the business of electric railway development have failed to see their opportunities and have allowed short-sighted judgment to blind them to the fact that what the people want the people will have.

Bus Transportation More Flexible

There is a flexibility to bus transportation not ever attainable by the rail lines. The mere fact that the bus may carry passengers who conceivably might have to take the street car or steam line if the bus were not there, is not an argument. In the field of freight carrying, the motor truck performs service not given by the railroads. If gasoline service between small communities, along the country road and in regular "run" activities, is relished by the people, is it to be stopped because the railroads—who cannot or will not give the service—lose income thereby?

The matter in its entirety is one for the most careful consideration. The steam line, the electric line, the bus line and the truck line each have their place in the scheme of transportation in this or any other Country. When they shall have found their places, each immediately will show the results attainable only through fair competitors. Certainly, it is not right to bog down the truck and the bus with onerous taxation, in whatever guise it may appear. Neither is it right that the steam and electric lines be made to pay more, relatively, in the way of taxation and cost of operation, than the gasoline driven vehicles.

If a company, a concern of any nature, loses money, either one or a dozen reasons may be advanced for the condition. It all simmers down to the basic fact that a losing venture is not wanted by the people. It may not be wanted because its rates for service are too high. It may not be wanted because the need for its services is not inherent in the community. It may not be wanted because the quality of service is not what it should be. But underneath all the camouflage thrown up by desperate management the fact remains that it is not succeeding because the people will not support it—and the people are not to be blamed.

Thus too long hauls by truck may prove expensive—to say that they may is not to say that they will, but the idea may be used for the purpose of example. Too high expenses mean too high charges. The people balk. Rail service, if inadequate or poorly devised, turns the people to other means of getting about and having their goods moved. The rail men should not blame the alternate means seized upon by the people.

Conceivably, if in Utopia a bus line, a truck line, a steam railroad and an electric rail line were laid down side by side between two villages, that service best designed for the needs of the communities would prosper at the expense of the others. What the others had done to improve Utopia would not be considered by that generation of men using them. No one rides in a vehicle of 1888 because Grandfather was served faithfully by the now decrepit carrier.

But, also conceivably, if the United States is served by a combination of the four conveyances, all will prosper to the degree in which they are found worthy. It will do no good to preach. It will do no good to cavil. Neither will anything be gained by such praise or scurrilous attack.

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SELLING GOODS AT RETAIL

ASK 'em to Buy for Christmas—NOW. There's not a minute to lose. Just a little over eight weeks, and the shouting will be over.

Some automobile and accessory merchandisers are going to close up their stores Christmas Eve with every business record smashed. Will you be one of them?

On the following pages AUTOMOBILE TOPICS outlines in general terms some of the possibilites of the Christmas campaign. But this is just a starter. In the meantime assistance in working up an effective holiday appeal will be rendered gladly to any automobile or accessory dealer.

Now is the time to decide how you'll stand six weeks hence.

"ASK 'EM TO BUY FOR CHRISTMAS"

A CERTAIN share of the responsibility of a man's success or failure rests with his wife. It is her attitude toward his job, as well as his, that determines his progress on the ladder that leads to Prosperity.

Some organizations have had their eyes opened to this fact. The National Cash Register Co., for example, which seeks the cooperation of every wife in a sales contest it is conducting.

And how? By offering her husband, prizes that will appeal to her own feminine taste—earrings, bar pin, wrist watch, bedroom set, and so on.

A little help at home will prove a decided stimulus to the salesman's efforts. When a wrist watch is at stake or some other coveted possession, much resistance to long hours will be overcome.

It is a thought worthy serious consideration by all those who have to deal with the personal element. And particularly by shop proprietors.

For who can estimate the profits derived from a shop where the customer is considered first, and personal inconvenience second?

"ASK 'EM TO BUY FOR CHRISTMAS"

ADVANTAGES derived from getting a good line and sticking to it are emphasized by President A. L. Stewart, of the Mid-West Tire & Sales Corp., Quincy, Ill.

"During the four years we have stuck to the one line," he states, "we have seen many lines come and go among our competitor friends. Some of them have been good lines but were dropped for something that looked a little better in the way of discounts, or possibly other reasons. As a result much valuable time is wasted in the constructive building-up process that must be accomplished to make business bigger."

In view of the sound logic embodied in this statement it is of interest to note how Stewart popularizes Vacuum Cup Tires throughout his territory. The story of his sales and service truck which serves his farmer trade is told on page 954.

AS "SID" SNYDER SAYS

WHEN you think that most all your wakin' hours is spent with your job, it's a good idea to choose the right one. You got to be dead in love with it if it's goin' to be a successful union.

* * *

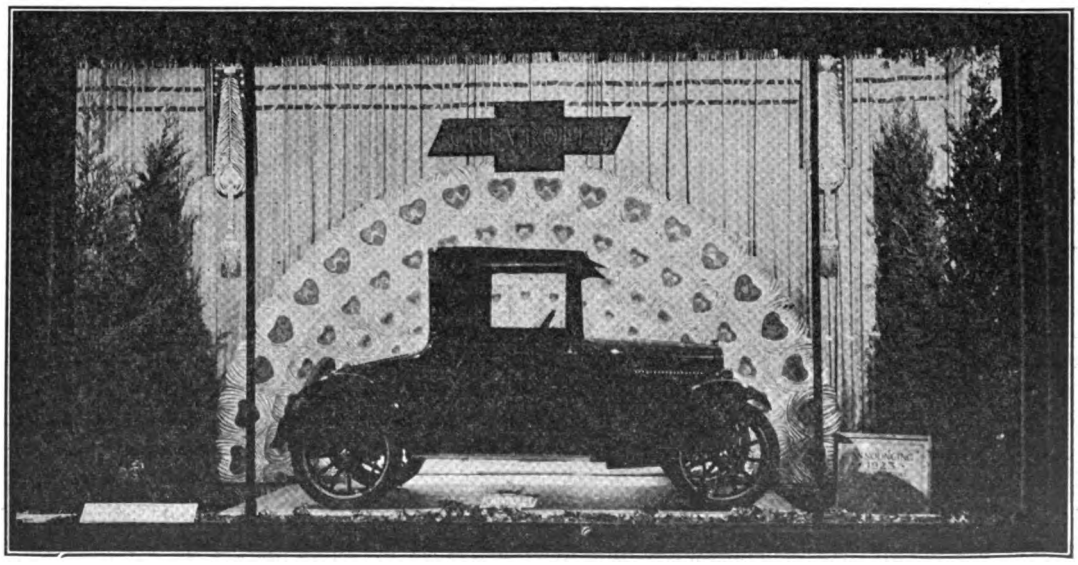
There's old Cy Watkins, who's always hangin' round the depot with his coach. One day Cy found he'd been left some money. So he retired. But the next day he was back. "Don't seem natural," he says, "not to feel the reins in my hands"

"ASK 'EM TO BUY FOR CHRISTMAS"

THANKSGIVING DAY is but a few weeks off. It is timely, therefore, to consider what sort of harvest setting will be used to attract attention to the show window and the merchandise it displays.

It need not be an expensive setting to be effective. Corn husks piled about, one or two pumpkins carved to make lanterns, an abundance of dead leaves as a floor covering—all these will garb the show space in attractive holiday attire.

Chevrolet Revealed in Handsome Setting



In introducing its new line of models for 1923, the Chevrolet Motor Co. of New York, Inc., achieved an artistic effect in colorful backgrounds. Each car had its own setting

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"Ask 'em to Buy for Christmas"

Now's the Time to Join Nation-Wide Army of Holiday Sales Boosters—Trade Hears First Roll-Call

MILLIONS of dollars will be spent on Christmas gifts within the next two months. To get their full share of this annual trade boom, retail merchants, large and small, are now—at this very moment—concentrating every effort on effective holiday sales appeals.

Two or three weeks hence, these efforts will be made manifest. The buying appetite of the public which grows keener as December approaches will be further stimulated by show windows brilliant with Christmas candles and colors. Every sales message will be replete with the spirit of holiday giving.

And what part does the automobile and accessory merchandiser play in these proceedings? What is he doing to transfer to his own organization some of the power from this vast business current?

These are questions impossible to answer at the present time. However, it may be said safely that this year will see more merchants of automotive products enrolled in the tremendous army of Christmas sales boosters than ever before. The trade, or at least a certain part of it, has become aware of the fact that with a little effort, Christmas time may be made a selling time.

Last season was an eye-opener to many. It was then that the slogan "Say It With a Motor Car" first came into use. This year it promises to become still more popular, but used in broader terms to include not merely the car itself but everything applicable to it.

From where he stands in his store on the "row," or adjacent to it, what does the automobile and accessory dealer see when Christmas time approaches? He sees crowds of buyers thronging the street, actually looking for places to spend their money.

And if he were to follow that crowd he would find it distributing itself among a wide variety of retail stores. He would behold women standing ten feet deep before necktie racks. He would find men waiting patiently in line at glove counters wishing they were almost anywhere else.

But here is the most significant thing of all. That great crowd, every unit of which has money in its pockets to spend, passes calmly by the automobile man's door without even so much as receiving an invitation to step in.

The result is just this. When Christmas morning arrives, neckties are distributed that are not at all what the recipient would choose for himself, and gloves are presented that are not needed in the first place, and what is more, have to be exchanged because of wrong size.

The saddest part of it all is that Mrs. Car Owner never had it suggested to her that the gift most acceptable to her husband would be one that he could use on his car. Nor was Mr. Car Owner reminded of the fact that his wife would enjoy an automobile robe or heater.

Much has already been accomplished in revealing this failing to the trade through the intensive Christmas merchandising campaign now being carried on by the Automotive Equipment Association under the supervision of Ray Sherman, its merchandising director. As the time draws nearer for the retailer to put his holiday campaign into actual operation its benefits will be further demonstrated.

This effort to boost Christmas sales of automotive equipment emphasizes the need for careful consideration of what the holiday season can be made to mean to both car and accessory dealer. But it is essential that no time be lost in getting busy.

To the automobile merchant the Christmas buying season offers unlimited opportunities in the way of closing out prospects on which he has been working for some time. It gives him a fresh angle from which to operate.

Granted that the prospect has been holding off buying for some weeks the salesman can now introduce a new tone into his talk. His argument may well be built along the following lines: "Why not surprise your wife when Christmas comes, and make her a present of that sedan she likes so much. We'll have it standing before your door early Christmas morning, so that it will be the first thing she sees as she looks out her window."

This argument might well be worked up in the form of a sales letter addressed to those prospects who have not as yet declared themselves. The same argument, too, might be used to advantage with the urge to buy now, so that the greatest amount of enjoyment may be secured from the enclosed car during the winter season.

The barrier of sales resistance is less severe when the Christmas spirit gets into the air than at any time during the year. This is something the automobile salesman should seriously consider.

Undoubtedly he has many names on his list that at times he has despaired of ever selling. They may have been there for many months with every indication of remaining as many more. On the other hand they may be of more recent origin—the result of a recent closed car exhibit, perhaps.

Why not treat them with the holiday

SIGN UP—NOW

THREE weeks ago AUTOMOBILE TOPICS first made mention of the slogan "Ask 'em to Buy for Christmas," which is nothing more nor less than the very effective one coined by the Automotive Equipment Association, adapted to the approaching holiday season. For that very reason, however, it bears a double significance.

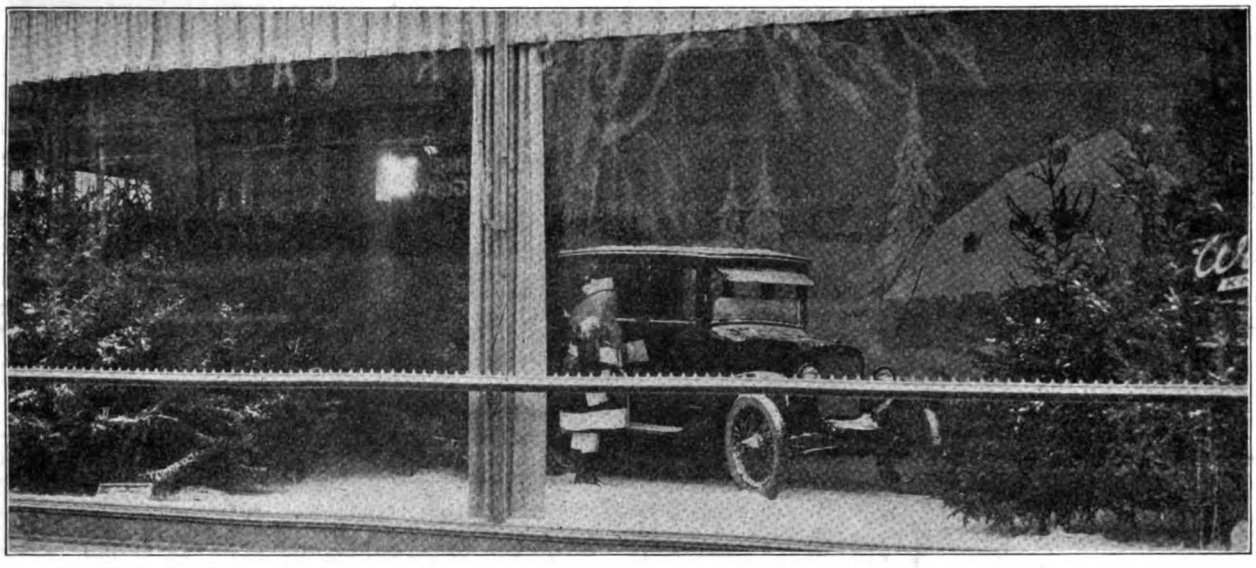
The vast army of retail merchandisers who yearly hang up the holly and mistletoe in their windows to attract the Christmas shopper have heretofore had few adherents among automobile and accessory merchants. It is a deplorable fact, but it is true.

This year, however, new life has been put in the movement through activities of the A. E. A., which is urging each of its members to get busy now and enroll. And, unquestionably, there's little time to be lost for everyone involved—manufacturer, jobber, automobile and accessory dealer—to unite in making the Christmas season a buying season

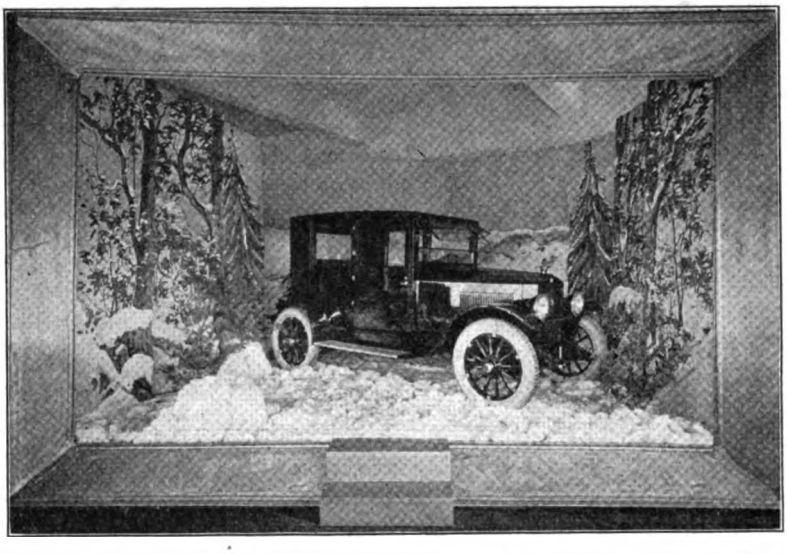
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Windows That "Ask 'em to Buy for Christmas"

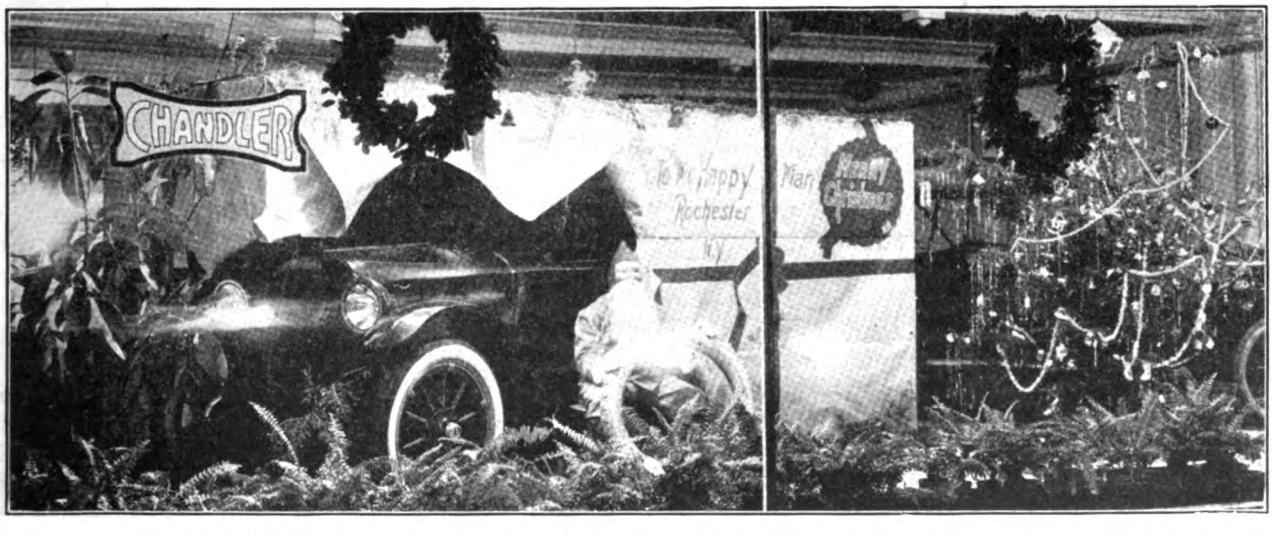
Each One Urges the Passer-By to "Say It with An Automobile"



FROM show windows dressed in holiday garb the shopper gets many of his ideas. Particularly important is it, therefore, that the automobile and accessory merchandiser make the most of his window space to suggest the advantages of an "automotive" Christmas present



DECORATION of the window may be as elaborate or as simple as conditions warrant, so long as it conveys the Christmas spirit. That certain members of the trade at least, were alive to the advantages of holiday business last season is evidenced in these three displays

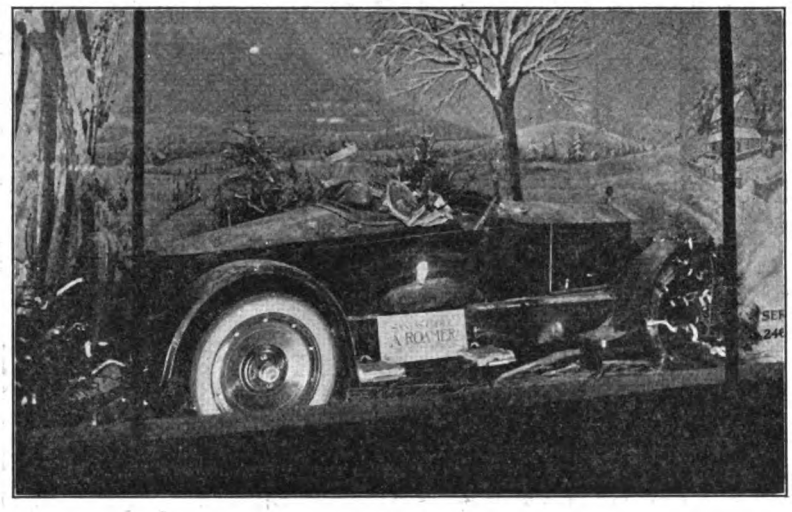


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spirit? Even though every other argument may have failed, the idea of giving pleasure to others at Christmas time may provide the necessary stimulus.

Too great emphasis cannot be laid upon the importance of effective window displays. This applies to the automobile merchandiser as well as to the accessory dealer.

What contributes more than anything else to the interest in holiday merchandise is the manner in which it is presented. Liberal use of pine trees covered with snow; the figure of Santa conspicuously displayed in connection with the machine which makes it possible for him to make his rounds: all these help to link up the automobile with Christmas giving, as the accompanying illustrations show.



Santa Claus seated at the steering wheel attracts the passer-by

By reason of the wide variety of his line, which offers something for every pocketbook, the work of the accessory dealer consists largely in calling the attention of the public to the fact that automotive equipment makes suitable and welcome Christmas gifts. To this is added the task of stocking his shelves with such devices as, he believes, will prove most popular, and arranging them effectively in the store and show window.

The problem of what to give the man of the house, particularly, is solved most satisfactorily by presenting him with something he can use on his machine. When it is considered that there are ten million car owners it will be seen that the accessory dealer has plenty of customers from which to get his share of business.

Still another point which stands in favor of the automobile accessory as a Christmas gift, and one which may well be stressed, is its utility. The practice of buying any old thing merely for the sake of giving something, is dying out, as those who make a study of the various trends in holiday buying have attested.

Rather is it the purpose of the shopper to spend his money on something practical—something that can be used every day. In addition to its practicability, the article that can be used on the automobile has the added advantage of being something that not merely one, but every member of the family can enjoy.

All these are points which, properly played up, will help materially in attracting attention to what the accessory man has to offer in the way of Christmas gifts. How, and to what extent he features them depends upon local conditions.

One thing is certain. He should begin at once to get things lined up, for upon the thoroughness of his preparation depends his success.

Between now and Christmas time a large proportion of the Country's 10,000,000 car owners will have occasion to visit the dealer. Right there lies the opportunity for spreading the Christmas sales message. A suggestion as to what to give is always welcome. Even though it fails to result in a sale then and there, it will at least give the visitor something to think over.

A brief sales letter may well be employed to carry the suggestion of giving automobile accessories as Christmas gifts into every household. This might prove most helpful if addressed to the woman of the household, who is generally in a quandary as to what to give the men of the family.

In preparing his store for Christmas buying the dealer would do well to study carefully how best he can display those products he feels will prove quick sellers. Tables distributed about, covered with heavy crepe paper of Christmas coloring and design will serve as convenient and attractive exhibition stands.

Displayed in this way, the various products may be inspected at close range by visitors. Moreover, such an arrangement makes it possible for the shopper to browse around at will. Thus, the chances are that before he gets through he will strike something that will interest him.

What has been said about the value of window display as pertaining to the car dealer applies as well to the accessory merchandiser. For it is what the passer-by sees in the windows that determines the extent of his interest.

An effective window display may be staged at comparatively little expense through the use of red crepe paper. This can be slit up into streamers for a background and interspersed with similar streamers of green crepe paper.

Plain red paper laid on the floor of the window serves as an effective background for the articles to be displayed. Branches of hemlock and fir placed in the corners and brightened with bits of cotton over which crystal powder is shaken will add considerably to the effect.

Show windows during the holiday period should be changed frequently so that there will always be something to catch the eye of the passer-by. A sign prominently placed, calling attention to the articles as suitable Christmas presents also will arouse interest.

The task of "Asking 'em to Buy for Christmas," however, does not fall entirely on the shoulders of those who come in direct contact with the buying public. Much depends upon the cooperation granted the retailer by the manufacturer.

Through stressing in every piece of advertising copy the fact that automotive devices make attractive Christmas gifts he can be of great assistance in popularizing the idea which his retailers are endeavoring to put across.

There is reason to believe, too, that the manufacturer might well consider providing his dealers with wrapping material which will make the package look like a gift. Sticker tape decorated in holly pattern or some distinctly Christmas design will add this touch.

To join the vast army of retail merchandisers who are mapping out their holiday campaigns the automobile and accessory man must sign up at once. Let him enroll his organization now under the banner which bears the slogan "Ask 'em to Buy for Christmas."

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$1,500 for Your Opinion, Mr. Car Owner

La Roche Bros. Bid Public Ride, Then Write About It

THE head of a wholesale millinery house in addressing a gathering of retailers once made this statement. "The hardest part about the job of selling hats," he said, "is getting the customer to actually sit down and try one on. When that has been accomplished there is a good chance of putting over a sale."

It is a long jump from millinery to automobiles, to be sure. Yet the fundamentals of successful merchandising remain much the same. Just as the millinery salesman endeavors to get the buyer to try a hat on his head so does the automobile merchandiser urge the prospect to try out the car.

Many methods have been employed by energetic salesmen to get the prospect inside the car so that he may see for himself how it feels to be a car owner. Many of these, too, have proved successful in stimulating general interest in the machine.

One of the most recent has been tried out by several Velie distributing organizations, having started originally with La Roche Brothers, Inc., Philadelphia, Pa., to whom credit belongs for working out a plan that is unique in many ways. This takes the form of a contest in which the public is given the opportunity of testing out its automobile selling ability.

In brief, anyone who has been a car owner for a year is invited to take a test ride in the Velie Six and then submit a letter embodying his impressions and opinions. From those letters received, the best three are chosen and are awarded credits of $700, $500, and $300 respectively against the purchase of a new Velie. The number participating in the competition is limited to 500.

Details of the contest were effectively presented in an advertisement which appeared in the local papers and which is shown in the accompanying illustration.

"$1,500 for your written opinion," this reads. "We claim the new Model 58 Velie at $1,395 was the best Light Six produced in America, and at the new reduced price of $1,275 it's revolutionary; and we're willing to spend $1,500 to let the public prove it.

"Our plan is simple but conclusive.

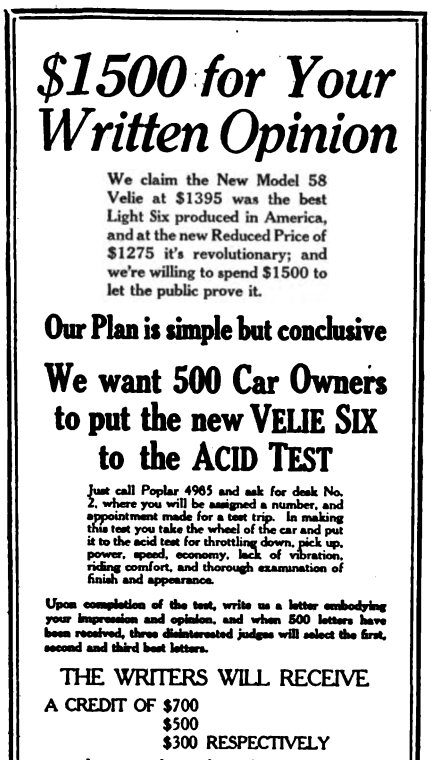
"We want 500 automobile owners to put the new Velie Six to the acid test.

"Just call Poplar 4985 and ask for desk No. 2 where you will be assigned a number, and appointment made for a test trip. In making this test you take the wheel of the car and put it to the acid test for throttling down, pick up, power, speed, economy, lack of vibration, riding comfort, and thorough examination of finish and appearance.

"Upon completion of the test write us a letter embodying your impression and opinion, and when 500 letters have been received, three disinterested judges will select the first, second and third best letters.

"The writers will receive a credit of $700, $500, and $300 respectively to apply against the purchase of a new Velie car. These credits are transferable.

"Note.—This test is limited to men or women who have driven their own cars not less than a year. We believe this term of experience is necessary for a competent expression of opinion. It makes no difference, however, what make or priced machine you have driven."



La Roche Bros. ask for 500 opinions

In making it conditional that everyone taking a demonstration should have owned a car one year, the Company had a trade-in prospect with each individual who made a trip in the Velie. As the Company points out, naturally a person taking a ride would write a good letter, as his chances of winning a prize depended upon just how good his letter was.

The fact that these prizes were transferable also added an element of interest, for if the person winning the prize did not want it himself he could sell it for whatever figure was acceptable to him.

In preparation for the event, the Company had its demonstrating cars tuned up in fine shape. Every part was carefully gone over so that the performance would be perfect in every respect.

Advantages of such an open competition in point of arousing public interest are self-evident. The public, or a large part of it is always alive to any opportunity that comes along for "turning" a penny.

The fact, therefore, that an offer is made to take a ride in a car, then go home and write the Company a letter telling all the nice things about it that can be remembered, with the possibility of receiving the equivalent to $700, $500, or $300 for the trouble, assures it a cordial reception. And in consequence the Company makes many new friends.

Getting the buyer to give the machine a careful test with himself at the wheel, is a favorable sign from a sales standpoint. It means that at least the first barrier of sales resistance has been overcome. That is to say, the prospect has permitted himself to become interested.

That is precisely what has been accomplished by La Roche Bros. through this contest. Successfully, too, judging not only from reports from Philadelphia but from other cities where Velie dealers have been quick to adopt a similar method of making the public "sit up and take notice."

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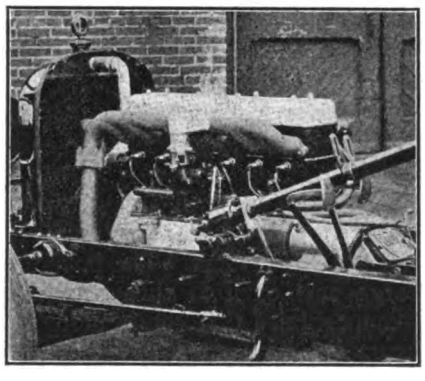
AUTOMOTIVE PRODUCTS THAT ARE NEW

Mercer Now Making a Six in Addition to Four

Six-Cylinder Valve-in-Head Unit Power Plant Is Chief Difference

IN addition to the four-cylinder car which it has built for years, Mercer Motors Co., Trenton, N. J., is now making a six-cylinder model. In the new series "Six" will be offered five body types. These include touring with two auxiliary seats, four-passenger sporting, and runabout with two-passenger seat folding into rear deck—all $3,750; and six-passenger sedan and touring limousine both $5,000. The touring limousine differs from the sedan in that the former has a glass partition between front and rear compartments.

The six-cylinder en bloc engine is a valve-in-the-head type, 3¾ x 5 inches. Its S. A. E. rating is 33.75 horsepower. At 2,550 r.p.m. it develops 84 brake horsepower. A three-bearing crankshaft



Mercer's new six-cylinder engine

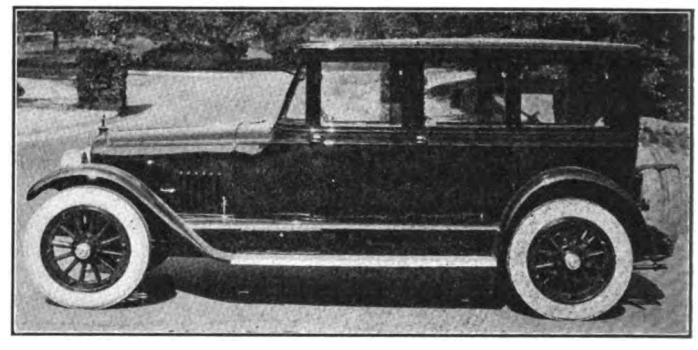
is used. Suspension is at three points, the single front one forming a regular ball-and-socket joint.

With the exception of the engine, unit power plant design, and three-speed gearset, the six-cylinder model closely follows the proved design of the four. The latter, as is known, has a four-speed transmission located amidships. The chassis, otherwise, is substantially the same. Body lines, too, retain the characteristic Mercer design.

Engine cylinder block is made from hard cylinder iron and is bolted to an aluminum crankcase, the lower half of which acts as an oil reservoir. Oil pipes are cast into the crankcase and supply oil to main and connecting rod bearings. Crankshaft is a drop forging with moon-shaped throws to give it balance. It is drilled, providing full-pressure lubrication to bearings. Camshaft is likewise a drop forging with cams and oil pump drive gear integral. Helically-cut timing gears are employed, the group consisting of a forged steel gear on the crankshaft, driving a Bakelite gear on the camshaft, which in turn drives a forged steel gear on the pump and magneto shaft.

Water circulation is maintained by a centrifugal pump, located at right forward end of engine. Pressure-feed lubrication is maintained by gear-driven pump, pressure varying from five to 15 pounds at slow speeds to 40 pounds at high speeds. Connecting rods are drop forged in conventional "I"-beam shape. They are 10 inches between centers and fitted with bronze-backed, babbitt-lined bearings.

***CHARACTERISTIC** body lines have been retained by Mercer for its six-cylinder models. Sedan and touring limousine are identical except that latter has compartment-dividing partition*



Rods are machined on the outside and drilled to reduce weight, providing light rods consistent with strength required. Pistons are die-cast of aluminum alloy, and are constant clearance type.

Valves are located in the removable cylinder head, and are operated by rocker arms, push rods and cam followers from the camshaft located in the crankcase. Camshaft is designed to slowly open and close valves, thereby eliminating noise. Valve seats are generously water-cooled and there is a circulation of water between each intake and exhaust valve.

Ignition is by single-spark magneto; starting and lighting by a 6-volt two-unit system. Clutch is dry-plate multiple-disc type; gearset provides, as mentioned, three forward speeds, direct drive on third.

Drive is through tubular propeller shaft with two universals to a three-quarter floating rear axle. Driving strains are taken through the rear springs. Service brake is internal expanding on propeller shafts; emergency brakes are internal expanding on rear wheels. Semi-elliptic 2½-inch springs are used, 39 inches long in front and 59 inches rear.

The 132-inch chassis is fitted with 32 x 4½ cord tires for the open models and 33 x 5 for the closed. All models are equipped with Houdaille shock absorbers, combination clock and speedometer and Moto-Meter. Wood wheels are standard on all but the sporting, which carries Rudge-Whitworth wire wheels with one extra. Two extra rims are furnished on the other models. Included in the closed-car equipment are walnut toilet cases, dictograph, corner and dome lights, reflecting mirror, Sargent locking system and the like.

The four-cylinder model is to be continued. That it is higher priced than the six is accounted for by the fact that it carries several items of extra equipment which the six does not. Deliveries on the six are about to begin.

Manzel Hydraulic Shock Absorber Has Automatic Control

Maker of Manzel Engine-Driven Tire Pump Going After Equipment Business

AUTOMATIC control is featured in the hydraulic shock absorber which Manzel Brothers Co., Buffalo, N. Y., is now offering the trade for equipment purposes. The manufacturer is known to the automobile industry as the maker of the Manzel engine-driven tire pump, used for years on several leading makes of cars, and lubricating devices.

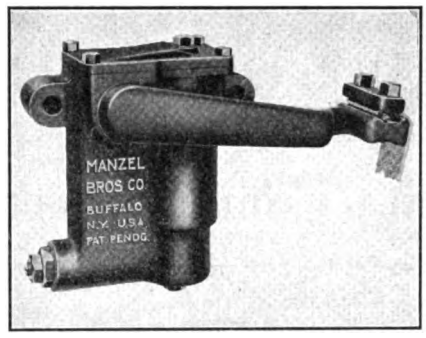
The shock absorber is made for all makes of cars and for both front and rear springs. It is easily installed and after installation is said to require no further attention. It is bolted to the side of the chassis frame and is connected by a flexible webbed strap with the axle. All parts necessary for installation are included in the list price of $90 for a set of four.

Its action is simple. After the shock absorber is attached to the frame, the cylinder casing is filled with a specially-prepared oil, which acts as the cooperating medium to function with the hydraulic mechanism that cushions the shocks. When the car spring rebounds, the check

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arm attached to the axle is pulled down and acts through a cam on a piston. This exerts a pressure on the oil in the cylinder and on the double-acting automatic control valves that regulate its escape into an outer chamber. This cushions the shocks automatically and allows the car springs to expand gradually back to normal position.

The action spring under the piston then raises the piston and this draws the oil back into the main cylinder around the valve. By means of an adjusting screw the valve action may be regulated to suit any weight of car. All working parts, being immersed in oil, are consequently self-lubricating. The cylinder casing is oil-tight, preventing escape of oil and keeping out all dirt.



Manzel hydraulic shock absorber

New Olds Distributer Stages Driveaway

Simmons Motor Car Co., newly appointed Oldsmobile distributer at Cleveland, opened its new relation with a driveaway of 30 cars last week. The concern has been in business for a long time and expresses high confidence in future sales of its new "stock."

D-A-C Engine Is Twin-Three with Staggered Cylinders

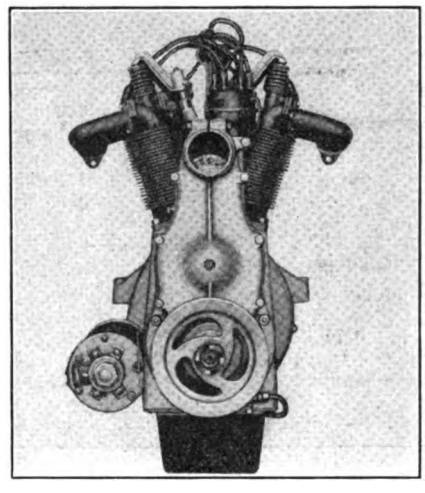
Doughty's New Scheme of Air-Cooling Consists of Two Patented Features

SOME interesting developments in air-cooled engine design have been achieved by President W. J. Doughty of the Detroit Air Cooled Car Co., Detroit. One of these is the method of cooling, which consists of two patented features.

The first is a directed and concentrated application of the air by specially devised and attached air-conducting chutes, that bring the in-rushing fan-impelled air to the radiating surfaces. The second is the method of arranging the cylinder—twin-three, staggered "V" arrangement—which facilitates cooling of cylinders, as it permits air to be directed to each cylinder in equal volume and at the same temperature.

The D-A-C twin-three six-cylinder engine has a 2⅞ bore by 4-inch stroke. Crankshaft is hollow and is but 14 inches between the two main bearings. The three-cylinder blocks are set in a "V" with cylinders staggered, thus giving a construction said to possess a characteristic advantage over the straight-line six-cylinder type since in that angle of cylinder inclination it is able to insure a theoretically balanced system.

Inlet and exhaust openings from the cylinders are very short, with thin walls which rapidly convey the heat without requiring additional radiating surfaces of fins. Cylinders project down in the crankcase, thus helping maintain uniform expansion.



D-A-C twin-three air-cooled engine

Another feature is the method of actuating the valves. The camshaft is separately housed and located in the trough between the cylinder blocks, all valves being operated by direct pull rods.

Bethlehem Producing Three Improved Trucks

Double-Reduction Rear Axles and Stronger Springs Now Being Used

THREE truck models are now being regularly produced by the new Bethlehem Motors Corporation of New York, Allentown, Pa. While many of the constructional features of the former Bethlehem trucks have been retained, there are also some changes in design and units. All models of former manufacture now in service will be permanently serviced from the Allentown factory service inventory.

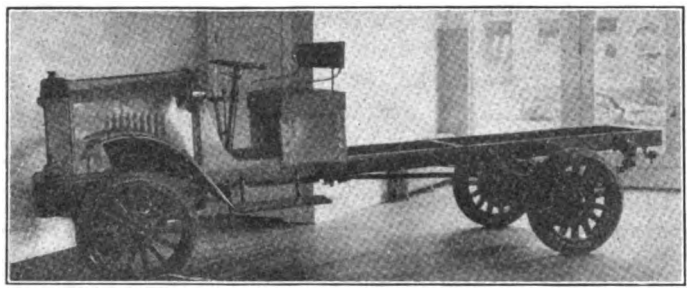
The new corporation is offering dealer contracts on a perpetual basis, automatically renewable year after year, and is providing attractive discounts. The Company is also making special contracts with car dealers to handle its speed truck only, and with present light truck dealers to handle only the larger Bethlehem models when desired.

Of the new models, the Airline has a nominal capacity of one ton and is designed for speedy transportation. The chassis is priced at $1,195, weighs 2,800 pounds, has a 125-inch wheelbase, 108-inch loading space and spiral-bevel gear rear axle. Any style of body, painted and mounted ready for work, will be provided.

Next in the new line is the two-ton Fast Freight, using a Wisconsin double-reduction axle in place of the axle formerly used, with heavier rear springs, these having 13 leaves. This chassis is priced at $1,595.

The Heavy Duty is a three-ton job with Fuller four-speed transmission, Wisconsin double-reduction rear axle and 15-leaf chrome vanadium steel springs with bronze-bushed eyes. This chassis is offered at $2,195.

All engines used are made in the Company's own plant at Pottstown, Pa. Electric lighting and starting is standard on all models. All models have been designed to operate consistently and economically at the higher speeds required on trucks with pneumatic tires.



AS now being produced, Bethlehem trucks have double-reduction rear axles and stronger springs. General design remains much the same

Packard Considers Golfer in Coupe

The latter part of this month, Packard Motor Car Co., Detroit, will start delivering its single-six coupe with an arrangement that permits carrying of golf bag and sticks without projecting out from the luggage compartment. An opening, cut through to the compartment under the driver's seat, does the trick.

Olds Gives Color Option on "47"

Olds Motor Works is now furnishing its model "47" closed cars in blue where it is preferred, rather than the standard Orriford Lake. Two weeks is required to get the blue after receipt of order.

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IDEAS THAT SELL ACCESSORIES

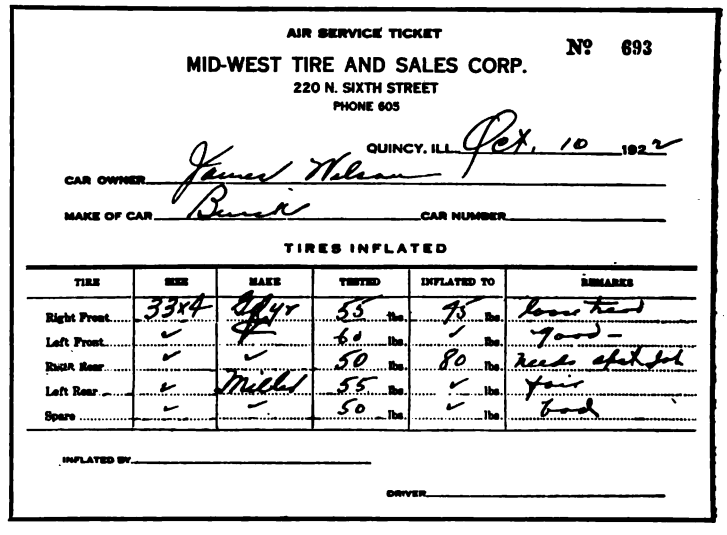
If the Buyer Can't Come to You—Go to Him

SELECT a good line and stick right to it year after year, and a good, substantial business is sure to follow." Such is the advice of A. L. Stewart, president of the Mid-West Tire & Sales Corp., Quincy, Ill.

To this, might be added the fact that Stewart is a firm believer in going out in the highways and byways and bringing business in, rather than sitting back and waiting calmly for it to declare itself. This is illustrated by the sales and service truck which carries the Mid-West Tire company's name into homes throughout the entire surrounding trade territory.



Mid-West Tire truck provides service at your door



AIR SERVICE TICKET

MID-WEST TIRE AND SALES CORP.

220 N. SIXTH STREET

PHONE 605

No 693

QUINCY, ILL. Oct. 10 1922

CAR OWNER James Nelson

MAKE OF CAR Buick CAR NUMBER

TIRES INFLATED

TIRE	SIZE	MAKE	TESTED	INFLATED TO	REMARKS
Right Front	33x4	Ajax	55 lbs.	75 lbs.	Loose tread
Left Front	✓	✓	60 lbs.	✓ lbs.	Tread
Right Rear	✓	✓	50 lbs.	80 lbs.	Rim chafed
Left Rear	✓	Mohawk	55 lbs.	✓ lbs.	Tire
Spare	✓	✓	50 lbs.	✓ lbs.	Tread

INFLATED BY

DRIVER

With each car owner it leaves this complete report

Before going further with the details attendant on the operation of this vehicle it may be said that the Company is located in the center of a vast agricultural district. The fact that it is frequently difficult for the farmers to get into town at regular intervals made it all the more imperative that some means be provided whereby their automotive wants might be taken care of satisfactorily. So the sales and service truck plan was worked out.

This machine is a specially built closed body on an International speed truck chassis. It is equipped with an air pump.

Its purpose is this: To maintain a close and careful inspection of all the tires that are on every car and truck in the territory. A definite report is made in each instance on the form shown in the accompanying illustration. The original is left with the car owner, and the copy filed by the Company for its future use.

It is interesting to note what Stewart has to say about the value of such a record. "We have found," he says, "that this form accurately filled, is a most valuable help in keeping in real close touch with our customers with positive information as to the condition of their tire equipment."

The Mid-West Tire truck is in reality a traveling store. In addition to the air pump, it carries a stock of approximately sixty-five tires and one hundred tubes. Room is also provided for a small stock of blowout patches, chains, pumps, jacks and other small tire accessory items, as well as a complete outfit of tire changing tools.

Definite trips are routed on each and every road covering the entire surrounding territory. About twenty-five car owners are visited each day.

As this field work lies principally among the farmer class of car owner it is necessary that the salesman who has charge of the work thoroughly understand his customers and be in sympathy with them at all times. It is essential, too, that he make friends with them so that they actually look forward to his visits.

The man who handles this end of the Mid-West Tire company's work is a high-grade salesman who has been with the organization for several years and enjoys a large personal acquaintance with the farmers. Instead of boring his friends with high pressure selling, he endeavors merely to interest them in the service rendered.

Stewart's own words best describe the goal which is being sought. "It is our idea," he states, "to actually interest everyone called on, in our store and our tires in such a manner that they will come to the store whenever they come to town."

As for the results of the undertaking, he has this to say: "Personal sales from the truck are more than maintaining the overhead expense so far, and actual records show that the truck is pulling new customers. We are enthusiastic about this sales and service truck idea and believe that it will be necessary to add more of them from time to time."

Stewart attributes much of his Company's success however, to sticking to one line. "Concentration on Pennsylvania Vacuum Cup tires has done much to build up our business," he emphasizes. "In these days of 'gyping' and price slashing it requires greater effort and more intensive selling on honest lines to accomplish the right results."

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PRODUCTS THAT AID IN QUICK REPAIRS

MILWAUKEE SPLIT RIM TOOL MADE IN TWO TYPES

Taking 'em off, and putting 'em on, is made a simple operation by use of the Milwaukee split rim tool which is being manufactured by the Milwaukee Pattern & Mfg. Co., 1195 Thirtieth street, Milwaukee, Wis. This device is designed in such a way as to make handling of split rims an easy matter.

It is of the three-arm type, two being



Milwaukee split rim tool

stationary, while the third is movable by screw action. The screw action makes the operation positive, and reversing the turn of the spider closes the rim again and locks it.

Two types are being offered at this time, one which attaches to the work bench or wall, and the other furnished on a special floor stand. The bench or wall type sells for $15, while the floor stand tool is priced at $20.

Kant-Slip Wrench Is All-Around Tool

Any object, round, hexagon or square can be gripped by the Kant-Slip wrench, a dependable, all-around tool that is being produced by the Allan-Diffenbaugh Wrench & Tool Co., Baraboo, Wis. This wrench is self-adjusting with double-action jaws which take a parallel grip. The harder the pull on the short handle the harder these two jaws grip. End of one handle is pointed so as to act as a screw driver, while a hammer is provided on the head. In addition to acting as screw driver and hammer, the tool is designed to act as monkey wrench, pipe wrench and plier.

Offers Motor-Operated Snap Switch

Temperature in electric ovens, and operation of electric signs, can be regulated by a new motor-operated snap switch which has been perfected by the Westinghouse Electric & Manufacturing Co. In fact this switch, which can be used on either alternating or direct current, is applicable wherever the automatic operation of electrical devices is desired. It consists of a heavy snap switch with a motor geared to the switch shaft. The switch is well constructed and has withstood successfully many severe service tests.

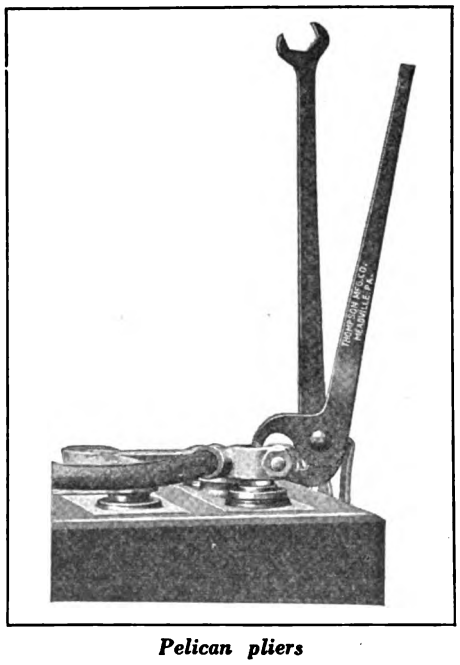
Contacts and moving parts are mounted on a porcelain base which is fastened in a cast iron base on three bosses. Intermediate gears between the motor and switch shaft are mounted on the floor of the base casting while the motor is a unit mounted on base casting.

PELICAN PLIERS DISCONNECT TERMINAL CLAMPS

They disconnect clamp type terminals that have become corroded and fused onto the battery post. Such is the service performed by Pelican pliers which have been designed by the Thompson Mfg. Co., Meadville, Pa. The action of these pliers is to lift the clamp vertically without placing any stress on the battery post.

On the end of one of the handles is a wrench which will loosen the average clamp nut. On the end of the other handle a screw driver has been provided which is intended to spread the terminal clamp.

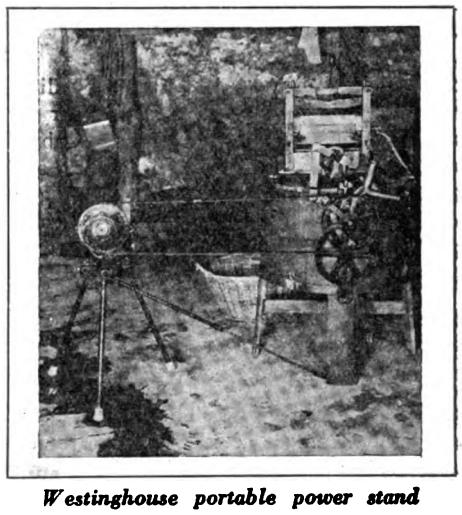
Pelican shaped jaws will grip hexagon nuts, and square and round-headed terminal bolts. Opening in the wrench jaws is made for a five-sixteenths standard hexagon nut. This can be closed, however, to suit smaller nuts. Pelican pliers sell for 50 cents a pair.



Pelican pliers

PORTABLE POWER STAND NEW WESTINGHOUSE PRODUCT

Of interest to the garage man and shop owner is a new portable power stand which forms an important addition to the line of automotive equipment manufactured by the Westinghouse Electric & Manufacturing Co. This has been designed with the requirements of the small machine shop and garage in mind.



Westinghouse portable power stand

It consists of a ¼ horsepower back-geared motor mounted on a tripod stand. Rotor speed of the motor is 1,750 r.p.m. and the speed of the back-geared shaft is 210 r.p.m. Four power pulleys are supplied, two of which take a one-inch flat belt and the other two a 3/8-inch round belt.

Through this system of back gears and the four pulleys, a wide range of speeds is obtainable and the motor can therefore easily be belted to operate at the proper speed, any device that can be worked with a ¼-horsepower motor.

The stand is very light, weighing only 55 pounds complete. A large wood-grip handle is mounted on the frame for convenience in moving, and an adjustable, telescopic rod is supplied which may be used either as a brace or as a tension anchoring device. Ten feet of extension cord are provided thus enabling the stand to be operated at any convenient spot about the shop.

"AMERICAN" GARAGE OUTFIT IS MILBURN PRODUCT

A complete outfit for oxy-acetylene welding and carbon burning that is fast growing in favor among garage and shop proprietors is the Milburn "American" garage outfit which is being produced by the Alexander Milburn Co., 1420 W. Baltimore street, Baltimore, Md.

The Milburn outfit consists of a Mil-

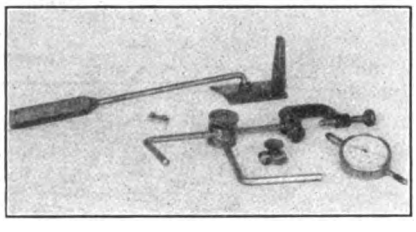
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burn "American" welding torch, 16 inches long; five welding tips for torch; a carbon burning tube, ten inches long; a single gauge oxygen regulator; a single gauge acetylene regulator; an oxygen hose, three ply, 12½ feet long; an acetylene hose, three ply, 12½ feet long together with beginner's supply of steel, cast iron and Tobin bronze rods and fluxes for same; a pair of welding goggles, wire frame, leather side, in flat metal box; a pair of gauntlet leather gloves; a Pyro friction lighter; a set of wrenches for torch, hose and regulators; a fiber carrying case, with reinforced riveted corners, oak tan leather handle and strap with buckle.

Particular emphasis is laid upon the ease with which the Milburn welding torch No. 1 is handled. Like other of the Company's torches it is of the balanced pressure type, operating on approximately equal pressures of oxygen and acetylene. Price of the "American" garage outfit complete is $55.

AMES ATTACHMENT MEETS ALL GAUGING REQUIREMENTS

Clamps in any position and permits gauging at any angle. This is the characteristic feature of the Ames Junior universal attachment which has been



Ames Junior universal attachment

added to the line of dial gauges and bench lathes made by the B. C. Ames Co., Waltham, Mass.

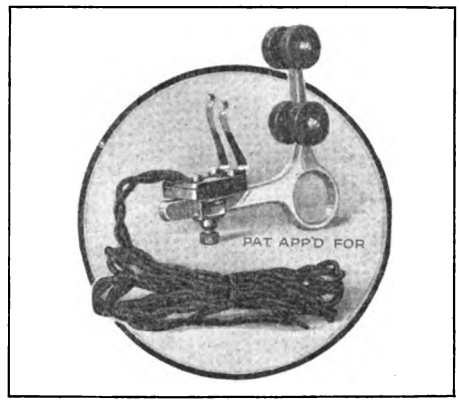
The Ames Junior attachment has been designed for use with the Ames Junior dial cylinder gauge outfit and is so constructed that it will clamp onto almost any object that will go between the jaws of the clamp. With the Company's other product it assures a complete testing outfit.

It is adaptable for showing straightness of crankshafts, camshafts, and valve stems and will check lift of valves and valve cams. It shows thickness of piston rings as well as the thickness of all materials such as shims, bearing liners, and so on.

Price of the attachment is $5. The Ames Junior dial gauge head is $10 and the Junior cylinder gauge mount is $5.

DURHAM OFFERS ADJUSTABLE COMMUTATOR CONTACTOR

Design of the adjustable commutator contactor which is being produced by the P. J. Durham Co., Inc., 244 West 49th street, New York city, is such that it can be used with any armature tester, measuring drop in voltage between commutator bars, or induced current in coils. Moreover, it is being offered at a price that should add to its popularity.



Durham adjustable commutator contactor

Particular stress is laid by the maker upon the fact that it maintains a positive contact and correct position while the armature is rotated. Carefully constructed and well adapted to use in electrical service stations it sells for $3.50, meter not included.

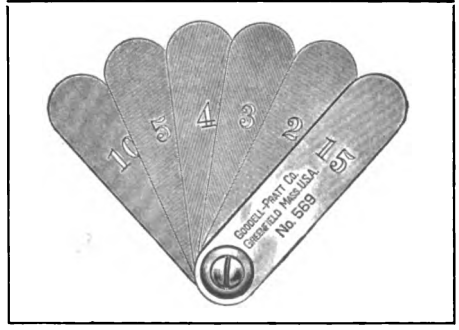
QUICKWAY SOCKET WRENCH IS BETHLEHEM PRODUCT

Ninety-three per cent of the nuts on all cars, including Fords, are said to be handled by the Quickway socket wrench which is now being offered by the Bethlehem Spark Plug Co., Bethlehem, Pa. This wrench comes in the form of a compact tool kit destined by reason of its extreme utility to have a wide appeal.

It comprises a hexagonal double-ended wrench, turned from solid bar steel of high-carbon test, accurately borached and cyanide-hardened. With this five sockets are furnished, of the following sinzes: ½ inch—9/16 inch—⅝ inch—11/16 inch—¾ inch. The tool complete is contained in a neat, black leather-like case.

GOODELL-PRATT INTRODUCES NO. 569 FEELER GAUGE

Six leaves comprise the No. 569 Feeler Gauge which has lately been placed on the market by the Goodell-Pratt Co., Greenfield, Mass. This tool has been designed for setting valve tappets, timer, and spark plug points.



Goodell-Pratt feeler gauge

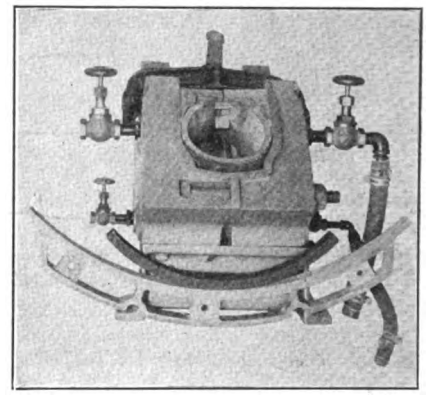
The leaves are .002, .003, .004, .005, .010, and .015 inch thick, making possible in combination all thicknesses by thousandths from .002 to .039 with the exception of .038. They are 2¼ inches long by ½ inch wide and are held together by a screw and nut which are readily removable for inserting or replacing leaves.

There is no case or sides for the gauge. Those leaves that are not being used form the handle. Price, each, is 60 cents.

WESTERN TRUCK TIRE MOLD HAS SEMI-FLAT TREAD

A semi-flat tread is one of the features of a mold for repairing and retreading truck tires which is being produced by the Western Rubber Mold & Battery Co., 321-323 North Crawford avenue, Chicago. This tread has been incorporated into the design of the mold so as to afford a contour which will fit perfectly the semi-flat type of tread as well as the round type.

The mold, which is of the simple cavity type, is designed in two separate halves and equipped with spacers of various widths so that it can be adjusted to fit the different sizes of tires. It can also be equipped with non-skid forms for retreading as well as repairing blow-outs, tread cuts and such injuries.



Western truck tire mold

Operation of the mold is practically the same as that of any other vulcanizing mold. Particular stress is laid upon the fact that necessary adjustments may be made quickly.

Engine Time Indicator Acts as Check

Checking up ignition and valve timing in a short time and with little mechanical labor has been made possible by Sauer's engine time indicator which is produced by Sauer Brothers, Chico, Calif. This convenient device is adapted for use on any engine. In timing ignition the instrument registers three distinct positions of the piston within a few degrees, namely, the compression stroke, dead center, and power stroke. With two of the Indicators it is possible to determine within two or three minutes the valve timing of any engine. Price is $2.50.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

CONNECTICUT — HARTFORD. — Daniel Mulconey has taken over the agency for the distribution of the Dort.

NEW YORK—NEW YORK.—Leindorf Motor Sales Corp. has leased to the Fay Taxicabs, Inc., a one-story garage, 200 x 100, running through from 136th to 137th streets between Madison and Fifth avenues. The building has been rented for fifteen years at an aggregate rental of approximately $200,000.—Harry Cahn has leased his new two-story fireproof garage on the northeast corner of Bergen avenue and 153rd street for fifteen years at $238,000 to the Montauk Garage Realty Corp.—A building will soon be erected on the northwest corner of Plimpton and Boscobel avenues. The structure, which will be used as a garage and stores, will cost $25,000 and will be 144.67 x 100.

K. and K. Garage, of which G. Wolkowitz, B. S. Katz and Z. Shapiro are directors, has leased the Royal Garage, a four-story building on a plot 73 x 100. The structure, which is located at 102-106 West 107th street, has been rented for nineteen years at $30,000 annually.—Murray Maran and Jacob Sanders have purchased the block front on the easterly side of Jerome avenue, between 181st street and Cameron place, to build a garage and stores. The property occupies a space 120 x 101 feet.—George Schmitt & Co. has sold the two-story garage, 51 x 194, now under erection on the north side of 160th street, block front from Park to Cortlandt avenue.

Michael and George Coleman have leased to M. Danielson the garage at 216-218 West 30th street for a long term of years at an aggregate rental of about $100,000.—A four-story brick building on a lot 20 x 100 at 342 East 48th street has been sold to the 340 East Forty-eighth Street Realty Co., owner of the Biltwell Garage which adjoins the recently acquired property. The company purchased the property in order to enlarge its garage which will then occupy a plot 50 x 100.—A receiver has been appointed for the Nuncie Auto Body & Painting Co., Inc., of 512 West 53rd street. It is stated the liabilities are about $20,000 and the assets about $2,500.

NEW JERSEY — GUTTENBERG.—Agency for the distribution of the Dort line in this territory has been granted the Boulevard East Garage.

MIDDLEWEST

ILLINOIS — CARLINVILLE. — Ira Allen, of the firm of Wells & Allen, has sold his interest in the garage on West Main street to S. K. Hushing. The firm will hereafter be conducted under the name of Wells & Hushing.

MICHIGAN — GRAND RAPIDS. — Permit has been granted the Chase Auto Parts Co. for the erection of a garage on Monroe avenue. The building will have a 150-foot frontage, extending back 100 feet, and will be constructed at a cost of $25,000.

JACKSON.—Dort distribution for this territory has been taken over by Ora P. Stewart.

WISCONSIN — APPLETON. — A garage will soon be erected here for the Hermann Motor Car Co.

CUBA CITY.—F. L. Erwin Garage has filed a petition in bankruptcy with liabilities listed at $6,000 and assets at $5,000.

FENNIMORE.—Harry Kemmer has disposed of his interest in the Manning & Kemmer Battery Station to his partner, Thomas Manning.

KAUKAUNA.—Latex Tire Co., of Fond du Lac, has established a branch store here.

LACROSSE.—A $20,000 garage will soon be erected for the Cameron Motor Car Co.

MADISON.—C. M. Connelley, dealing in automobile accessories, has filed a petition in bankruptcy with liabilities listed at $4,000 and assets at $1,200.—Under the management of J. R. Johnson, the Wingra Park Garage has been opened in the new building at Monroe and Regent streets. The west side showrooms of the Buick Motor Car Co. will also be housed in the new building.

MONTFORT.—Oliver Yerke will open a garage and service station on the corner of Highway 19 and 80.

RED GRANITE.—Magnus and Edwain Hanson and Robert Eitel, conducting the Red Granite Garage, have filed a petition in bankruptcy. Liabilities of the firm are listed at $1,893 and assets at $500.

SLINGER.—A new garage is now under construction for Merten Brothers at the corner of Highway 29 and 15.

VIOLA.—Fire destroyed the Sylvan Garage, of which E. N. Grim is the proprietor.

WAUSAU.—A large garage will be erected here for the Marathon Motor Car Co.

MISSOURI — BETHANY. — Rex Carter and Jos. Adams have purchased the stock and leased the building of the Bethany Service Station, which is located on West Main street.

BILLINGS.—J. C. Head and Percy Estes, as soon as work is completed on their new building, will open a garage and repair shop.

CAPE GIRARDEAU. — John Sackman, formerly president of the Cape Overland Motor Co., has sold his interest in the organization to Al. Dittinger and Edwards.

CARTHAGE.—A branch of the Stephens Associated Tire Stores has been established in the new Steadley building at the corner of Sixth and Grant streets. M. L. King has been appointed manager of the new store.

CHILLICOTHE. — Benj. Dienst has sold his half interest in the Willard Battery Station on Elm street to Harry G. Smith. Paul Freid is the other partner in the concern.—J. R. White has purchased the interest of E. A. Green in the Green & White Garage.

CONCORDIA.—Concordia Auto Paint and Sign Shop has moved to the new Kuhlman building.

ELLINGTON.—Hal Horn has sold the Ford Garage to George and Gus Bedwell, of Dickens Valley.

HUTCHINSON.—J. W. Wright has purchased the H. & D. Garage.

JEFFERSON CITY. — Kocher and Diercks, of the Capital City Wagon Co., have secured the agency of the Durant and Star cars for this territory.—Heisinger Motor Co. has obtained the distribution of the Goodyear tires for this section.

KANSAS CITY.—A two-story and basement building will soon be erected for Stanley Lippman, owner of the Lippman Motor Toggeries, operating a chain of motor car top and trimming shops. The structure will be built on a plot having a 25-foot frontage on 3008 McGee road.—At a cost of $60,000, a two-story brick and concrete garage, 110 x 132, will be erected at 1126-1132 Locust street for the Locust Realty Co.—E. W. Arrasmith, for many years Kansas City dealer for the Oakland car, has become Chevrolet representative here. He has opened a salesroom and repair shop at 3636 Main street.

LADDONIA.—Bates Nelson and C. W. Smith have dissolved their partnership, Nelson having moved to the Huffman Garage.

LAWSON.—Larger quarters in the Rhodus barn have been obtained by the Ward Garage, formerly in the Albert Green building. The new location is on the south side of the Park.

MARTVILLE.—Wilkinson & Winge,

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of Marshfield, have rented the Pool Garage and will soon open for business at that location.

MONETT.—Mat Butler has re-opened his garage at 217 Third street.

ODESSA.—Henry O'Bryan, of Lees Summitt, has purchased the Ford agency owned by Jos. Lightner.

ROCKFORT.—Bert Amthor, who has conducted the North Main Street Garage for several years, and maintained the Chevrolet agency for this city, has sold his business to Peter Burroughs, of Northboro.

ST. LOUIS.—Three explosions in a one-story building, occupied by the Independent Tire Co., wrecked the structure. The estimated damage is in excess of $100,000. Insarel Reifler is proprietor of the business. — Ward-Groff Motor Corp., formed recently by Roy J. Ward and William C. Groff, has moved into the new building at 2907-2909 Washington boulevard. The company is a dealer in Paige and Jewett lines, operating under the Newell Motor Car Co., distributer.

James Rayan & Co. have completed the foundation for their new garage and work shop at Horn avenue and the Lemay Ferry road.—L. B. Tebbetts & Co., who for more than four years have been located at 2125 Locust street, has moved to 3311-3315 Washington boulevard. The new location was formerly occupied by the Battery Exchange, Inc., of which Harry J. Brockmann is president.—Union Motor Car Co. has purchased the building at the southeast corner of 39th street and Blaine avenue, occupying a lot 128 x 132 feet. The building consists of five stores on 39th street and garage and filling station fronting Blaine avenue and running south to the alley. The Union Motor Car Co. will operate the garage and filling station and will use one of the storerooms for tire and battery service.

Roberts Tire Co., Federal tire agency, has installed a new vulcanizing plant in its tire shop at 2027 Locust street.—Warne Motor Service and Sales Co., a newly organized concern, has opened sales and service quarters at 4333 Warne avenue. The new company has taken a dealer franchise for the Studebaker under the Weber Motor Car Co., distributer. Those in the partnership operating the business are Frank Sebastian, A. H. Lee, and R. J. Siefert.

SALEM.—Dixon Garage has been purchased by the Service Garage and the equipment moved to the latter's offices.

SARCOXIE.—J. J. Luttrell and son have sold the Ozark Garage to Marion Snow, of Bowers Mill, and Jos. Wheeler, of Stotts City.

SAVANNAH.—A. J. Fritchman has purchased the Helsby Battery Station and has already taken possession of the business.

SPRINGFIELD.—Roy Penn, for several years with the McGregor Motor Co., has purchased from O. G. Teagarden, the Bolivar Ford Agency.

VANDALIA.—E. L. McLeod and Gregg Hark, of Bowling Green, have purchased the Trower Garage.

WELLINGTON.—C. W. Courter, of Enid, has purchased the Exide Battery Shop from the Kinslow-Lantz Motor Co.

WHITE CLOUD.—W. H. VanDoran has disposed of his interest in the White Cloud Garage to Charles Tucker in exchange for land in Hirley, Tex.

KANSAS — ARKANSAS CITY.—Charles Hill and his brother, J. Ray Hill, have purchased the business of the Collinson Buick Co. here.—United Tire & Vulcanizing Works has moved from 112 to 114 South First street, also the location of the Coats-Corlett Battery Station. Ray Coats will have charge of the tire and vulcanizing works as well as the battery station.

ATWOOD.—Frank D. Hoover has bought C. C. Hastings' interest in the Airline Garage. He will continue to operate the business under the same name as heretofore.

COLBY.—Ray Kirkendall and Paul Morris have opened a garage in the new Carpenter & Shaffer garage building.

CONCORDIA.—Calvin D. Walker, of the Walker-Griffith Motor Co., has leased the Larson Garage on West Sixth street. The place is known as the Studebaker Garage and a general garage service will be maintained.

EUDORA.—W. U. Carter and C. W. Smith have taken over the agency for the Ford car at this place. The firm will operate as the Carter-Smith Motor Co., with Carter in charge.

FLORENCE.—Reo distribution in this city has been granted William Bashor.

HALFORD.—William Taylor has sold his garage to Oscar E. Keck.

HIAWATHA.—I. W. Keller has disposed of his interest in the Bowers & Keller Garage to his partner, H. E. Bowers.

HUTCHINSON.—Connelly Motor Supply Co., located at the former quarters of the Reno Buick Motor Co., has been opened by J. E. Connelly.—Hutchinson Electric & Repair Co. has taken over the business of the Kansas Luthy Battery Co. with quarters at 23 West Second.

LEAVENWORTH.—A. G. Clark, proprietor of Clark's Garage at 411 South Fifth street, has moved into his new location at 429-433 South Fifth street, formerly the Coliseum Garage. With the change in location, Clark has also renamed his business Clark's Fifth Street Garage. At the new location the floor space will allow storage for practically one hundred cars.

LONGFORD.—William Kid has purchased the Rolfus Garage of which he took immediate possession.

MARYSVILLE.—An automobile supply store has been opened by J. H. Krug, formerly of Beatrice.

NEODESHA.—Bert Alley has completed the erection of a new garage and showroom at the corner of Fourth and Wisconsin streets. The building, which is 25 x 110, he will occupy as the home for the Durant, Star, Nash and Marmon agency.

OTTAWA.—A. W. Hilding, 117 East Second street, has taken on the local agency for McKone tires and tubes.—W. C. Wakefield has leased the building at 214 North Main, the store room of which he will use as an automobile accessory and tire shop.

PAOLA.—W. M. Cox and Son have opened a Nash agency at this place.

PARSONS.—H. A. Washburn, of Kansas City, has purchased the K. T. Garage from Paul McConnell and has already assumed charge of it. Washburn will also have the agency for the Hupmobile.

PRATT.—Nash Sales Co., of which Henry Shafer and Lloyd Lambert are the proprietors, will be devoted exclusively to the sale and service of Nash cars.—C. E. Bucklin has moved his battery station to the new Kaufman building on West Fifth street.

PRESCOTT.—S. P. Howard has leased the repair room of the City Garage.

REXFORD.—Charles Wilcox has become owner of the garage building which has been the property of Charles Roamer for some time. The new business will be conducted in addition to another garage operated by Wilcox.

SALINA.—A garage has been opened by A. R. Bragg at 132 North Fifth street.—Larger quarters have been secured by the Reo Motor Co., recently organized, which will now occupy the entire Nelsen building on South Fifth street.—Kansas Automotive Electric Co., owned by Milton Peterson and Reyden Eby, has moved to the Holmquist building on the east side of South Fifth street.—J. W. Southmayd, formerly connected with the Hockaday Auto Supply Co., has purchased the Kelly-Springfield Tire Co.

SHARON SPRINGS.—W. M. Turner, proprietor of the Sharmon Motor Co., has leased the garage of the Golden Rule Oil Station, and is now equipped to handle repairs on all cars.

STERLING.—A. E. Whitzell, who recently obtained the Nash agency, has also become Chevrolet representative for this district.

STILWELL.—A front entrance to his garage is being constructed by Jack Gill.

TOPEKA.—E. H. Montgomery, formerly of Larkinsburg, and J. C. Flipse, of Oakley, have purchased the Cottrell & Dial Garage at 1702 Lincoln street.—Union Pacific Highway Motor Co. has occupied the building at 911 North Kansas avenue formerly occupied by the Denver Motor Co. L. W. Metzler is the manager of the new concern.—Permit has been granted Earl S. Johnson for the erection of a garage and filling station at

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IT'S human to try to get a bargain out of the dealer who hasn't much conviction about what he is selling.

So you can't blame the car owner for "dickering" with a dealer who carries a mixed stock of many brands.

How much better to carry a full line of all required sizes under one quality banner.

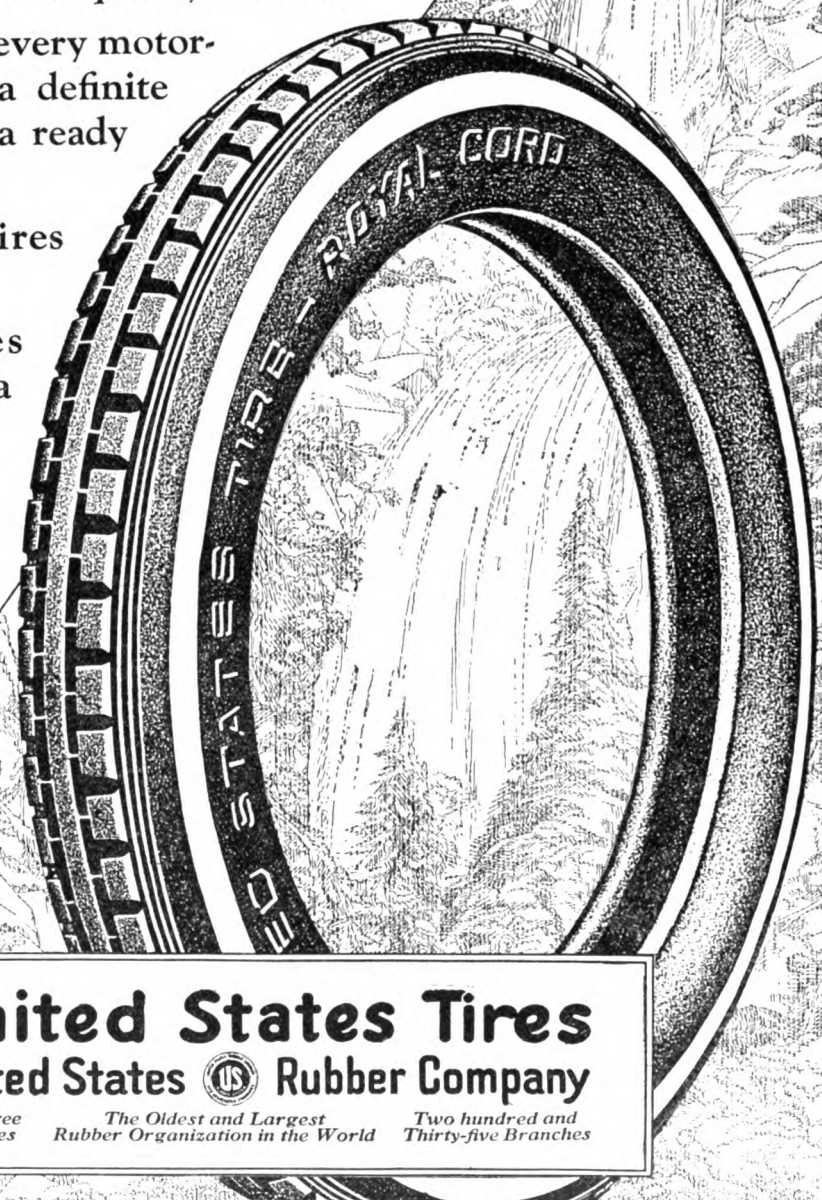
A line that meets every motoring need and has a definite loyal following and a ready market.

United States Tires are good tires.

The U. S. Sales Relationship is a good relationship.

United States Tires are Good Tires

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United States Tires

United States Rubber Company

Fifty-three Factories | The Oldest and Largest Rubber Organization in the World | Two hundred and Thirty-five Branches

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1432-1434 North Topeka avenue. The construction will cost $2,700.

WEIR.—Work will soon be completed on the remodeling of the Weir Supply Garage.—Local distribution of the Durant has been taken over by L. M. Fryer.

WESTMORELAND.—A garage will soon be opened by John Gordon, of Stillwater, and Ralph Hawkins, of Perkins, Okla., in the garage building south of Main street formerly occupied by Guy McLaughlin.

WHITE CITY.—Richard Johnson, who has been acting as manager of the Johnson Tire Shop, has purchased the front end business of the White City Garage recently. He handles accessories, tires, oils and gasoline.

WICHITA.—L. L. Hullett, having sold his interest in the Cleveland Tractor agency at Kansas City, will open an automobile agency here.

NEBRASKA—CALLAWAY.—D. F. Sherrell has purchased the interest of his partner in the Sherrel & Lamb Garage.

CENTRAL CITY.—An automobile accessory shop has been opened under the firm name of Haddix & Spagenberg.

CRAF.—A new garage, recently erected here, has been opened for business with Kahout & Dollarhide in charge.

ELKHORN.—John Diestal has purchased the Mangolí garage and has already taken possession.

GRANT.—Alvin Gaddis has become sole owner of the Grant Service Station, having purchased the interest of E. D. Bells.

HASTINGS.—Albert E. Stitt will erect a new garage at Third street and St. Joseph avenue.

HOWELL.—Ignetz Strehle, of West Point, has purchased a garage at this place.

MERNA.—Graves Garage has been rented by Siegfried, of Lincoln, who has moved here to take charge of the business.

RANDOLPH.—Ford distribution for this section has been taken over by the Amoroz-Ashburn Motor Co.

NORTHWEST

MINNESOTA—RED WING.—Work has been started on a garage building for Seufert & Saupe, which, as previously reported in these columns, will be erected on Plum street. The structure will be 50 x 80 feet, of tile construction with a brick front.

ST. PAUL.—George J. Kramer and R. H. Deppe, who have been in the automobile business at this place for twelve years, have completed the erection of a garage at University and Farrington avenues. This building, equipped with waiting rooms and shower baths, is 125 feet square and has a 40 x 60 foot showroom. The firm, which has obtained a Buick sub-agency, will be operated under the name of the Kramer & Deppe Co.

SOUTHWEST

ARKANSAS—LITTLE ROCK.—A partnership has been formed by F. R. Fleming and E. L. McElhannon, to operate under the firm name of Fleming-McElhannon Motor Co. An automobile salesroom will be opened at the corner of Clinton and Seventh streets in which the company will handle exclusively Willys-Knight and Overland cars and carry a line of parts and accessories. A repair department will also be maintained.—Auto Beauty Shop, of which E. H. Channell is president, has been opened at 416-20 West Markham street.—A new showroom has been opened in the General Motors building, at Grand and Second boulevards, as an Oldsmobile agency. Ross C. Lowrie, connected with the Oldsmobile branch in Detroit for many years, will be in charge of the new salesroom.

MENA.—Daniels Brothers has leased the Diamond Front Service Station from W. I. Green.

OKLAHOMA—HENRYETTA.—A brick building is being erected for J. H. Gardner, the lower floor of which will be occupied by the Paige agency. The Chevrolet distributer is also negotiating business quarters.

HOLDENVILLE.—R. L. Knight and D. E. Harmon, of Graham, Tex., have secured the agency for Exide batteries and leased a part of the old M. M. Smith building, formerly occupied by the Hendricks Motor Co.

LAWTON.—A garage will be erected at 103 Eleventh street for Walter Foster. The structure will be 60 x 20, and will cost approximately $2,000.

POTEAU.—J. A. Skinner has obtained the selling rights for the Chevrolet. He will operate from the brick building, first door north of the First National Bank.

SAND SPRINGS.—Distribution of the Studebaker has been secured by L. L. Greer who recently purchased the garage business known as the Greer Supply from C. L. Greer.—New quarters, in which to carry on their vulcanizing business have been opened by Neel Brothers in the frame building at the southeast corner of Second and McKinley.

SAPULPA.—Work will soon be started on the new building to be erected at Main and Lee streets for the Sapulpa Motor Co., which will use the structure as a salesroom and garage.

WALTERS.—An addition is being erected to the building of the Walters Battery and Electric Co. on South Broadway. When completed, this will afford it larger and more convenient floor space for its line of batteries, electrical supplies, tires, etc. The concern recently has taken over the Firestone line of tires formerly handled by the L. & D. Service Station, and also has inaugurated a tire service station.

TEXAS—AUSTIN.—A. W. Whitten has purchased the assets, other than outstanding notes and accounts, of the Exide Battery Service Station, recently dissolved, at Fifth and Lavaca streets.

BALLINGER.—W. A. Talley has purchased the interest of M. G. Justice in the M. G. Justice Motor Co., and will assume full charge.

BEAUMONT.—An agency to handle Jordan cars has been opened by Clarence Booz, formerly of Port Arthur.—Rowe-Holcomb Motor Co. has opened at 885 Pearl street.

CUERO.—A. W. Swenson, who for a number of years has been associated with the Cook & Day Motor Co. of Cuero and has been interested in the branches of that company at Yorktown, Runge and Yoakum, has disposed of his interests in the other stores, and has acquired the branch at Yoakum, known as the Cook Motor Co., of which he has been manager for the past two months. D. I. Pattison and associates purchased the Runge branch during the present year. The only two branches still remaining with the original company are those at Cuero and Yorktown.

BIG SPRINGS.—J. E. Price and S. H. Hall have purchased the Tourist Garage from P. King and will operate it with J. E. Price in charge.

DECATUR.—An authorized sales and service station for Dodge Brothers cars has been opened by the Cooke-Boyd Motor Co.

EL PASO.—A shop, equipped to handle all classes of electric motor repair and maintenance work, has been opened by the Electric Motor Maintenance Co.

GATESVILLE.—A new home for the Overland, to provide twice the present floor space, will soon be opened by D. D. McCoy on Main street.

GRAHAM.—C. H. Smith and Cornish Bates have purchased the Shamrock Motor Co. from J. C. Vaughan.

HUBBARD.—Fire recently destroyed the building and contents of the Bowman & Henderson Garage. The loss is estimated at about $2,000.

SAN ANTONIO.—C. H. Mountjoy & Co., dealers in Sav-Oil piston and compression rings, have located at 211 Third street.

YOAKUM.—A fireproof building will soon be added to the service station owned by A. W. Swenson.—A large building is being erected for the Jarmon Garage—C. C. Tribble plans to erect a garage.

LOUISIANA—NEW IBERIA.—A garage will soon be constructed at Main street and Railroad avenue for Carver & Rahm.

PACIFIC COAST

CALIFORNIA—OAKLAND.—Fred. Gaine, Frank Elliott and Curtis Schmidt have opened the G. E. S. Co., specializing in Cadillac repairing. They have located at 23rd and Valdez streets.

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"They know Automobiles and Automobile Merchandising"

By C. A. Earl

I HESITATED to use that headline. It sounds like emphasizing a compliment to the Earl factory organization, even though it appears in a distributor's letter not originally intended for Jackson eyes.

As a matter of cold business, however, merchandising ability at the factory is an important asset to every motor car distributor or dealer. Unless the men who make an automobile know how to advertise and sell it, the man in the field has a difficult task.

I am glad, therefore, to quote from the letter of Mr. Karl H. Bremer, president of Earl Cincinnati Motors, in answer to a prospective distributor's request for information on Earl sales and the organization behind the car.

"Regarding the Earl," Mr. Bremer writes, "I can speak very highly of the mechanical excellence of the car. It is well worth $1,095 and from the viewpoint of service it is a capital car to handle.

"The Earl factory organization are exceptional people to do business with. They are thorough automobile men, plus business men. They know automobiles and automobile merchandising.

"Their policies are very liberal and I find my connection with them exceedingly congenial. They do not put undue pressure on their distributors by forcing shipments. They are prompt in acknowledging complaints and making adjustments. They have a liberal advertising policy. I have no criticism to make on the way they handle their dealer.

"Earl owners in Cincinnati are quite enthusiastic over the car. It stays sold, as it requires very little service. Personally, I look to a very successful business on the Earl account. If you are considering the Earl, permit me to congratulate you on securing the franchise."

If there is no Earl representative in your city, let us send you the facts about our contract terms and the quality Earl line.

C. A. Earl
President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Area Rental Service, Manhattan, N. Y. To rent automobiles. Capital $10,000. Incorporators: J. and H. Axlead.—Barley Roamer Export Co., Manhattan, N. Y. Capital $10,000. Incorporators: H. A. Reed, D. Merkel, J. M. Pitkothly.—Brunos Garage, Manhattan, N. Y. Capital $10,000. Incorporators: F. DeLuca, H. Albrecht, S. Rubenstein.

Clif Electric Corp., Manhattan, N. Y. To deal in electric motors. Capital $10,000. Incorporators: B. Bandel, T. F. Garvey, G. Rudnick.—Petrol Service Station, Manhattan, N. Y. To deal in gasoline and supplies. Capital $10,000. Incorporators: I. Goldman, M. Shmerler.—Select Yellow Taxi Co., Manhattan, N. Y. Capital $10,000. Incorporators: M. Vernon, R. D. Parker, H. E. Bronson.

Self Feeding Vaporizer Corp., Manhattan, N. Y. To deal in automobiles and parts. Capital $5,000. Incorporators: M. E. Higgins, G. Ramsey, E. Bossi.—Twentieth Century Black and Yellow Taxicab Operators, Manhattan, N. Y. Capital $5,000. Incorporators: S. Estrin, C. M. Decillis, B. Schlaff.

Kennedy's Auto Express Co., Bronx, N. Y. Capital $10,000. Incorporators: R. G. Flood, J. Gallagher, G. A. Turley.

Ambrose Garage, Brooklyn, N. Y. Capital $5,000. Incorporators: P. Koenigsfest, R. Weinstein, E. McMahon.

J. J. Lindeman, Flushing, N. Y. To deal in automobiles. Incorporators: J. J. Lindeman, A. Worth.

McLean Chevrolet Corp., North Tonawanda, N. Y. To deal in automobiles. Capital $15,000. Incorporators: H. A. and E. D. and F. McLean.

Paul Lehardy, Rochester, N. Y. To deal in automobiles. Capital $75,000. Incorporators: F. H. Lehardy, H. Fosdick.

National Motor Supply Co., Schenectady, N. Y. To deal in automobiles. Capital $20,000. Incorporators: J. Mullany, J. H. Wright, S. Freidlander.

G. T. Gilmour Co., Inc., Syracuse, N. Y. To deal in automobiles, motors, etc. Capital $100,000. Incorporators: Charles F. Gilmour.

Unadilla Motor and Supply Co., Unadilla, N. Y. Capital $6,000. Incorporators: C. C. Moore, G. Bell, W. J. Topliff.

NEW JERSEY.—The Terrace Garage, Hasbrouck Heights, N. J. Capital $100,000.

G. W. Tisdale, Newark, N. J. To manufacture motor vehicles. Capital $100,000. Incorporators: Glen W. Tisdale, Louis Joseph, Glen A. Tisdale.

L. C. Savale, Inc., Orange, N. J. To deal in automobiles. Capital $100,000.

Motor Bus Sales Corp., Passaic, N. J. To deal in automobiles. Capital $120,000.

PENNSYLVANIA.—Arcadia Motors Corp., Philadelphia, Pa. To deal in automobiles. Capital $300,000. — Forward Garage, Philadelphia, Pa. Capital $50,000.

DELAWARE.—Gettman Motor Co., Dover, Delaware. To manufacture motors, etc. Capital $250,000. Incorporators: Wilber P. Gettman, Sara M. Gettman, Lelia P. Fisher.—Vasta Tire Co., Inc., Dover, Delaware. To deal in automobile tires, etc. Capital $500,000.

C. R. Feltman & Sons Co., Wilmington, Delaware. To manufacture automobiles. Capital $100,000.—National Auto Body Corp., Wilmington, Delaware. To manufacture automobile bodies. Capital $350,000. — National Automobile Men's Supply Co., Wilmington, Delaware. Capital $200,000.

National Gasoline Refining Co., Wilmington, Delaware. Capital $1,000,000.—The Way-A-Head Corp., Wilmington, Delaware. To manufacture a certain anti-glare type of headlight known as Way-A-Head lens. Capital $500,000.

WEST VIRGINIA.—Carr-Hays Auto Sales Co., Charleston, W. Va. Capital $25,000. Incorporators: James A. Carr, C. J. Hays, F. N. Stambaugh, F. C. Mayjor, F. A. Hendershot.

Osbone Motor Co., Huntington, W. Va. Capital $50,000. Incorporators: D. R. Porter, E. H. McCrea, G. M. McLaughlin, W. M. Parker, P. P. Gibson.

Burge Auto Accessories Co., Parkersburg, W. Va. Capital $60,000. Incorporators: Karl Steinberg, V. M. Eaton, E. E. Harrison, C. W. Burge, C. M. Schoolcraft.

The Nash Wheeling Motor Co., Woodsdale, W. Va. Capital $25,000. Incorporators: B. W. Burkle, H. J. Hoffman, M. C. Hoffman, W. N. Sprague, Bernice Watt.

NORTH CAROLINA. — The Hipp Chevrolet Co., Charlotte, N. C. To deal in Chevrolet cars and trucks.

KENTUCKY.—Commercial Auto Co., Fayette, Ky., has decreased its capital from $150,000 to $50,000.

Leyman Motor Co., Jefferson, Ky., has decreased its capital from $100,000 to $10,000.

OHIO.—The Hayes Auto Top Co., Canton, O. Capital $10,000. Incorporators: James F. Hayes, D. Edwin Lothemer, D. M. DeCorps, I. E. Drumm, C. M. Conter.—Timken Roller Bearing Service & Sales Co., Canton, O. Capital $25,000. Incorporators: Herman Ely, H. H. Timken.

The Cole McVey Motor Co., Warren, O. Capital $30,000. Incorporators: C. S. Cole, Bess R. Cole, Ann McVey, T. M. McVey, Herbert D. Scott.

The Wellsville Motor Co., Wellsville, O. Capital $10,000. Incorporators: Harry J. Brennen, Minnie C. Higgins, Gertrude A. Brennen, Charles Brennen, Nancy C. Bright.

INDIANA.—Automobile Co-operative Club of Indiana, Hammond, Ind. No capital.

Indiana Steamers, Inc., Indianapolis, Ind. Capital $100,000. Incorporators: James J. Bolton, George W. Ray, Charles Mendenhall.

ILLINOIS.—Arrow Garage, Chicago, Ill. To own and operate public garages. Capital $20,000. Incorporators: Joseph Schwartz, Rose Vinograde, James Vinograde, Harry K. Kopald.—The Degraw-Johnson Co., Chicago, Ill. To manufacture and deal in automobile accessories, etc. Incorporators: Clement Degraw, Colvin L. Johnson, R. Deaper.—Guaranteed Parts Co., Chicago, Ill. To manufacture and deal in motor driven vehicles, etc. Capital $10,000. Incorporators: E. J. Dayton, W. S. Grant, Samuel Levy.

Crystal Auto Accessories Co., Maywood, Ill. To manufacture and deal in machinery, auto accessories, etc. Capital $40,000. Incorporators: R. F. Hirman, Mary L. Hirman, Charles I. Hoag.

WISCONSIN.—The Taylor-Sweet Oil Co., Beloit, Wis. Incorporators: J. Taylor, A. Sweet, J. Zimmerman.

Capital Sales Co., Madison, Wis. To deal in automobile accessories. Capital $5,000. Incorporators: H. Krebs, H. Hites, F. Kilgore.

Nelson Mitchell Co., Milwaukee, Wis. To deal in automobiles. Incorporators: John O. Nelson, I. A. Zavitosky, R. O. Kidd.—Perfect Carbon Remover Corp., Milwaukee, Wis. Capital $2,000. Incorporators: J. Cochran, H. Robinson, C. Robinson.—Radio Garage, Inc. Capital $2,000. Incorporators: H. L. Heimovit, Belle Heimovit, Karl Fleming.

Uecke Motor Car Co., Milwaukee, Wis. Capital $25,000. Incorporators: A. and E. and M. Uecke.

MISSOURI.—Diamond Motor Car Co., St. Louis, Mo. Capital $16,000.—Grinham-Johnson Motor Sales Co., St. Louis, Mo. To distribute the Chevrolet automobile. Capital $25,000. — Union Motor Car Co., St. Louis, Mo. Capital $5,000.

MINNESOTA.—The Columbia Northwest Motors, Inc. of Minneapolis, Minneapolis, Minn. Capital $100,000. Incorporators: C. D. Buckpitt, J. W. Greeveb, J. J. Goodel.

OKLAHOMA.—Williams Motor Sales Co., Sapulpa, Okla. Capital $20,000. Incorporators: W. A. Mouer, Perry I. White.

Barrows Auto Supply Co., Tulsa, Okla. Capital $5,000. Incorporators: Sallie Evans, Jesse Evans, Roy Elam.

TEXAS.—"Comfy" Ventilated Auto Seat Co., Dallas, Tex. Capital $750. Incorporators: C. A. Leather, R. C. Merritt.

Box Motors Co., Georgetown, Tex. Capital $1,000,000.

UTAH.—Nielsen Buick Co., Brigham City, Utah. Capital $10,000. Incorporator: J. C. Nielsen.

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General Motors Trucks

There is a message for every motor truck dealer in the fact that many of the largest motor truck users such as Standard Oil, Morris & Company, Armour & Company and national merchants of the same character are big buyers of GMC trucks.

It is an endorsement of the quality and performance of GMC trucks such as could be obtained in no other way than by the actual sale of these trucks to firms having every facility for selecting the best motor truck.

To the retailer of motor trucks this should be proof of GMC quality and of the possibilities that a GMC franchise offers.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 ***2 Ton $2375*** ***3½ Ton $3600*** ***5 Ton $3950***

Chassis Only—At the Factory—Tax to be Added

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CALENDAR

Santa Barbara, Cal., October.—Annual General Convention of the California Automobile Trade Assn.; Robert W. Martland, secretary.

London, England, Oct. 12-23.—International Commercial Vehicle Exhibition at Olympia.

Washington, D. C., Oct. 21-28.—Annual Closed Car Salon, auspices of the Washington Automotive Trade, Convention Hall.

Cleveland, O., Oct. 24.—Society of Automotive Engineers, meeting of Springs Division, Standards Committee.

Cleveland, O., Oct. 25.—Society of Automotive Engineers, joint meeting of Chain Division, Standards Committee, with Power Transmission Chain Committee of American Society of Mechanical Engineers.

New York, N. Y., Oct. 26.—Society of Automotive Engineers, meeting of Iron and Steel Division, Standards Committee.

Detroit, Mich., Oct. 26-27.—Society of Automotive Engineers, Production Meeting.

Washington, D. C., Oct. 26-28.—Second National Conference for the Study of Highway Engineering and Highway Transport Education, auspices of the Highway Education Board.

Fresno, Cal., Oct. 28.—150-Mile Race.

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Los Angeles, Cal., November.—Tent Show, auspices of the Motor Car Dealers' Assn. of Los Angeles.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Pittsburgh, Pa., Nov. 4-9.—Electric Show, auspices of the Electric League of Pittsburgh, Motor Square Garden; Paul D. Lockard, manager.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Harrisburg, Pa., Nov. 20-21.—Annual Convention of the Pennsylvania Automotive Assn.; L. H. Hagerling, secretary-manager.

Louisville, Ky., Nov. 20-25.—Closed Car Week, auspices of the Louisville Automobile Dealers' Assn.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

St. Louis, Mo., December.—Third Annual Meeting of the American Petroleum Institute, Statler Hotel.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

New York, N. Y., Dec. 7-13.—National Exposition of Power and Mechanical Engineers, Grand Central Palace.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Hotel Commodore.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

Cleveland, O., Jan. 20-27.—Cleveland Automobile Show, auspices Cleveland Automobile Manufacturers' and Dealers' Assn., New Public Auditorium; Herbert Buckman, manager.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; Jos. Thompson, manager.

Cincinnati, O., Feb. 7-14.—Annual Automobile Show, auspices of the Cincinnati Automobile Dealers' Assn.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12.—Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn.; Frank R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19.—Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

Louisville, Ky., Feb. 19-24.—Fifteenth Annual Show, auspices of the Louisville Automobile Dealers' Assn.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the Saginaw Auto Dealers' Assn.; Guy S. Garber, manager.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Muskegon, Mich., Feb. 28.—Automobile Show, auspices of the Automobile Business Assn.; John C. Fowler, manager.

Bay City, Mich., Mar. 5.—Automobile Show, auspices of the Bay City Auto Dealers' Assn.; George L. Weiler, manager.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Assn.; C. E. Holgate, manager.

Boston, Mass., Mar. 10-17.—Passenger Car, Truck and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

Gothenburg, Sweden, May-July.—Automobile Show, auspices of the Royal Automobile Club of Sweden.

* Tentative.

HOUSE ORGAN KEYNOTES

I believe that if I fail to do my fair share of the world's work I shall only make life just that much harder for some other fellow who perhaps has greater handicaps than I.

I believe that the Creator gave me talents in the expectation that I would use them in the service of my fellow man. Even if unmindful of my own interests, I have no right to cheat others.

I believe that every piece of goods I help to manufacture represents a part of myself when it goes out into the world. Whether I write letters or file them, whether I work at a desk or in a factory, or in a store, I believe in the thing I am doing, and will put my best thought and effort into it.

I believe in myself and in my friends. I believe in my company. I believe in humanity in general, and that the good in the world far outweighs the bad. I believe that I shall receive justice and a square deal. I believe that if I do my best, if I study to improve myself, and look cheerfully upon life and its tasks, whatever rewards may be justly due me I shall receive.—Harry A. Earnshaw in *Cadillac Cheer*.

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For substantial profit in the tire business, look to *volume* sales. Offer the tire that sells readily —the tire for which there is steady demand.

Racine Tires, with the black treads and other improvements, are even greater in demand than ever.

The full Racine line—the Multi-Mile Cord, the famous Country Road fabric and the fabric Trusty —offers the dealer a profit opportunity of unusual strength.

Write

RACINE RUBBER COMPANY
RACINE, WISC.

Distributors in Principal Cities

RACINE
Absorbing
ShockStrip

It welds the Tread and Carcass—Inseparably

RACINE
FABRIC TIRES
COUNTRY ROAD

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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PUBLISHER'S OBSERVATIONS

MAJOR HAWES SPEAKS HIS MIND

"NINETY-FIVE per cent of the automotive vehicles in the commercial world are relegated to the scrap heap before the public has obtained fifty per cent of their value." G. P. Hawes, Jr., Maj., Q. M. C., U. S. A., is nobody's press agent. In fact, this radical assertion of his appears as a prelude to a semi-official discussion of the need experienced by the Army in respect to the maintenance of automotive equipment, and the consequent steps taken in the training of enlisted personnel for that work. The observation is startling, nevertheless.

¶ Great strides have been made, the last two or three years, in improving the methods whereby the automobile industry "gives service" on its product. "Flat-rate" systems have been studied out and introduced with more or less success. Standardized repair operations and standard time limits worked out for repair and replacement jobs on different brands of cars have been even more successful, because, instead of shocking the dealer with the suggestion of compulsion, they have stimulated him to more consistent efforts by setting up an illustrative example of what can be done and is being done by other dealers handling cars of the same kind.

Standard time systems, instead of being a discouragement to some dealers are an inspiration. They are proud to say that they can beat the standard time allowance right along.

¶ The industry is making considerable progress, but it still must overcome its two greatest handicaps in respect to the question of maintenance. One of these is physical and the other mental.

The physical handicap arises from the fact that "service," meaning the operations incident to replacing defective parts, must be performed on a shop basis, whereas production is accomplished on a manufacturing basis.

The mental handicap arises from the fact that the industry has never yet brought itself to acknowledge broadmindedly the incontestible fact that tortured machinery is bound to wear out if it doesn't break down—which is the more likely of the two—nor to study these alternatives as commercial opportunities.

¶ "Service" is the wrong word, as many have attempted to demonstrate. But giving it a new name, as has often been proposed, will do no good, unless the rechristening should symbolize a change of heart.

Consider, for example, that a great many dealers are still losing money on their repairshops, and accepting with reluctance the manufacturers' injunctions concerning the conduct of those departments. Consider also, that many men who are not dealers, and who, perhaps, have no ambition to be dealers, are making a living by repairing cars in which they have no interest beyond a bill for this same "service." Consider, finally, that as and when such outsiders are found to be diligent, honest, reasonable in their dealings and sometimes fairly prosperous, there is an element among automobile dealers, which would treat them as interlopers. In those three clauses lies an indictment against which quite a share of the industry will have difficulty in defending itself before the history of this decade shall have been written down.

¶ A major in the United States Army cares very little about the welfare of the automobile industry. Therefore he may be charged with haste, heat and certainly with inaccuracy when he says that 95 per cent of the automotive vehicles in the commercial world are relegated to the scrap heap before the public has obtained 50 per cent of their value. But while his figures are wrong, he is still more than half right.

Maybe not 95 per cent, but anyway 75 per cent of all the automobiles are discarded by their original owners for reasons of decrepitude, in the sense that it is cheaper to swap them in for new ones than it is to fix them up. Anyone familiar with the automobile business will admit as much.

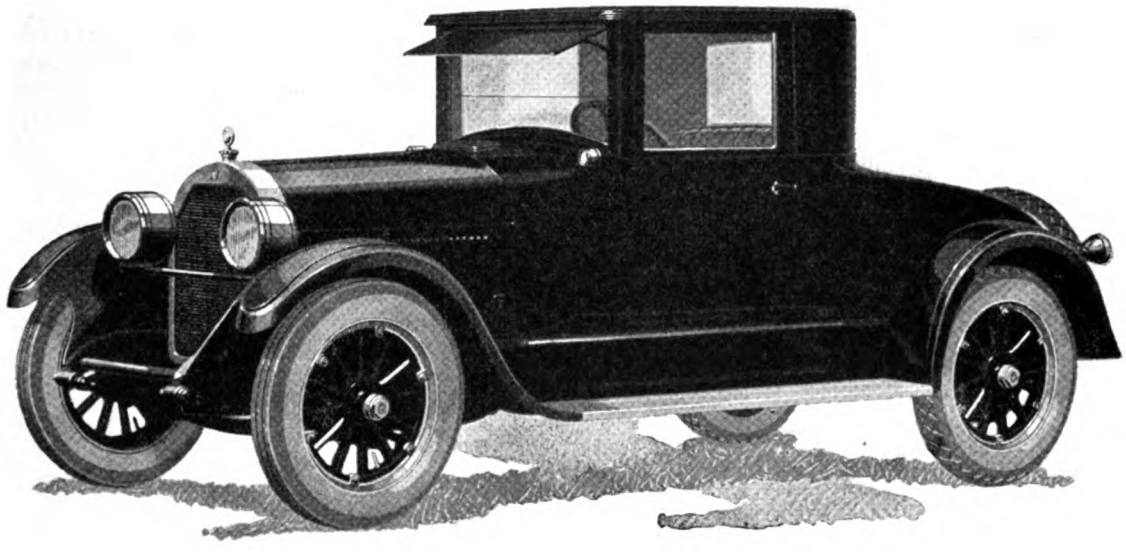
By periodic overhauls and scrupulous attention to day-by-day requirements it would be possible to make a well-built motor vehicle last for many years—say for argument, the active lifetime of an average owner. It is possible, even though at present expensive. It is possible, even though the frightful possibility cannot be contemplated without appreciating that were it realized, the market for new cars would suffer.

¶ There is an element of economic waste in the continued accumulation by the industry of used cars whose value can be restored only by the application of shop methods, yet which must be resold in competition with other cars produced by manufacturing methods. There is an element of economic instability, even more disconcerting, in the continued manufacture of better, lower-priced cars without vastly improved methods of maintenance being offered to care for them.

It is perfectly obvious that the industry had to develop economic production methods after evolving a satisfactory and thoroughly salable product. It is equally obvious that the commercial need for correspondingly low-cost methods of keeping low-cost cars in satisfactory condition must follow in due course.

The need of the moment is for clearer vision and less prejudice about these matters; for less sensitiveness about public discussion of them. A lot of money will yet be made just keeping automobiles going, even though the public is fast learning to discriminate in favor of those automobiles that can be kept going at the minimum expense.

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Over and over again, during the last two months, we have been told that for power, sustained speed and ductility, the like of the new Peerless Eight has not been produced before.

We record this fact out of a sense of gratitude and gratification.

What it means to us, is that we have excelled ourselves.

That, assuredly, was our aim and our purpose in building the new Peerless Eight.

Here is an eight-cylinder organization of long standing and long experience.

It has worked together for years. It pioneered the eight-cylinder principle in America, and has witnessed its growth to a tremendous vogue among buyers of cars of the higher grade.

Admittedly, then, it is pleasant to be told that all we had hoped for in our latest effort has been realized, and that admirers and adherents of the cars of the highest grade everywhere, are turning to the new Peerless Eight.

THE NEW PEERLESS EIGHT IS BUILT IN THE FOLLOWING TYPES:

Four Passenger Touring Phaeton
Seven Passenger Touring Phaeton
Two Passenger Roadster Coupe
Four Passenger Suburban Coupe
Five Passenger Town Sedan
Seven Passenger Suburban Sedan
Five Passenger Berline Limousine
Four Passenger Opera Brougham

THE PEERLESS MOTOR CAR COMPANY, CLEVELAND, OHIO

PEERLESS

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You Can Sell —

more of these popular Sixes—on this liberal payment plan

Chief among the important advantages that accrue to Oakland dealers—because of Oakland's position as a permanent division of the General Motors Corporation—is that afforded by the G. M. A. C. plan.

Under this plan, the dealer's credit sales are financed entirely by the General Motors Acceptance Corporation—enabling him to sell Oakland cars on liberal time-payment terms, without any carrying or other extra charges.

Consider the additional advantages an Oakland dealer has—his franchise is permanent, his contract liberal, his car purchases are guaranteed against price reduction for 12 months, his car is a popular-priced Six, and his market, therefore, one of the widest in the industry. An inquiry from the first capable dealer will obtain the franchise if his territory is open.

Oakland Motor Car Co., Pontiac, Mich.
Division of General Motors Corporation

GMAC Plan

The 1923 Series

Roadster, 2-Passenger	*$ 975*
Touring Car, 5-Passenger	*995*
Sport Car, 4-Passenger	*1165*
Coupe, 2-Passenger	*1185*
Coupe, 5-Passenger	*1445*
Sedan 5-Passenger	*1545*

All prices f. o. b. at Factory

The New Oakland Six

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN†			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 393	5	Starter—Dem. Wheels	$ 364	2	Starter-Dem. Wheels	$ 530	2	$ 595‡	5	Starter—Dem. Wheels	3¾x4	Own	L	H	T	...	Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	C	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760‡	5		3⅝x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		850	4	860	5	C	3½x4	Own	H	H	P	...	Z-H	R-AL	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5	N	3⅝x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C. P.	850	2	C. P.	980§	2	1,195§	5	C, N, P, V	3⅞x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, D, P	3½x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Chevrolet "FB-50"	885	5		865	2		1,325	3	1,395	5		3½x5¼	Own	H	H	P	...	Zen	Rmy	A-L	Own	Own	Own	Q	4.62	33x4	110	Chevrolet "FB-50"
Dort	885	5	P	885	2	P	1,045§	2	1,095§	5	C, P, V	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	F	4.66	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	985§	2	1,335	5	C, D, K, P, T	3⅝x4½	Own	L	H	T	...	Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V	3⅞x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, H, P	895	2	C, H, P	1,095§	2	1,345	5	C, H, N, P, T, V, a	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.8	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5	V	3½x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5		1,075	4	C, D, M, P, Z	1,375§	5	1,595	5	P, V	3⅛x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, H, O	1,095	4	D, E, G, H, J, L, O, Q	1,395	3	1,395	5	D, G, H, J, L, N, O, V	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, H				1,245§	5				3½x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, L, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3 7/16x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, Z, b	1,095	2	C, D, H, O, P, Z, b	1,345	3				3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, N, O, P, V	3½x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5	D, P, Z	1,295	5	C, K, P, W, Z	1,795	4	1,795	5	C, P, U, V, Z	3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B, C, O	1,235	2	B, C, O	1,795	4	1,950	5	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B, C, O						2,195	7	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3½x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T	...		Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5	C, H, I	2,250	2	C, H, I	3,150	4	3,450	5	C, H, I, V	3¾x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	C, 2J, M	2,475	2	D, 2J, M, Y	3,250	4	3,475	5	C, 2J, L, O, U, V	3¾x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	H, J, L, O, Q, b	2,790	4	H, J, L, O, Q, b	3,490	4	4,450	5	H, J, L, N, O, U, b	4½x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
Handley-Knight	2,650	7	D, G, J, K				3,450	4	3,450	7	D, G, J, K, O	4½x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800	...	4,000	...		3½x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, J, L, Z	3,785	2	A, D, G, J, L, Z			4,650	4		4¼x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer Four	3,950	6	G, 2I, O, P, Z, c	3,950	4	G, 2I, L, O, P, Z, c	4,850	4	5,250	7	G, 2I, N, O, P, T, U, Z	3¾x6⅝	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer Four
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, D	975	2	B, D	1,225	3	1,550	5	B, C, D, G, V	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4½	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Hanson Light Six	995	5	H, J, K, P									3½x4¼	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, C, V	3½x5	Own	L	H	P	...	Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2 11/16x4¼	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Cleveland	1,095	5	D, H	1,260	5	C D E H J K¹ L T W X Z	1,495	4	1,585	5	C, D, H	3 1/16x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4½	Fal	H	H	T	...	Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Elgin "K-1"	1,125	5	C, D	1,165	4	C, D, H, K, M, Z	1,645	4	1,645	5	C, H, N	3½x4½	Fal	H	H	T	...	Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Chalmers	1,185	5	C, K, P	1,185	2	C, K, P	1,595	4				3½x4½	Own	L	C	T	...	Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, D, H, O, P				1,450§	4				3⅝x4¼	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.62	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3⅜x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Nash Six	1,240	5	D, R	1,645	4	D F H 2I 2J K Q R W Y b			2,040	5	C, D, N, R, T, U, V	3½x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G	1,250	2	B, C, D, G	1,875	4	2,050	5	B, C, D, G, N, S, V	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Own	S	4.67	32x4	115	Velie "58"
Piedmont "6-40"	1,285	5										3½x4½	Con	L	H	P	...	Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN†			ENGINE						Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Gooling	Cool'g Con.										
(SEE FOOTNOTES)											SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Davis "71"	$1.295	5	E, J, K, O, Z, c				$1,795	4	$1,795	5	E, J, K, N, O, S, V, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Moon "6-40"	1,295	5	B				1,595	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7	D, R				1,890	4	2,190	7	C, D, N, R, T, U, V	3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	D, H, P, Z						1,850	5	D, H, P, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	Ful	Col	S	4.58	32x4	118	Barley
Courier (Maibohm)	1,395	5	P, Z	1,495	4	C, D, H, K, P, Z, b	2,065	3	2,165	5	N, P, V, Z	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P, Z, b	1,395	2	C, D, H, O, P, Z, b	1,975	3	1,995	5	C D H N O P T U V Z b	3⅜x4½	Con	L	H	T		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, K, O, T, Z	1,695§	2	2,095	5	C, D, G, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D P, G, T, V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W X Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3⅜x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3⅜x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B	1,645	5	C D F G H K T U W Z b	1,835§	4	1,885§	5	C, D, K, N, T, V, Z	3½x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, D, G, H, M, O, P	1,945	4	A C D F G H J K M O P Y	1,995	4	1,995	5	A, C, G, H, M, O, P	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	I, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, H, K¹, O, P, R	1,545	2	D, H, K¹, O, P, R	2,095§	3	2,395	5	D G H K¹ N O P R U V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Pilot "6-45"	1,500	5	H, Z	1,500	4	H, Z						3½x5	T-H	L	H	P		Til	Del	Del	B&B	Mun	Col	C	4.45	32x4	120	Pilot "6-45"
Paterson	1,550	5	D				2,595	4	2,595	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, H	1,525	4	B, H	1,625	5	2,295	7	B, H, T, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,790	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "66"	1,595	5	G, P, Z	1,695	4	G, P, Z	2,475	4	2,585	5	G, H, P, U, Z	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "66"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, P, V	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	....	War	Tim	S	5.11	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, S	1,785	4	2I, X, Y, F, K, 2J	2,275	4	2,650	7	B C F G 2I 2J K N T V Y	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, D, H, Z	1,890	2	B, C, D, G, H, K¹, W, Z	2,750	4	2,790	5	B, C, G, H, N, T, U, V, Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J K¹ O P T X Zc			2,890	5	E 2I 2J K¹ N O P T U V X	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Davis "63"	1,695	4	E, J, K, O, S V, c				2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "63"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W X Y Z	2,145§	5	2,545	5	U, V	3¼x4½	Ans	H	H	P	T	Ray	Con	G& D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1 785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G& D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B	1,885	5	B, D, X			2,485	7	B, N, U, V	3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, O, P, Z, b	1,750	3	A, D, H, O, P, Z, b	2,550	4	2,690	5	A, D, H, N, O, P, V, Z, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, C, O, Z	2,150	4	B, C, F, O, X, Y, Z	2,485	5	2,485	5	B, C, G, O, T, U, V, Z	3¾x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, Z	1,800	3	C, G, H, M, W	2,400	4	2,500	5	C, G, H, V, Z	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K R T V W X Y b	1,895	2	F H 2I 2J K R T V W X Y b	2,195	3	2,695	5	F H 2I 2J K N R V X Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, O, P	1,900	2	A, B, D, G, O, P	2,750	3	2,850	5	A, B, D, G, O, P, T, V	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	H, O, P, Z, c	2,190	7	E H 2I 2J K¹ O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	W rG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5		2,150	2		2,800	4	2,950	5		3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O, P	2,245	4	A, B, C, D, G, O, P	3.100	5	3.155	7	A, B, C, G, O, P, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, Z, b	2,200	4	A, D, H, O, P, Z, b	2,850	4	3,250	7	A, D, H, N, O, P, V, Z, b	3½x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Roamer "6-54-E"	2 285	4	A, G, H, Z	2,750	4	A, G, H, J, L, Z	3.285	3	3,585	5	A, G, H, J, L, U, Y, Z	3½x5¼	Con	L	H	P		Str	Spl	Wes	B&B	G-L	Tim	C	4.45	32x4½	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3¼x5	Rut	L	H	P		Str	Bos	G& D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2.385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A D G H K¹ O P R X Y	2,395	2	A C D H 2J K¹ L O P T W	3,095	5	3,395	7	A D G H K¹ N O U V Ya	3⅝x5½	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	33x5	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	P		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	A, C, G, O, M	2,485	2	C, G, K, O	3,175	4	3,275	5	C, G, O, M	3⅜x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, O, M						3.525	7		3¾x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5	C, D, H, I, Z	2,700	4	C, D, H, I, Z	3,350	4	3,700	7	C, D, H, I, V, Z	3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.9	34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Coc'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ace "C"	$2,975	5		$2,975	2				$4,500	5		3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, G, P, R, S, c	3,435	4	A, B, G, H, P, R, X, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5½	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, P	3,300	4	A, B, C, D, G, P, X, Y	4,300	4	5,100	7	A, B, D, G, N, P, T, U	3¾x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, G, P	3,600	4	A, B, C, G, H, I, P	4,000	4	4,550	7	A, B, G, N, P	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.91	33x5	132	Winton "40"
Mercer Six	3,750	6	G, H, O	3,750	4	G, H, J, L, O			5,000	6	G, H, O, T, U	3¾x5	Own	H	H	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.77	32x4½	132	Mercer Six
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3⅝x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7		3,800	4		4,600	4	4,800	7		3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A, C, D, G, H, J, M, O, T, Z				4,900	3	4,900	5	A C D G H J M O T Z	3¾x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, O, Z, b	3,950	4	A, G, O, Z, b	4,985	4	5,750	7	A, D, G, O, U, Z, b	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A, G, H, O, Q, W	4,500	4	A, G, H, O, Q, W, X, Y			6,500	5	A, G, H, O	3⅝x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,500	5							5,500	5		3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A B C D E G H J M O Z X	6,300	4	A B C D E G H J M O Z X	7,500	4	7,500	7	A B C D E G H J M O Z X	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4 7/16x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, E, G, 2I, Q, T, Z	7,600	4	A, B, E, G, 2I, Q, T, X, Z			11,000	7	A B E G 2I Q T U V Z	4½x5½	Own	T	H	P	...	B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	G, H, I, J, L, U, Z	10,900	2				12,900	7		4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
												EIGHT-CYLINDER PASSENGER CARS																
Oldsmobile "47"	1,375	5	C, D, P, T	1,675	4	F H K O P Q T W Z b	1,875	4	2,025	5	D, N, O, P, V, Z	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	G, O, P	1,735	4	G, O, P			2,635	7	G, N, O, P	2½x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	7	A, B, G, H, P, R, b	1,795	2	A B G H I L O P R W b	2,400	4	2,550	7	A B C D G H N O P R V b	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G, O, P	2,395	4	A, D, G, O, P	2,750	4	3,200	7	A, D, G, N, O, P, V, a	3½x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, D, E, G, H, O	2,620	4	A, D, E, G, H, O,	3,625	4	3,695	7	A C D E G H N O T V	3½x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A B G H 2I 2J M N O X	2,685	4	A B G H 2I 2J M N O X	3,385	4	3,685	7	A B G H 2I 2J M N O U X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G H O P T V Z b c	2,990	4	A B C G H O P T V X Y b c	3,400	4	3,900	5	A B G H O P T U V Y Z b	3½x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,875	2	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, T, a	3,800	4	A, B, C, D, G, O, T, a	4,400	5	4,900	7	A, B, C, G, O, T, U, a	3¾x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A B C D G H I O T V Z	4,090	4	A B C D G H I O T V X Y Z	5,500‖	4	5,500	7	A B C D G H I O T U V Z	3½x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, D, G, I, O, P, R, Z, a	4,350	2	A, D, G, I, O, P, R, Z, a	5,350	...	6,000	...	A D G I O P R U V Z a	3½x5½	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A B E G H J M O U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	B F G H I J L O 2Q S Z b	6,500	4	B F G H I J L O 2Q S Z b	7,800‖	4	7,800	7	B F G H I J L N O R V Y b	2⅞x5	Own	H	V	P	T	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
												TWELVE-CYLINDER PASSENGER CARS																
Packard Twin-Six	3,850	7	A, G	3,850	2	C, G	5,240	4	5,400	7	C, G	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

†**CLOSED MODELS:** Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §. ‡ Two-Door. ‖ Four-Door.

ENGINE: Ans—Ansted; Con—Continental; Dus—Duesenberg; Fal—Falls; Gry—Gray; H-S—Herschell-Spillman; Lyc—Lycoming; Nor—Northway; Rut—Rutenber; T-H—Teetor-Hartley; Wei—Weidely.

VALVES ARRANGED: H—in head; L—at side; N—side and head; R—horisontal; S—sleeve; T—opposite.

CAMSHAFT DRIVE: C—chain; H—helical gear; S—spur gear; V—vertical shaft.

COOLING: A—air; P—pump; T—thermo-syphon.

COOLING CONTROL: D—declutching fan; S—radiator shutters; T—thermostatic; U—thermostatic and shutters.

CARBURETER: B&B—Ball & Ball; Car—Carter; Eag—Eagle; Hol—Holley; Joh—Johnson; Mar—Marvel; Ray—Rayfield; Shb—Schebler; Sco—Scoe; Stw—Stewart; Str—Stromberg; Til—Tillotson; Y-T—Yale & Towne; Zen—Zenith; Z-H—Zenith or Holley.

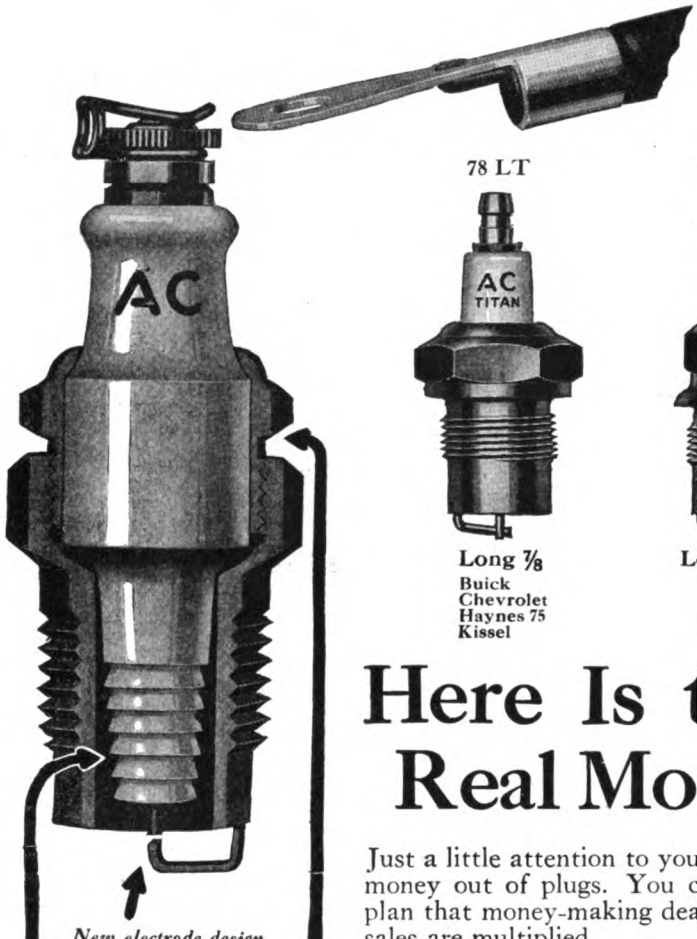
IGNITION and LIGHTING: A-K—Atwater-Kent; A-L—Auto-Lite; Ber—Berling; Bos—American-Bosch; Bjr—Bijur; Con—Connecticut; Del—Delco; Dyn—Dyneto; Eis—Eisemann; G&D—Gray & Davis; Kin—Kingston; L-N—Leece-Neville; N-E—North East; Rmy—Remy; Scn—Scintilla; Sim—Simms; Spl—Splitdorf; S-W—Splitdorf & Westinghouse, 18 plugs; USL—U. S. Light & Heat; Wag—Wagner; Wes—Westinghouse; R—AL—Remy or Auto-Lite.

CLUTCH and GEARSET: Ans—Ansted; B&B—Borg & Beck; B-L—Brown-Lipe; Cov—Covert; Det—Detroit; Dif—Detlaff; Doo—Dooley; Dur—Durston; G-L—Grant-Lees; Hoo—Hoosier; Lng—Long; Mec—Mechanics Machine; Mun—Muncie; Nor—Northway; War—Warner Corp.; WrG—Warner Gear; Ful—Fuller.

REAR END: Adm—Adams; Col—Columbia; Fln—Flint; GMC—General Motors Corp.; Per—Peru; Sal—Salisbury; S-P—Standard Parts; Spk—Spacke; Tim—Timken; U.S.—United States; W-M—Weston-Mott.

REAR SPRINGS: C3—three-point cantilever; C—cantilever; F—full cantilever; L—floating cantilever; E—elliptic; S—semi-elliptic; 3—three-quarter elliptic; Q—one-quarter elliptic; P—platform; T—transverse.

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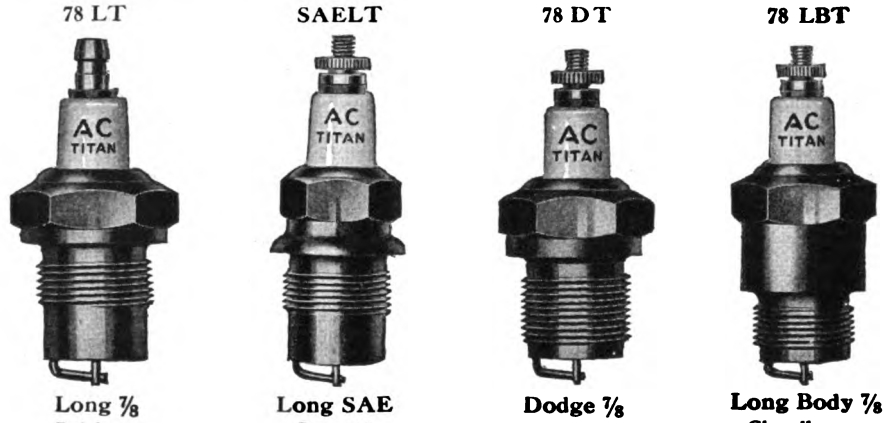


Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost

New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain with its high temperature fins attains sufficient heat to burn oil deposits, thus offering effective resistance to carbon



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

Long SAE
Durant 4
Oakland
Olds
Saxon

Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

Long Body 7/8
Chandler
Willys-Knight

Here Is the Way to Make Real Money Out of Plugs

Just a little attention to your spark plug business will enable you to make real money out of plugs. You can easily prove this truth for yourself. Follow the plan that money-making dealers have already adopted and see how your plug sales are multiplied.

You'll find that few motorists realize that hard starting, spluttering, backfiring, and other motor troubles usually are caused by cld, worn-out, or incorrectly designed spark plugs.

THAT'S YOUR CHANCE! Sell new sets of AC's.

When you provide a car owner with a new set of AC's you sell him properly designed plugs that will certainly give him snappy, efficient service.

Make it a practice to look at the plugs in every customer's car. When you find a mixed assortment of plugs remind the owner that he needs a set of AC's.

Sell AC's when you find old, worn-out plugs.

Sell a few spare plugs to owners of old cars or new ones. Spare plugs are as important as spare tires.

In no time, you'll find that the car owners are looking upon you as the spark plug expert of your community. Pleased motorists will tell others, and in every instance the quality of AC Plugs make it certain that all your customers will be satisfied.

AC 1075

Special for Fords

The Best Spark Plug Ever Made for Fords

The AC 1075 is AC's answer to the need for better plugs for Ford engines—cars, trucks, and tractors.

In addition to many other efficient features, it has the famous AC Carbon Proof Porcelain with its high temperature fins that facilitate starting and avoid short circuiting.

Every Ford owner who comes into your store is a prospect for a set of AC 1075 Plugs.

Think of it—this plug gives you first place in the biggest plug market. And when you build up an AC trade among Ford owners of your vicinity you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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The Standard Spark Plug of the World

18 MT



Reg. Metric

Duesenberg
Essex
Hudson

12 CPT



Reg. Carbon Proof ½

Overland 4

SAENT



Extra Long SAE

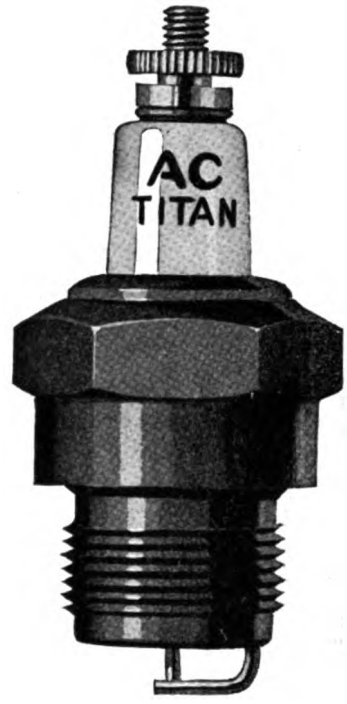
Elgin
McFarlan
Nash

SAET



SAE

Apperson
Durant 6
Mitchell
Marmon
Standard 8



Reg. ⅞ T

Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton

and 170 other makers of cars, trucks and tractors

Why You Should Sell AC's —and AC's *Only*

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum.

A line of AC Spark Plugs will enable you to put your plug stock on that profitable basis. You need only one line of plugs—AC's—for there are AC's for every make and model engine.

Millions of car owners must have the AC Plugs shown on these pages. The fact that their cars were factory-equipped with AC's makes them AC buyers. This alone creates a tremendous market, and also is an outstanding proof of AC quality.

DODGE BROTHERS cars have been AC-equipped since the company was founded.

BUICK cars have been AC-equipped for fourteen years.

NASH cars, both Sixes and Fours, have always been equipped with AC's.

OAKLANDS for the past fourteen years have been AC-equipped.

CHEVROLET cars have always had AC Plugs in their engines.

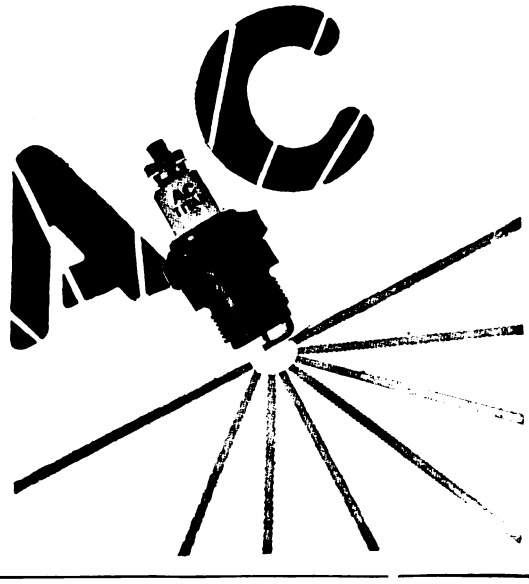
CADILLAC, CHANDLER, CLEVELAND, DORT, DURANT, ESSEX, HUDSON, HUPMOBILE, LAFAYETTE, MAXWELL, OLDSMOBILE, OVERLAND, PAIGE, WILLYS-KNIGHT and many others are all standard AC-equipped.

The leading racing men use only AC's. The first, second and third place winners at Indianapolis last May used AC Plugs.

Car Owners Everywhere Know "AC" Means Quality

You can sell AC Plugs to all motorists, for there are specially designed AC's for all engines, whether originally AC-equipped or not. And when you sell AC's you need waste no time on long-winded "introductions" or "explanations." AC's are the established plugs, the plugs that motorists everywhere know through experience and AC's strong advertising.

All you have to do is say "AC"! Don't overlook the opportunity to create new AC users!

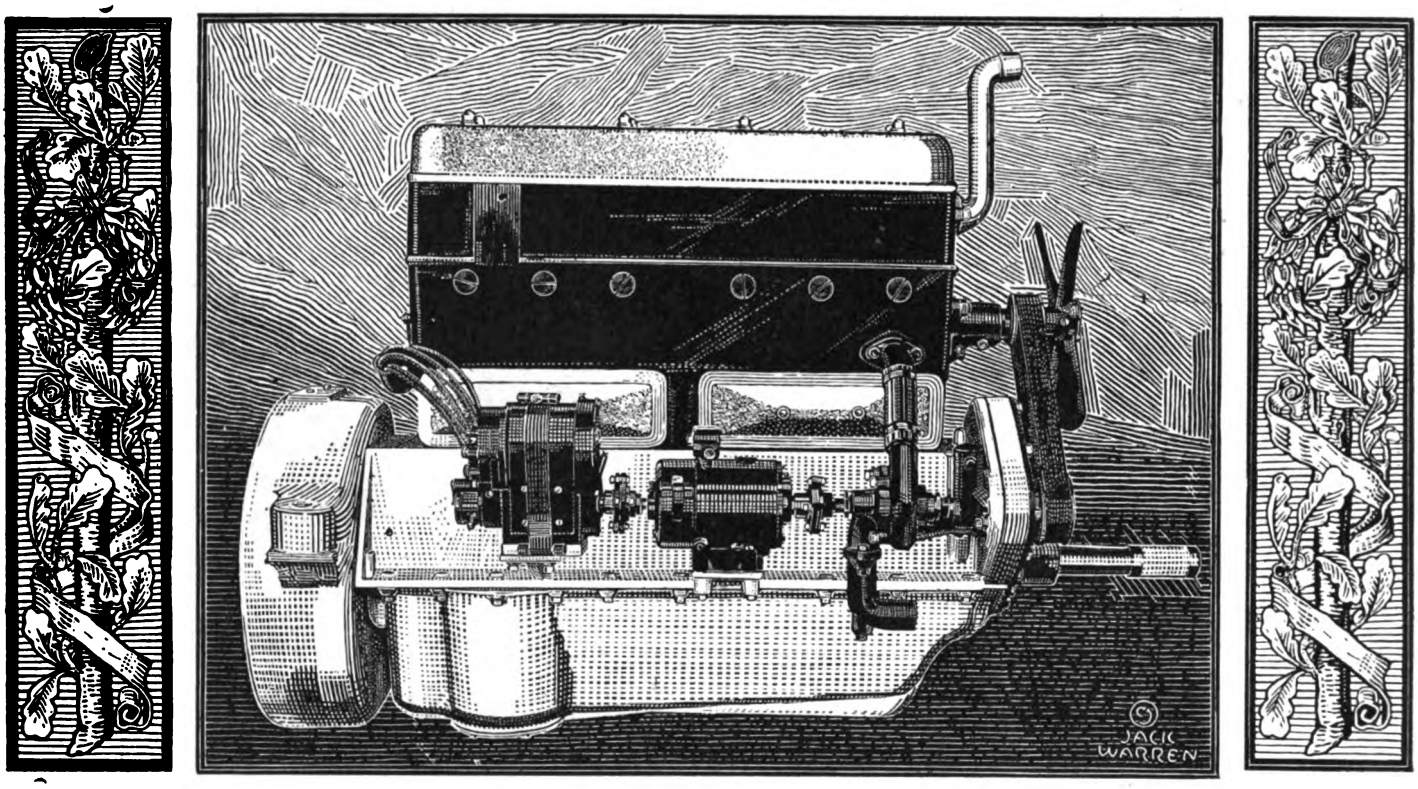


AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915, U. S. Pat. No. 1,216,139, Feb. 13, 1917. Other Patents Pending

by the Set

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The bore is 3¼". The stroke 5". The brake horsepower is 84 at 2550 R.P.M.

A New Six Cylinder

MERCER

is now available in the same body styles as the Four

The rare qualities which have long identified the Mercer Four as America's finest road car, have finally been recreated into a Six-cylinder car of surprising flexibility and amazing smoothness.

There is that same vigorous flow of power in abundance, the same dependability of sustained performance, the same rugged stamina that is so characteristic of the Four.

But to these qualities have been added a quick and eager flexibility, a quiet smoothness and virility of performance that establish entirely new standards of comfort and security for those who drive in congested places.

Discriminating owners who admire and appreciate mechanical excellence will discover in this new engine, many fine details of design and construction to win their quick approval.

It is simple, trim and clean cut in appearance. There are no pockets or corners to collect dirt. The top and sides are flat.

All parts are immediately accessible. The engine can be removed without disturbing

MERCER MOTOR CARS

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the arrangement of the pipe lines or wiring, all of which disconnect at the nearest point on the body. The head is easily and quickly removable. Carbon can be scraped or valves reground in a third the usual time.

The entire valve mechanism is fully enclosed, thoroughly lubricated and noiseless. The valves are easily accessible and all twelve can be adjusted, in case of necessity, in less than twenty minutes.

The crankcase is of aluminum with the oil pipes cast in. It can be drained without getting under the car.

The timing gears are helically cut, thoroughly lubricated and absolutely silent.

The crankshaft is accurately balanced, and drilled to provide full pressure lubrication to main and connecting rod bearings.

To prevent any possibility of strain or distortion, the motor is suspended on the chassis frame at three points, one in front and two at the rear, the front suspension forming a regular ball and socket joint.

Mercer's brilliant road record, its well known ability to travel long distances in complete safety and without fatigue to driver or passenger, are due to correct and intelligent design and to the strict avoidance of all temptation to use cheap materials and hasty methods of production.

For that reason Mercer offers an opportunity for you to gain audience with a large number of buyers to whom cars of lesser capability have no appeal.

And the addition of a complete line of six cylinder models to the well known four, opens a still broader and more fertile field for your selling efforts. And the name Mercer brings with it a prestige and a following that is a huge asset in itself.

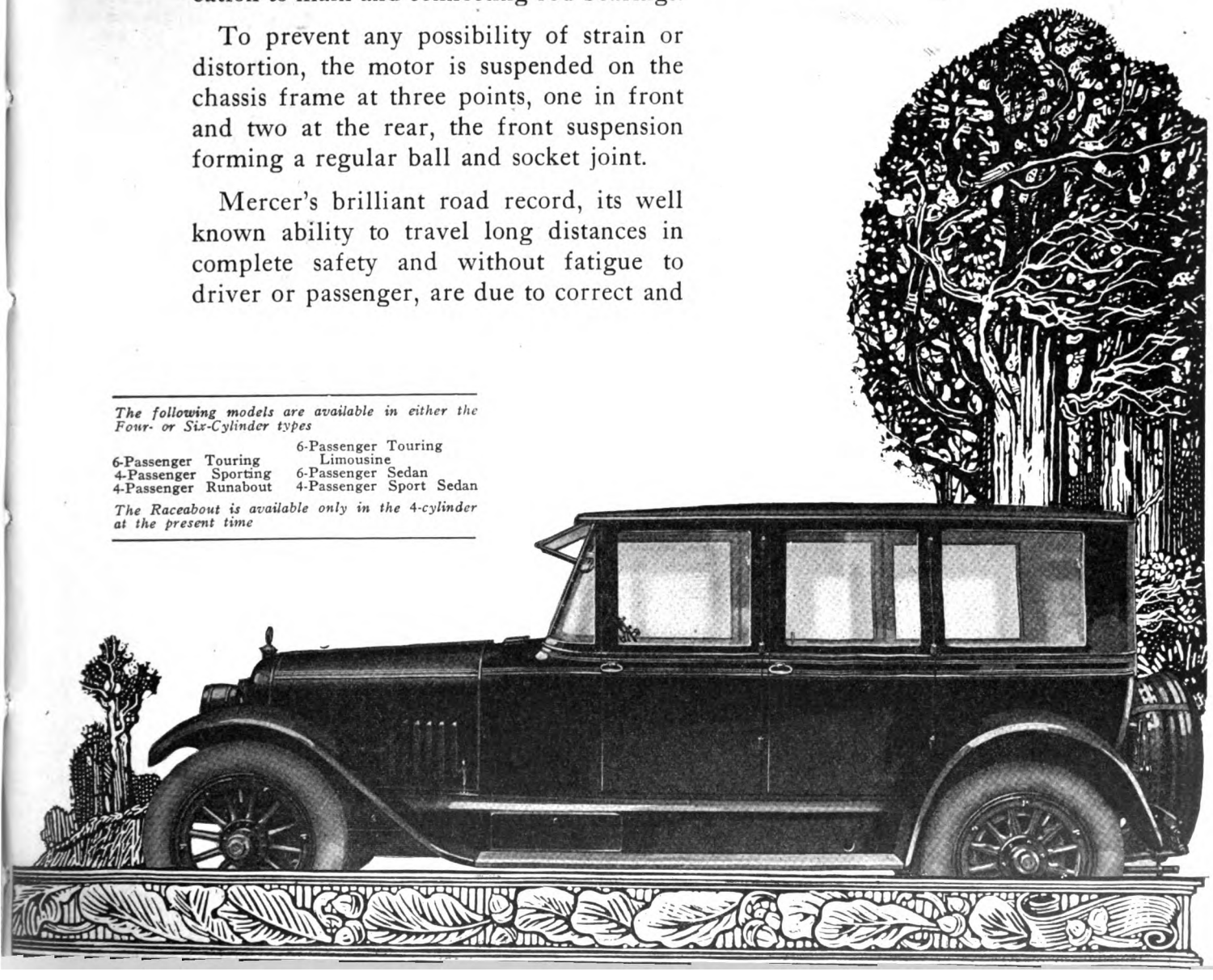
The Mercer Motors Company desires to be represented in every principal city. A request for the details of our sales plan does not obligate in any way.

Mercer Motors Company, Trenton, N. J.

The following models are available in either the Four- or Six-Cylinder types

6-Passenger Touring	6-Passenger Touring Limousine
4-Passenger Sporting	6-Passenger Sedan
4-Passenger Runabout	4-Passenger Sport Sedan

The Raceabout is available only in the 4-cylinder at the present time



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N.B. There will be but little consolation in knowing that the profits which some other dealer in your immediate territory derives from the Stutz selling privilege might have been yours

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By the Dealer For the Dealer

Embarked on one of the most notable periods of development and progress in its entire career, the Stutz today offers the alert automobile merchant a compelling opportunity—backed by a contract that assures a permanent business free of encumbrances and costly risks.

For the Stutz dealer franchise was written by Stutz dealers. It gives the dealer what he wants. If it were possible to conceive a more liberal or constructive selling arrangement, Stutz would have it!

No element of speculation exists. The dealer is given credit for knowing the conditions in his territory and his relations with the factory are worked out accordingly.

Stutz has only one objective in mind: to enable Stutz dealers to build up a permanent, profitable, satisfactory business. The contract is perpetual—assuring an uninterrupted factory relation just as long as the dealer shows an inclination to put forth a reasonable effort on behalf of Stutz cars and Stutz owners.

Discounts are regarded as the most liberal now offered among cars in the Stutz price class. Territories are adapted individually to the dealer's facilities to produce business. The product, at its present low prices, is the greatest value ever offered by the company.

Back of all this are the unlimited financial and industrial resources of the Stutz company—resources almost without parallel in the entire industry—and that enviable prestige and distinction always associated with Stutz.

Ahead are developments of vital importance assuring one of the choicest business opportunities in the automobile selling field.

Farsighted dealers realize the wisdom of identifying themselves with Stutz activities without further delay. If you have not inquired into the possibilities in your section, write for information today.





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Three Types—



Gill Piston Rings with the famous Gill patented *interlocking-joint* are universally known as the highest type produced. Their resistance to leakage of compression, oil and gas; their elasticity, make them the largest-selling patented piston ring.

This Special Oil-Wiper ring is produced to meet fully the need for this type of ring. Made from individual castings of finest grey iron and machined to absolute accuracy.

In producing the quick-seating, step-cut Servus Piston Ring we meet the demand for a quality piston ring of this particular type. Made from individual castings of finest grey iron and machined to absolute accuracy.



36 Branch Offices prepared to give practically 24-hour service to the entire trade. Whenever possible, however, dealers should order through their jobbers.

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One Quality

GILL *Interlocking-Joint* piston ring—the largest selling patented piston ring.

SPECIAL *Oil-Wiper* piston ring—the reasonably priced, well-made oil scraper.

SERVUS *Step-Cut* piston ring—peak quality in this type, at a moderate price.

Now—this complete quality line backed by the prestige and national service of the Gill Mfg. Co.

Every ring is individually cast from the special grey iron which has given our rings their reputation for leak-proof, heat-proof toughness and elasticity. Every ring is *lathe-turned* and machined to absolute accuracy.

Now you can supply rings of *known quality* for every service, at the right price, *at once*. For greater profit stick to GILL—SPECIAL—SERVUS for every piston ring need.

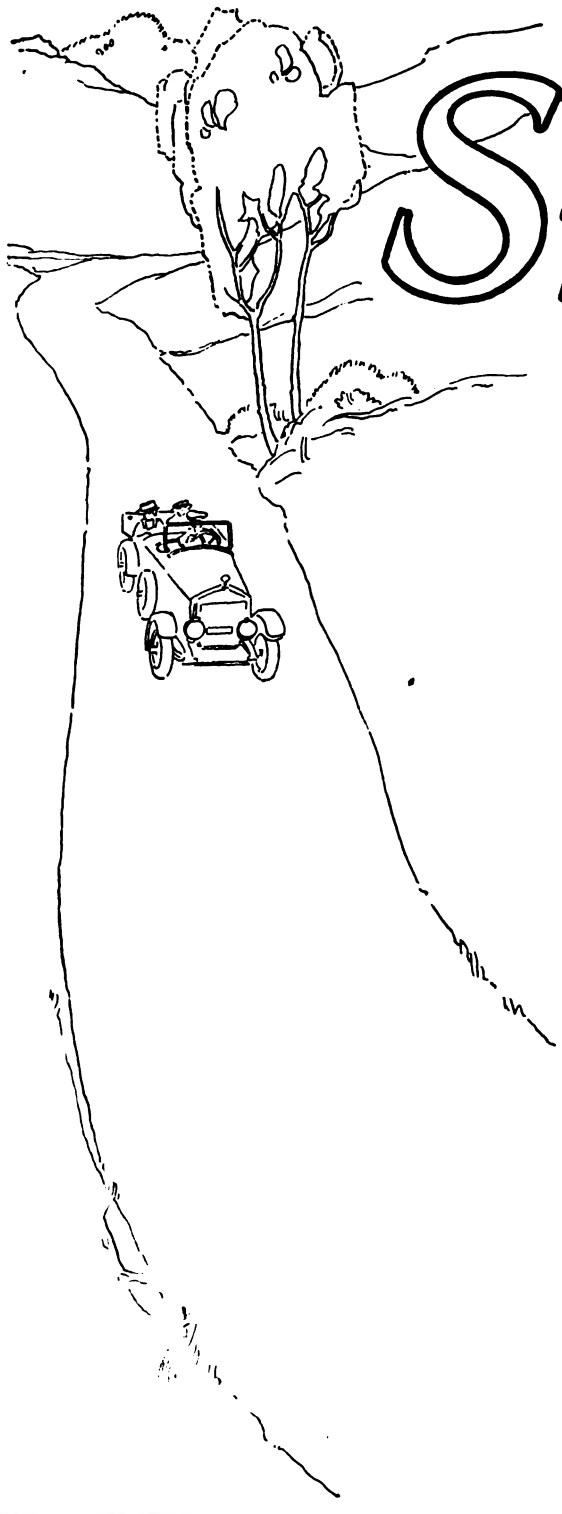
Gill Mfg. Co.

8300 South Chicago Ave., CHICAGO

Eastern Headquarters—10 Central Park, West—New York City
Canadian Factory—415 King St. W. (Brown Engineering Co.), Toronto
Sole Canadian Distributor—Canadian General Electric Co., Ltd.
Export Connection—American Steel Export Co., 29th Floor, Woolworth Bldg., New York, N. Y.

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Smooth

Like a well-built car on new asphalt, a genuine Morse Chain performs *smoothly*.

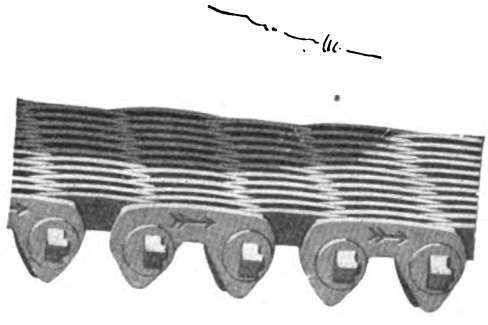
The specially shaped Morse links, operating on the exclusive "rocker-joint" principle, bring about this happy result. They mesh with the sprockets with a rolling motion that reduces friction and operates silently.

They drive cam and accessories the way you like to see production going.

MORSE CHAIN COMPANY

Main Office and Works
ITHACA, NEW YORK

Sales and Engineering Office
DETROIT, MICHIGAN



MORSE

GENUINE SILENT CHAINS

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Discovered at Last

—A new type of Black Baking Enamel for hoods, fenders, shields, radiator shells, etc., that will positively end the enameling troubles you have encountered for years.

—A new type of Black Baking Enamel that will not pit, sag, silk or wrinkle; a Baking Enamel that ends the pulling away from seams and bolt heads. It will not drip in the oven.

—A new type of Black Baking Enamel that besides overcoming these many difficulties will give you free and quick flowing, quick setting with good fullness and lustre.

Hard to believe, isn't it? We can prove it. Give us an opportunity. Write today.

Made also in Rubber First Coater

THE GLIDDEN COMPANY

***National Headquarters,* Cleveland, Ohio**

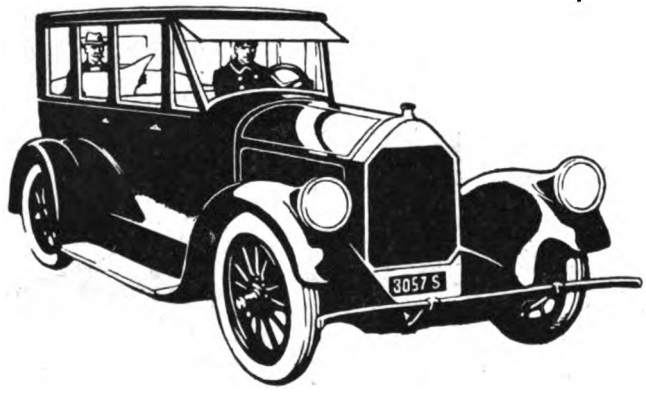


BOMBAY BLACK

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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PIERCE



Here is the most sought for model that ever bore the Pierce-Arrow name—the Enclosed Drive Limousine. It serves both as a chauffeur-driven Limousine and as an owner-driven Sedan. The change is instantly made by a completely disappearing French plateglass partition. As a Limousine, it affords isolation from the chauffeur's compartment. As a Sedan, it offers a companionable arrangement for all occupants.

Distribution of the Pierce-Arrow is not confined strictly to a few large metropolitan centers. It is in constantly growing demand in the smaller cities also.

In certain localities there is an opportunity to secure the Pierce-Arrow dealer franchise. If there is no Pierce-Arrow Agency in your city communicate with us.

Open Cars, $5,250. Closed Cars, $7,000.

At Buffalo

Prices in Canada upon application.

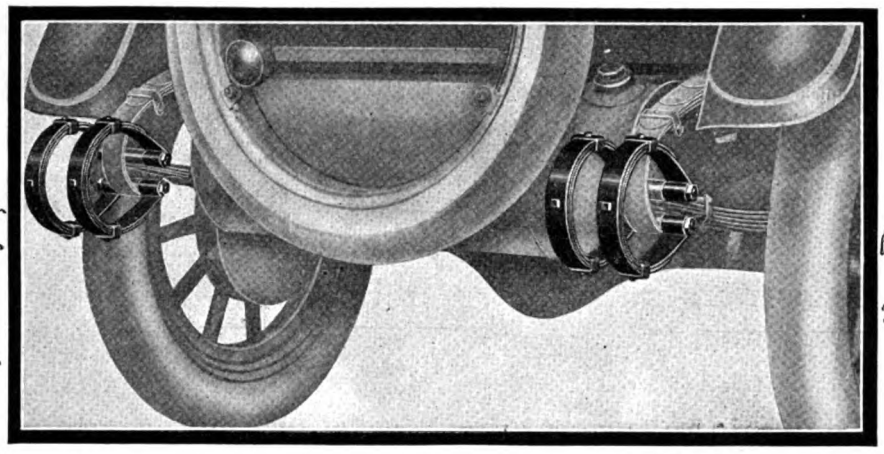
THE PIERCE-ARROW MOTOR CAR COMPANY

Buffalo, New York

92

ARROW

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Ride and Know

The Added Comfort This New Idea in Spring Suspension Really Gives

TO ANY CAR

ECLIPSE MASTER SPRINGS add immeasurably to the riding comfort of any car. They achieve complete freedom from road jolts and jar. And they do all this by entirely displacing a non-resilient part in old spring construction which even we as spring engineers have always thought indispensable.

Unshackle Your Springs

You know what the Spring "shackle" is. That stiff link of steel—rightly named because it holds the absorber action of the springs within narrow limits. It was a product of the old days of slower speeds and lighter loads. It served well on horse drawn vehicles. It has even survived for years the coming of fine motor cars.

It has remained, hidden and unnoticed. The coming of the pneumatic tire saved it. Had tires not been improved—Springs must have been. Now both approach perfection with the coming of Eclipse Master Springs.

"Floating Anchorage"—The New Idea

The wonder is that car builders and spring makers have not before thought of *unshackling* their springs. You can see at a glance the undoubted advantage of using these resilient master springs instead of stiff shackles. Now the last unyielding contact between your car body and the chassis has been eliminated. Your springs are cradled in perfect freedom. There is no surging back and forth of sharp shock waves. These springy leaves of steel swallow up all super-shocks, all reflex shocks and their curved shape makes rebound impossible. Eclipse Master Springs are easily applied to any car new or old—and at very moderate cost.

Car distributors and manufacturers should investigate the marked riding improvement Master Eclipse Springs will give their product. Dealers will find in them a sales opportunity far greater than is offered in any shock absorber because Master Springs give greater freedom of action to the car springs instead of choking off their resiliency. WRITE or WIRE.

INDIANA PARTS COMPANY, Dept. 2016, RICHMOND, INDIANA



The MASTER Spring

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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A Revolution in Anti-Skid Chains

OFF'N'ON Chains were introduced to the trade in December by a simple announcement that told of the tremendous improvements in chain-making to be found in OFF'N'ON Chains.

The announcement went to 125,000 jobbers and dealers. It was widely read, widely commented on, and quantities of orders poured in. For nearly everyone on the selling end of automobile accessories had long felt the missing wants in chains which OFF'N'ON Chains supplied.

Such Features as these:



This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No lost chains—no loose chains. OFF'N'ON has a positive locking device.



This patented slip-on link makes it easy to take off worn-out cross chains and put on new ones.

A child can do it. OFF'N'ON Chains, with these special devices, cost no more.



Write for further particulars, giving name of your jobber

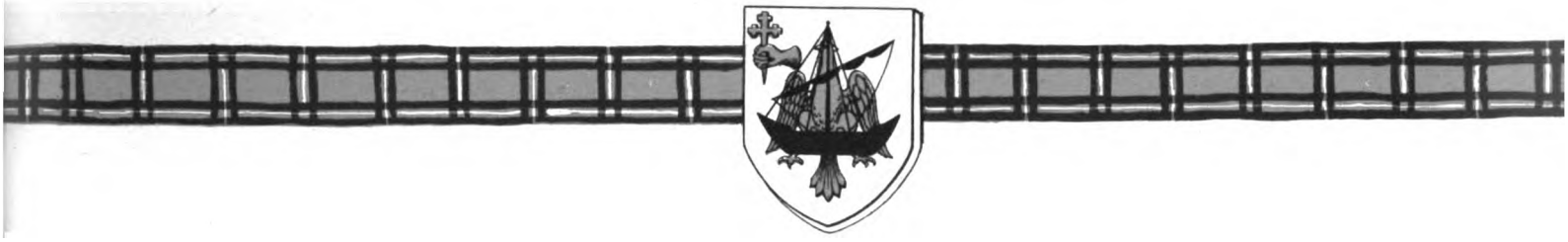
PYRENE MANUFACTURING CO.

Makers of Pyrene Fire Extinguishers

520 Belmont Avenue, Newark, N. J.

Branches: **CHICAGO—17 So. Jefferson St.** **KANSAS CITY—1712 Grand Ave.**
ATLANTA—24 Nassau St. **SAN FRANCISCO—527 Mission St.**

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No Signs of Letting Down

The overwhelming demand for Moon cars continues unabated and without the least indication of letting down at any point. Never as seasonal a seller as some cars, all signs this year point to every month's sales being greater than the month before.

The number of cars built and shipped during the nine months of 1922 more than equals the entire production of 1920, the greatest year in the Moon's history. Had we been able to build sufficient cars during the past nine months we could have increased this record by 50 per cent.

But despite these exceptional increases we have succeeded in broadening our factory facilities to such an extent that we can now look forward to arranging for dealer connections in places where we are not represented.

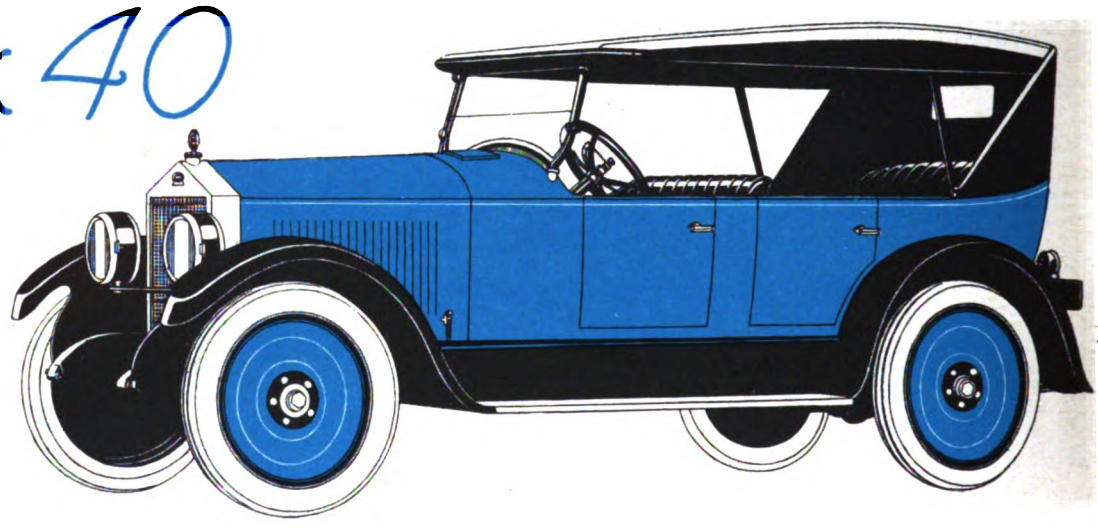
Stewart McDonald
President Moon Motor Car Co., St. Louis

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The New Six 40

$1195

F.O.B. ST. LOUIS



—the car that caused the big demand

The Moon design with its distinctive lines and superb finish has irresistible appeal to the eye. It's just the kind of car people like to be seen driving. And with its rare external beauty it combines an internal mechanical excellence that gives keenest satisfaction in power and responsiveness.

These inherent qualities of rare beauty and dependability have placed the Moon in the forefront of public favor and have made it the outstanding sales success of the year. Better than a thousand cars a month are now being sold!

With increased production facilities the Moon offers—to those who act promptly—an unusually valuable franchise.

Write, telegraph or telephone for the Moon proposition.

MOON MOTOR CAR COMPANY, ST. LOUIS, U. S. A.

Founded 1907 by Joseph W. Moon

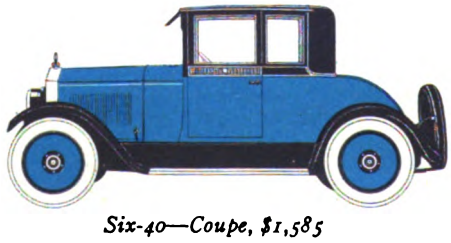
Six-40—5-passenger Touring	*$1,195*	*Six-58—5- and 7-passenger Touring*	*$1,785*
Six-40—Tourlux	*1,445*	*Six-58—Sport Touring*	*1,885*
Six-40—Coupe	*1,585*	*Six-58—7-passenger Sedan*	*2,485*
Six-40—5-passenger four-door Sedan	*1,695*	*Six-58—Four-door Petite Touring Sedan*	*2,485*

(Prices f. o. b. St. Louis)

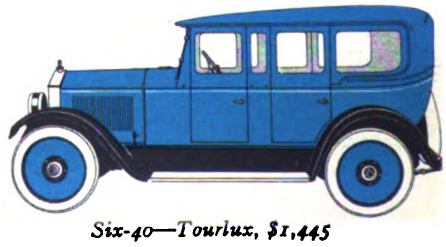
The MOON



Six-40—Sedan, $1,695

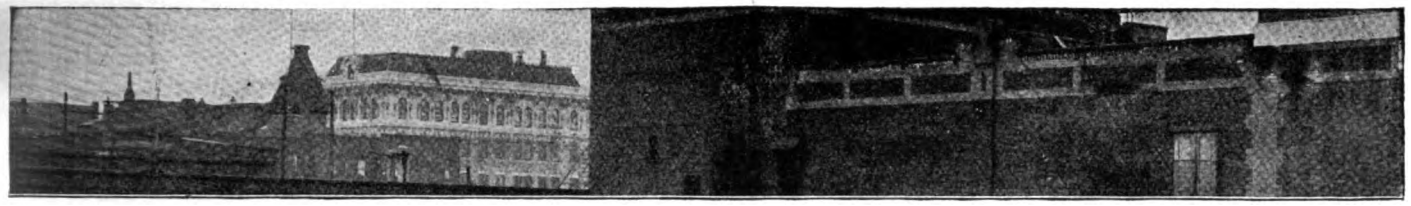


Six-40—Coupe, $1,585



Six-40—Tourlux, $1,445

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GOODYEAR TIRES ARE EASY TO SELL



Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

Photograph pictures Metropolitan roof parking space, where 70% of cars are Goodyear equipped

"Of the 170 cars parked daily in the new Metropolitan Garage, approximately 70 per cent are equipped with Goodyear Tires. These cars are owned by the livest business men of Seattle, tenants of our office buildings. In opening our garage, a display of Goodyear Tires led off as the first big showing in the accessory shop. We are convinced that the Goodyear Tire is a business getter." METROPOLITAN BUILDING COMPANY, Seattle, Wash.

Today, the demand for Goodyear Tires is widened and strengthened by the fact that Goodyear Tires are better, and cost less, than ever before. Dealers who recognize frequent turnover and satisfied customers as essentials of tire-selling success are concentrating their efforts on Goodyears.

For several reasons, Goodyear Tires are easy to sell. They are big, strong, and comfortable to ride on. More people ride on Goodyear Tires than on any other kind. The tough, long-wearing Goodyear Tread holds safely to any road.

Automobile dealers find that Goodyear Tires are of great assistance in car merchandising, for Goodyears contribute generously to the economy of operation every owner, and every prospective owner, is seeking.

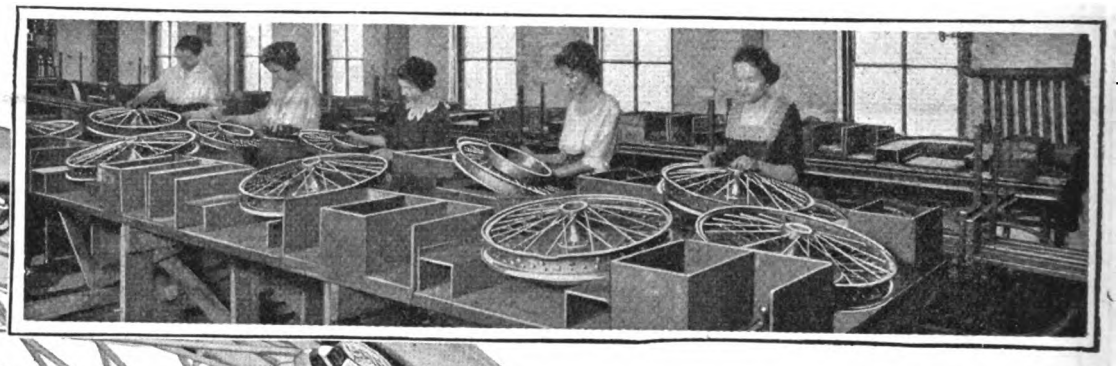
If you want to be a Goodyear Dealer, and sell Goodyear Tires the Goodyear way, enjoying the constant assistance and counsel of Goodyear experts, write at once to Goodyear, Akron, Ohio, or Los Angeles, California.

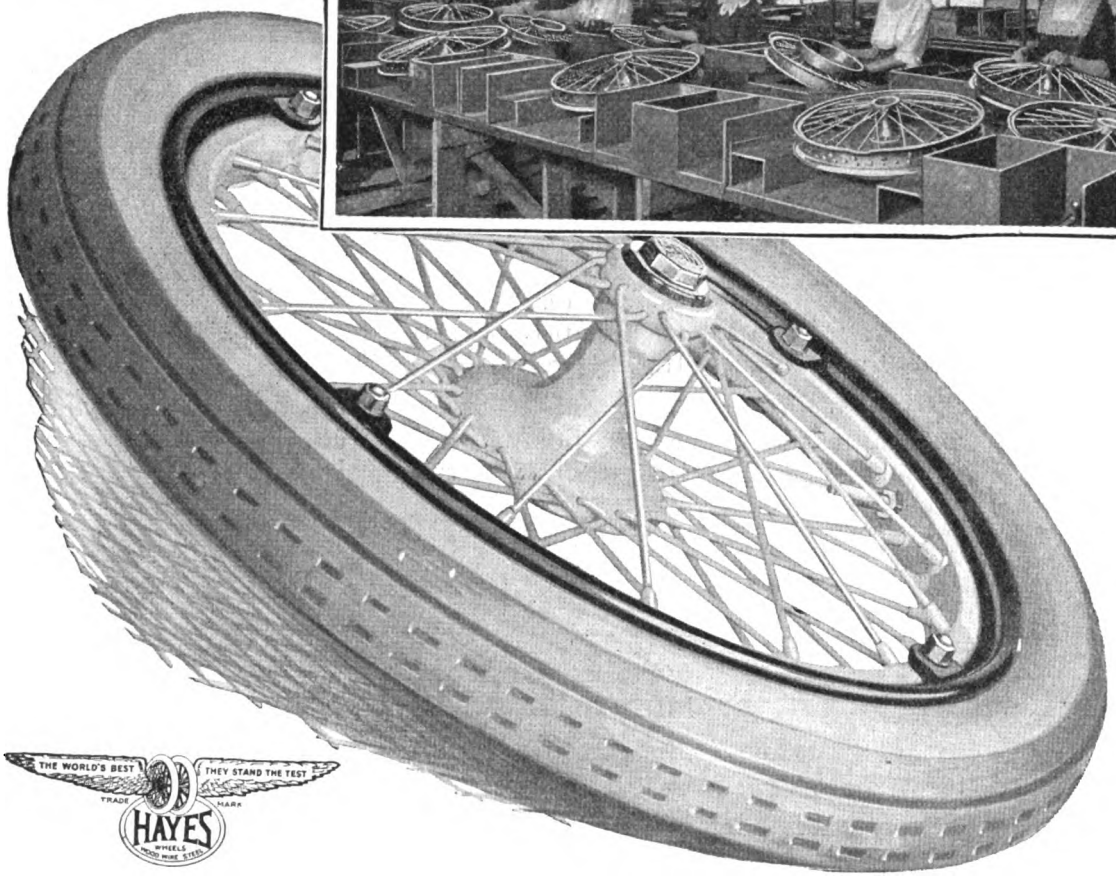
GOODYEAR

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HAYES

DEMOUNTABLE AT THE RIM





Wire Spoke Assembly.

NO other manufacturer can approach the high standard of quality of Hayes Demountable at the Rim Wire Wheels at anywhere near the same price. No other manufacturer has the tremendous manufacturing facilities, the immense production and the enormous purchasing power of the Hayes organization—builders of wheels for over half of all the cars produced in America. Every possible economy in material and manufacturing cost, made possible by the magnitude of Hayes operations, is passed on to the motor car manufacturer. The entire Hayes organization is constantly at his service in planning Hayes wheels to meet his particular requirements. Thus he, in turn, is enabled to offer to his customers the added buying inducement of Hayes Wire Wheels at the lowest possible price and without a moment's delay in production.

WIRE WHEELS

(52)

HAYES WHEEL COMPANY, *Manufacturers*, Jackson, Michigan

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Building Volume and Profits

Mr. Louis Geyler, President of Louis Geyler Company, Chicago pioneer of the automobile trade, with eighteen years of successful merchandising for background, tells why he considers the Stephens franchise an exceptional business opportunity.

"IT has been only ten months since we started with the Stephens line, but we feel that we are on the way to build up an exceptionally fine business through its sale.

"The Stephens is undoubtedly one of the best cars built in this country. Every automobile merchant knows that there is a constant and growing demand among buyers for better and better cars. The Stephens distributor or dealer is in a position to cash in on this demand.

"There is a great advantage in handling a car that is *manufactured*, not merely assembled by the company that puts it out. The factory organization feels its responsibility more. The car is a finer, more dependable car. Owners are better satisfied—and the month-to-month advertising that always follows is a valuable promoter of sales.

"This is particularly true when the car is priced—as the Stephens is—at a figure that puts it in a strong competitive position compared with other cars of equal size, greater cost, but much less actual value and ability to perform.

"The factory organization behind the Stephens is all that any distributor or dealer could wish. They have all the facilities required to make a fine car. They know how to use them and how to check and test their product. They appreciate the conditions the automobile merchant has to meet and they give him every possible help in meeting them and making a market for the car."

. . . . I am happy to quote Mr. Geyler, one of the best known figures in the automobile trade, as showing the present opportunity to build volume and permanent profits in selling the Stephens car. If the Stephens is not represented in your city, let us send you a catalogue and our liberal contract. Write today.

R. W. Lea

Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.

Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

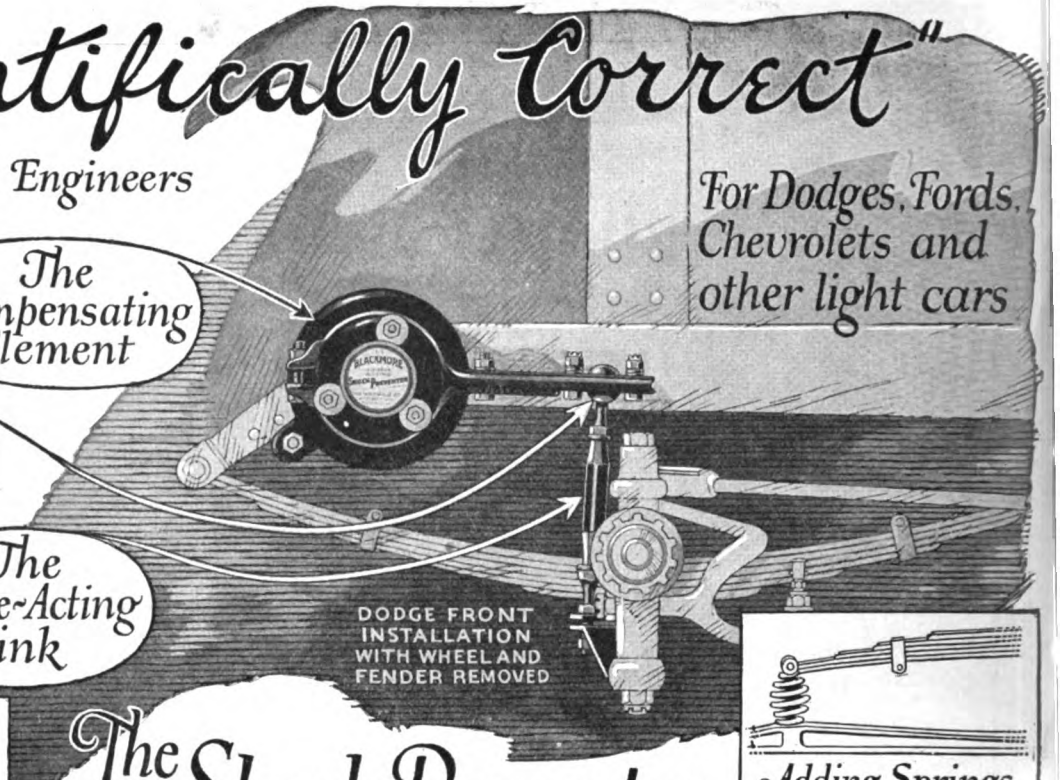
Nine individual body types—$1575-$2550, f. o. b. Freeport

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"Scientifically Correct"

Automotive Engineers

For Dodges, Fords, Chevrolets and other light cars



The Shock Preventer that prevents

THE world is full of shock absorbers. Yet for ten years automotive engineers have been searching for means of checking the overaction of the springs when the wheel strikes a rise or depression in the road. The Blackmore shock and roll preventer is that device. When the spring is in its normal position, the Blackmore, unlike spring shock absorbers which merely add to the reaction, or friction devices that stiffen the action of the spring, furnishes no resistance to the softness of good springs.

When the bouncing jolt is encountered, the Blackmore, as the body leaves its normal position, takes a firm grip on the spring, lessening its hasty compression, easing up its hasty reaction, bringing the car body back to its normal position with a cushion-like ease that has surprised the whole automotive world.

The Blackmore gives minimum resistance at normal position, but gives an increasing resistance as the car body leaves its normal position and maintains that resistance in graduated proportion throughout the entire upward and downward motion of the body, entirely automatic and exactly in proportion to the movement of the body.

The most astonishing results are obtained with the Blackmore Preventer. Small cars so equipped may be driven at full speed over washboard roads with no more movement to the body than is normal on the finest roads. Until the advent of the Blackmore such results, among spring experts, were considered impossible.

Now for the first time is offered to the light car public a device that after years of careful experiment and hundreds of thousands of miles of driving has proved the final solution to these problems.

Now ready for Fords, Dodges, Chevrolets and other light cars. Later this list will be expanded. Live dealers from Coast to Coast are finding Blackmores one of the greatest accessories ever offered.



The Resistance of a Feather Pillow

is proportionate to the weight—the feathers, like Blackmores, give no reaction.

The only tools you need ~

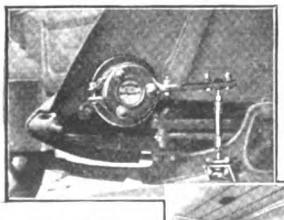
a monkey wrench

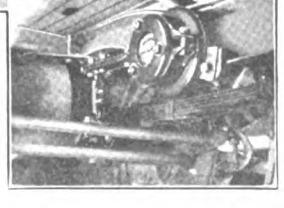


and a screwdriver



to attach Blackmores in an hour. No car parts are discarded.

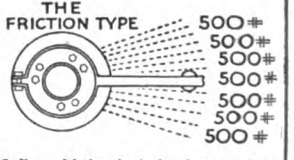




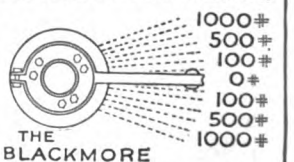
Dodge Front and Rear Installation

Adding Springs to Springs naturally adds to the rebound

A Basis for comparison that every motorist should understand



Ordinary friction shock absorbers require a fixed energy to move them at all positions, on center when only slight resistance is wanted as well as when the spring is farthest deflected from its normal center and has stored in it an enormous reaction energy



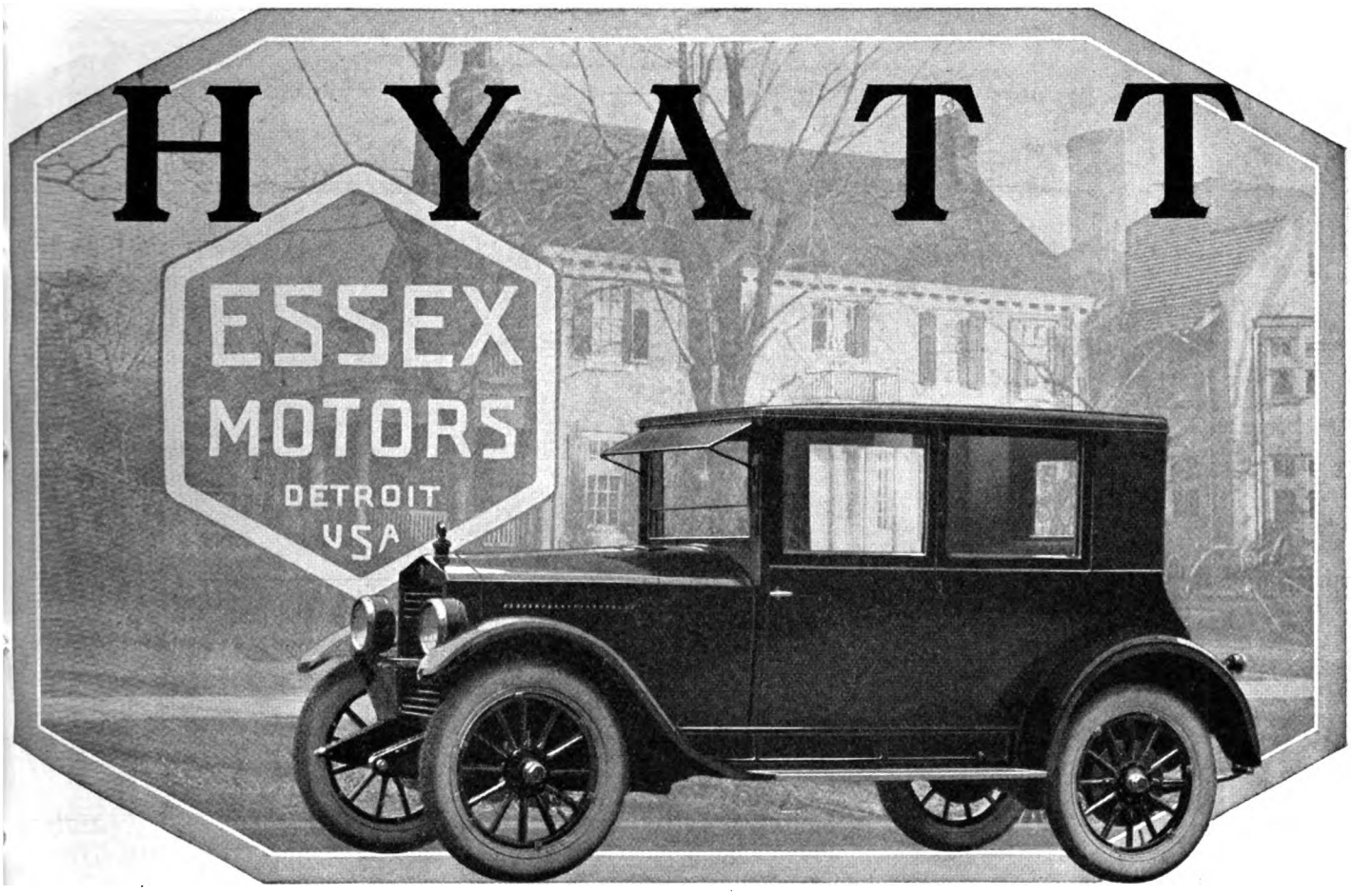
Blackmore Shock Preventers multiply the energy necessary for movement as they move away from center—hence they multiply the resistance to spring overaction and spring reaction in direct proportion to the deflection from center both ways—upward and downward, both above and below normal center

The HOUDAILLE CO.
1440 West Avenue,
Buffalo, N. Y.

Real Shock Preventers

BLACKMORE

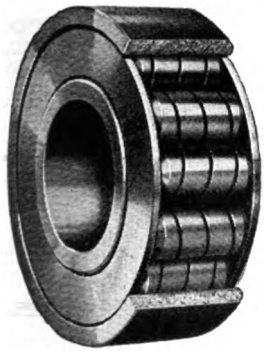
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THE fleet and nimble Essex which has established so enviable a record for brilliant and enduring performance has consistently demonstrated the value of the term "Hyatt-Equipped".

The first Essex car was equipped with Hyatt Bearings. From that time to the present, every Essex car built has employed Hyatt Roller Bearings. They are used throughout in the transmission and in the valve rockers.

In the transmission, Hyatt Roller Bearings make possible a noiseless, sturdy and enduring unit. They carry heavy loads, maintain proper alignment of shafts and gears and due to their self-lubricating qualities make the most of every drop of lubricant provided. In the rockers they provide a construction ideal to withstand the constant hammering load of the valves without necessitating frequent lubrication and without developing looseness.



A Hyatt bearing with part of outer race removed to show the spiral rollers

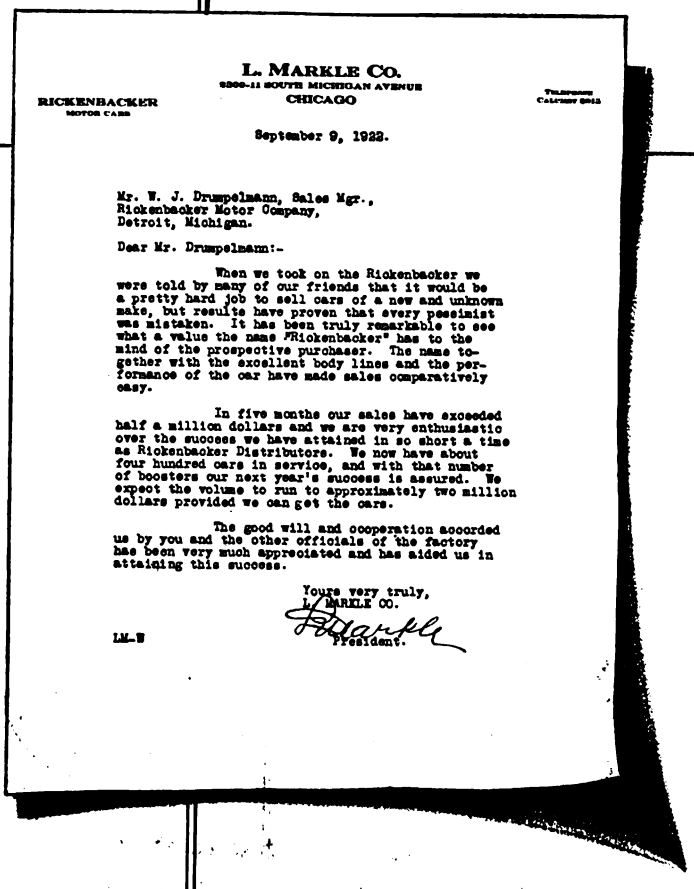
HYATT ROLLER BEARING COMPANY

***Motor Bearings Division*: Detroit, Michigan**

Tractor Bearings Division	*Pacific Coast Division*	*Industrial Bearings Division*
Chicago, Ill.	San Francisco, Cal.	New York, N. Y.

HYATT QUIET BEARINGS

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L. MARKLE CO.
2000-12 SOUTH MICHIGAN AVENUE
CHICAGO

RICKENBACKER
MOTOR CARS

September 9, 1922.

Mr. W. J. Drumpelmann, Sales Mgr.,
Rickenbacker Motor Company,
Detroit, Michigan.

Dear Mr. Drumpelmann:-

When we took on the Rickenbacker we were told by many of our friends that it would be a pretty hard job to sell cars of a new and unknown make, but results have proven that every pessimist was mistaken. It has been truly remarkable to see what a value the name "Rickenbacker" has to the mind of the prospective purchaser. The name together with the excellent body lines and the performance of the car have made sales comparatively easy.

In five months our sales have exceeded half a million dollars and we are very enthusiastic over the success we have attained in so short a time as Rickenbacker Distributors. We now have about four hundred cars in service, and with that number of boosters our next year's success is assured. We expect the volume to run to approximately two million dollars provided we can get the cars.

The good will and cooperation accorded us by you and the other officials of the factory has been very much appreciated and has aided us in attaining this success.

Yours very truly,
L. MARKLE CO.
President.

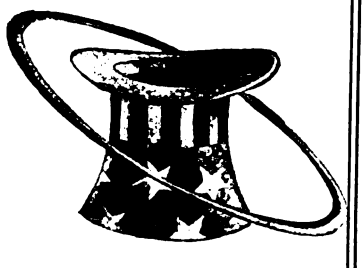
LM-W

$500,000.00 in 5 Months

That's the Record of L. Markle Company; the Rickenbacker distributor of Chicago.

These amazing records are occurring all over America. You can do likewise. Write us for facts.

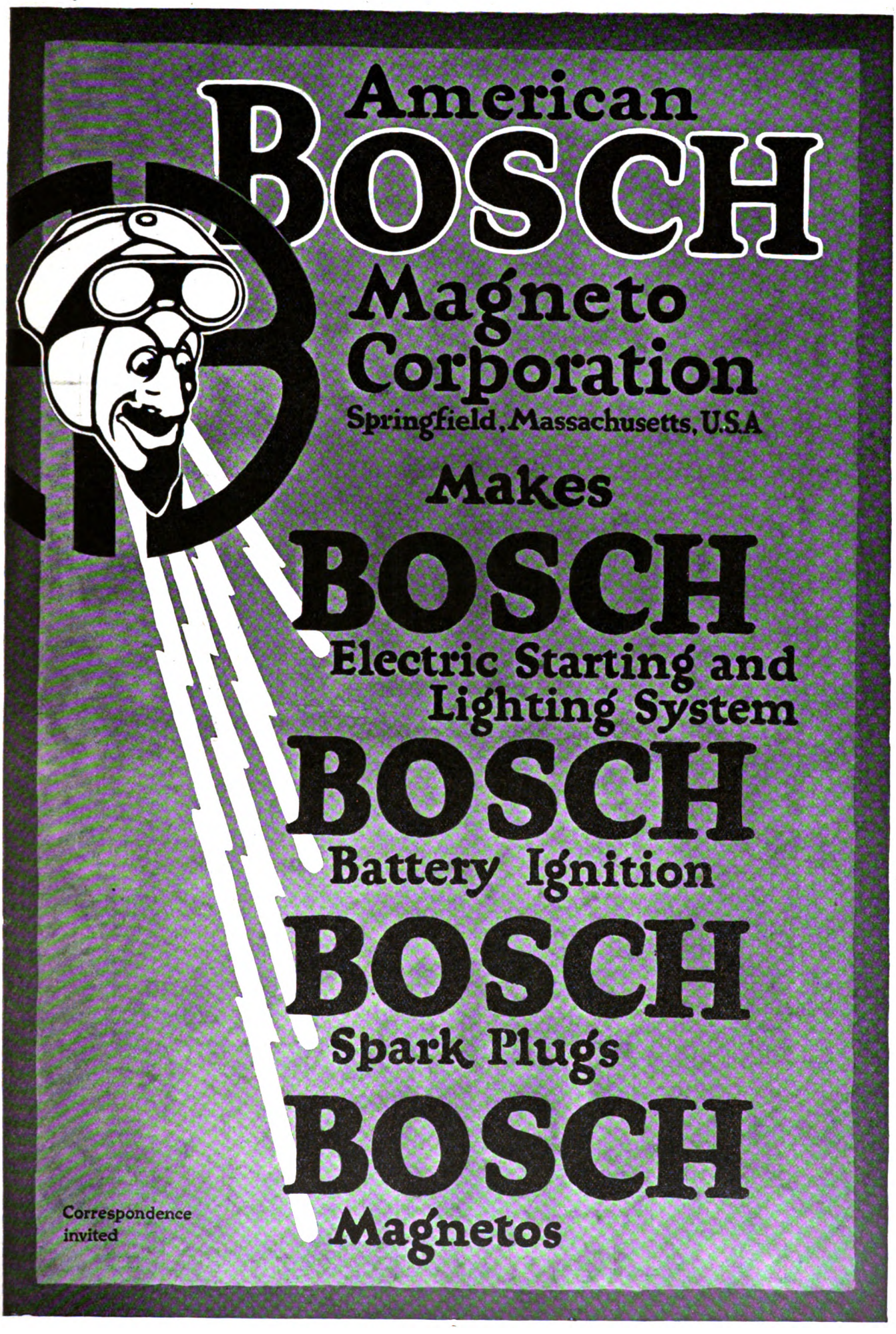
Rickenbacker Motor Company
Detroit Michigan



Rickenbacker

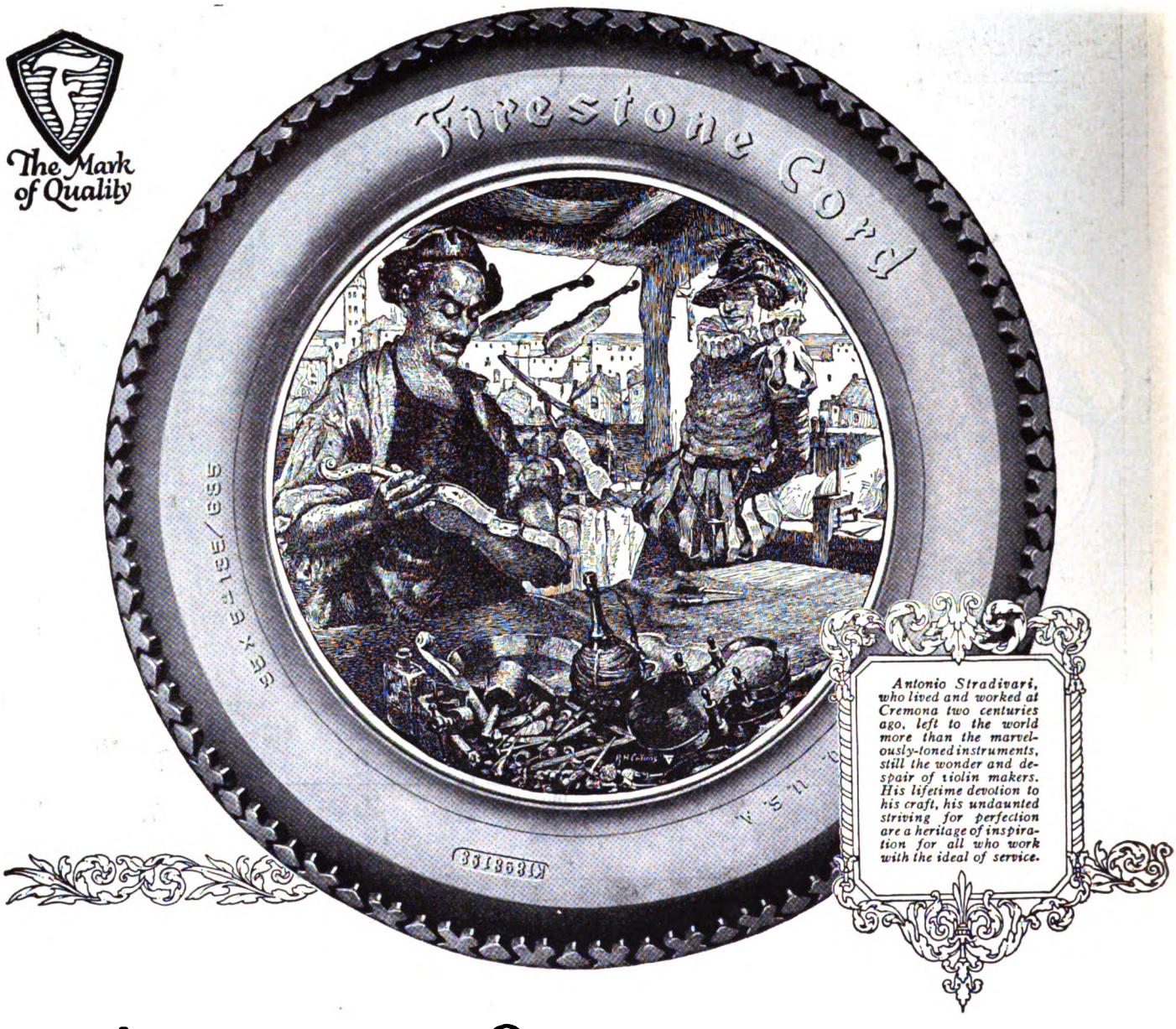
A • CAR • WORTHY • OF • ITS • NAME

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Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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IMMORTAL CRAFTSMANSHIP

THE romance of creating and building takes strong hold on men's imagination. The bridge builder, the automobile manufacturer, the tire-producer are actuated no less by the ideal of service than the maker of swords, the weaver of tapestries or the designer of violins.

The highly practical industry of tire-building has afforded opportunities for vision, for faith and determination that future generations will recognize and respect.

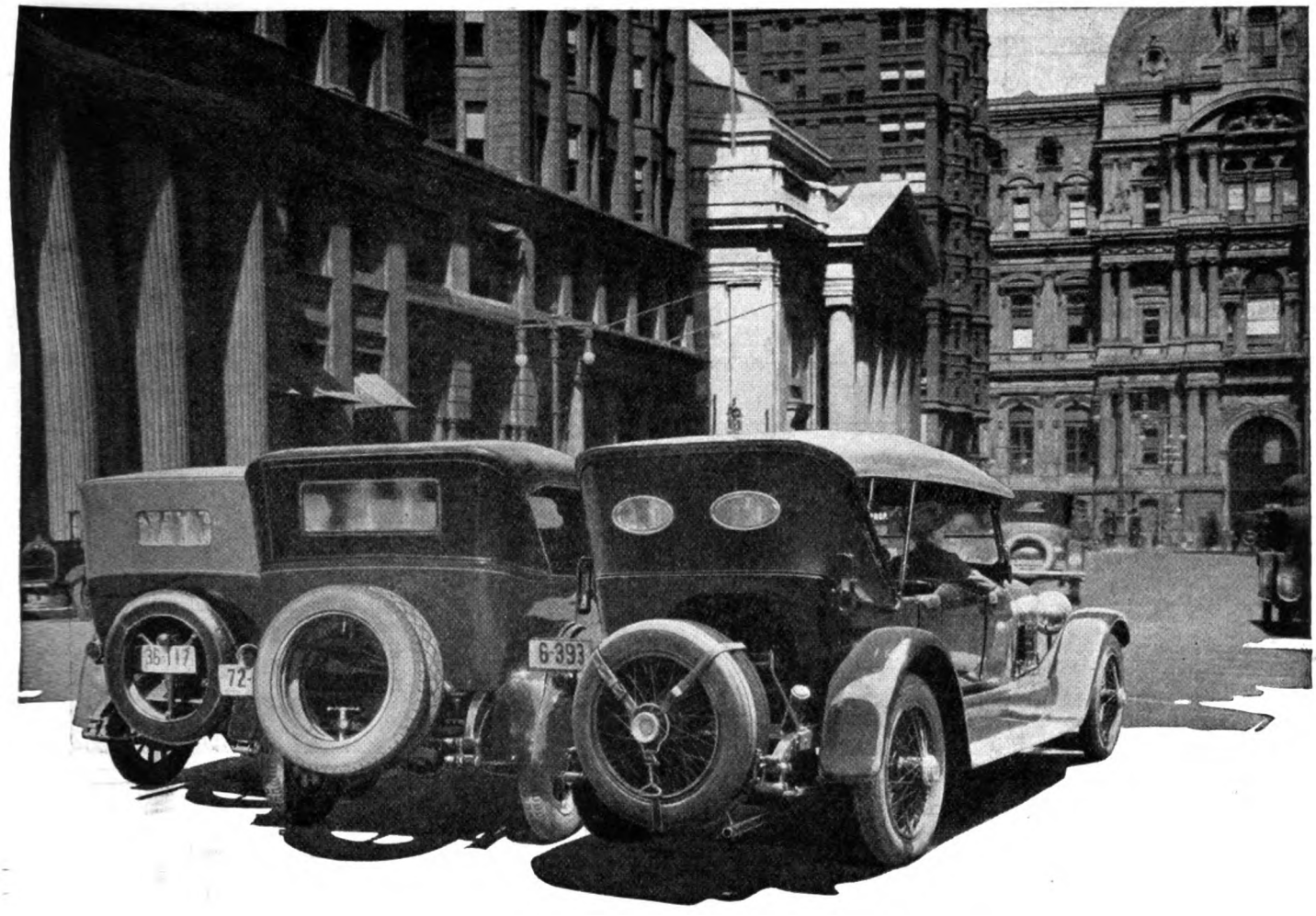
Because tires are a utility "Most Miles per Dollar" is a worthy expression of the high standard of craftsmanship back of them. It is the pledge that accompanies Firestone Cord Tires from the organization that for twenty-two years has worked and thought and planned to make the name Firestone mean the utmost in tire value.

That Firestone Cords are available and economical for all who drive cars everywhere only emphasizes the important contribution they have made to safer, swifter and more comfortable transportation.

Most Miles per Dollar

Firestone

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"Style is the Thing"

THREE YEARS AGO we predicted that body style and smartness of appearance would become increasingly important as a factor in the sale of automobiles.

1922 and 1923 models have borne out this prophecy in striking fashion. Mechanical excellence is largely taken for granted. Body style is the thing of supreme importance.

Neverleek Top Material continues to add beauty and distinction to a majority of high-grade cars as it has done for many years. Neverleek tailors in artistic shapes to harmonize with every body design. It has the substance to hold plate glass window without sagging. It is durable beyond question. Its richness of finish is lasting.

Samples of Neverleek Top Material in different finishes and with varied linings, with prices, on request.

F. S. CARR COMPANY, 31 Beach Street, BOSTON, MASS.
Detroit Chicago St. Louis Atlanta

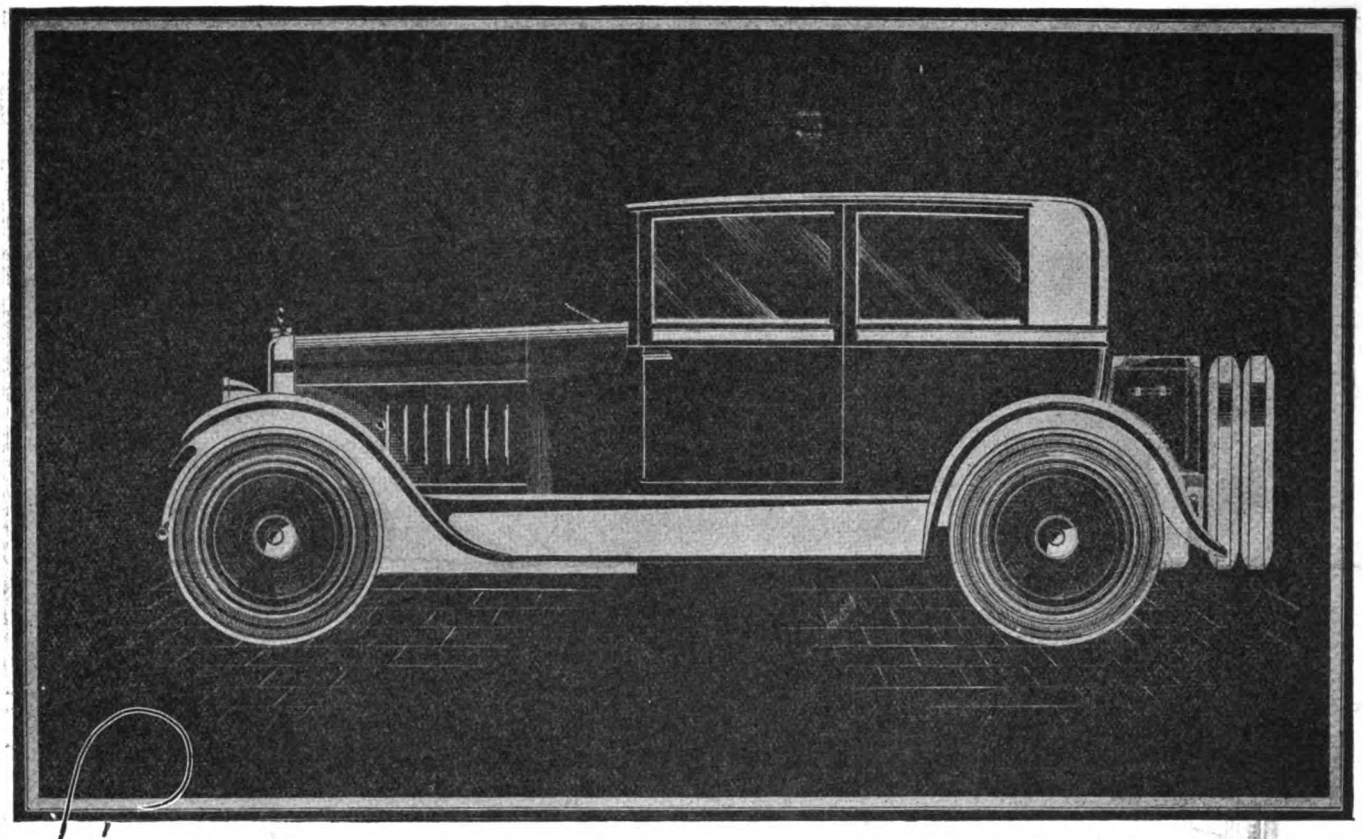
NEVERLEEK

TOP MATERIAL

Trade Mark Reg. U. S. Pat. Off.

Predominates

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Lines—

—that Help Sell the Car

Last fall, in our advertisement here entitled "**Bodies With Sales Appeal**" we made this significant statement—

> "For the next six months fully three-fourths of all automobiles sold will be closed cars. Everyone of these will be selected largely from **the appeal the body makes to the customer.** The body equipment is of greater importance than all other selling features combined.

This is so fundamental that we feel impelled to reiterate it now. The sales-appeal RAULANG Closed Bodies will make to **your** customers can be harnessed by your sales force and become one of the most potent sales influences you have.

This added sales-appeal you can get for less than you probably think—the moderation of Raulang prices is due to the many economies we effect by **quantity** production.

RAULANG BODY DIVISION

The Baker R & L Co.

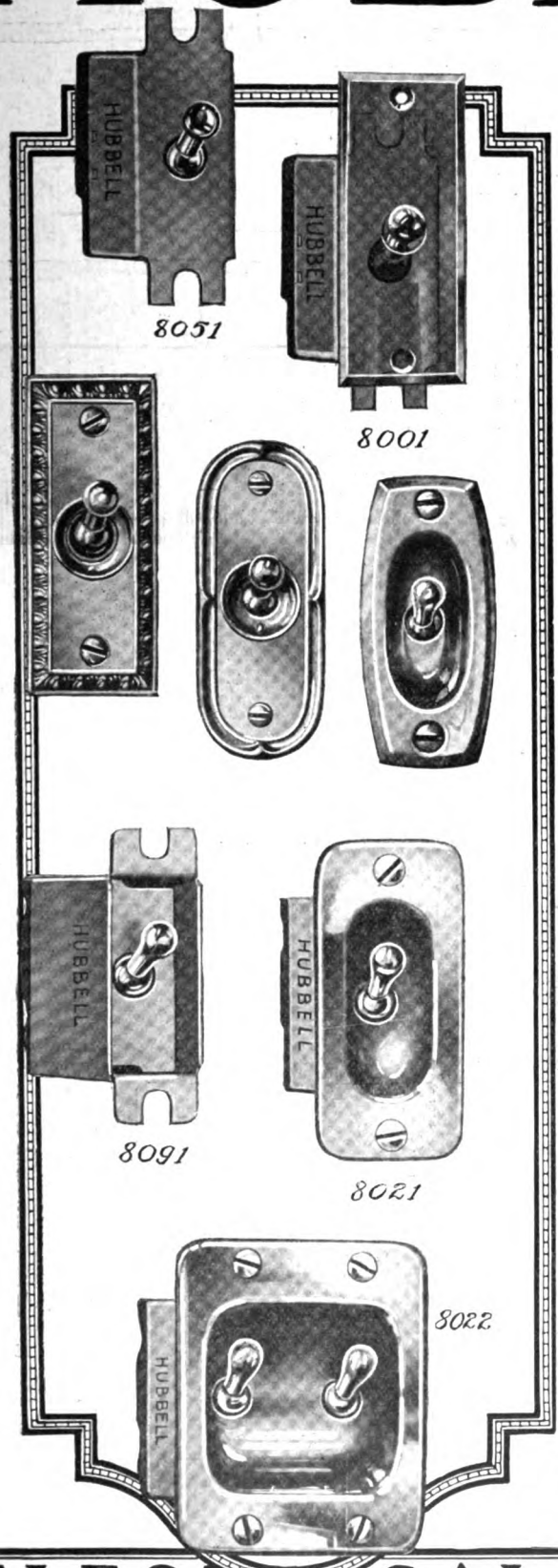
CLEVELAND, OHIO. U.S.A.

Raulang enclosed bodies are not supplied to individual customers — only in quantity to Motor Car Builders.

Raulang TRADE-MARK AUTOMOBILE BODIES

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HUBBELL



Toggle Switches

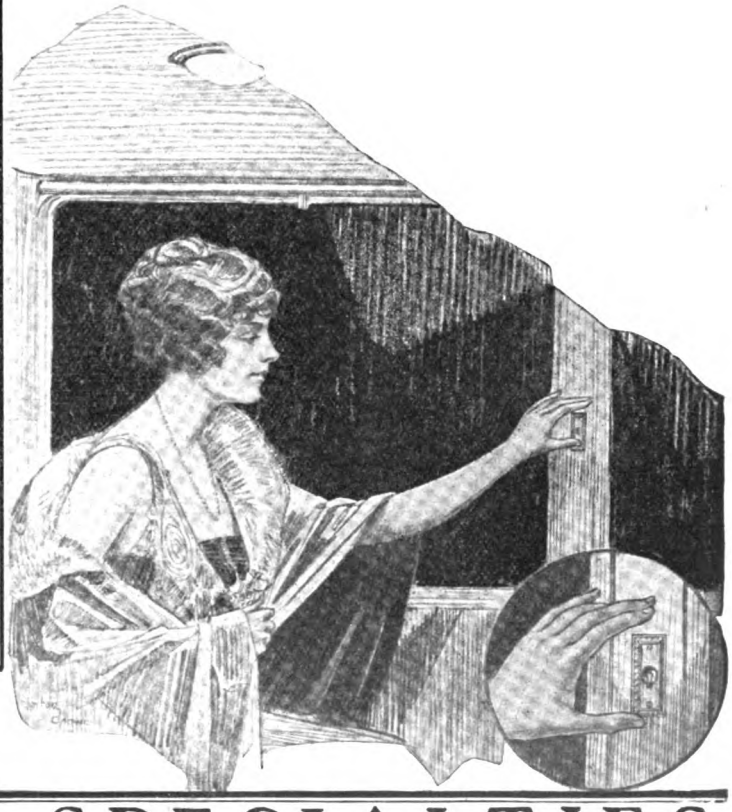
Add character to enclosed automobile Lighting Equipment.

Mechanism is strong, neat and convenient.

Furnished with standard or special plates—any finish.

Specify Hubbell Toggle Switches for enclosed body work.

HARVEY HUBBELL INC
ELECTRICAL SPECIALTIES
BRIDGEPORT CONN. U.S.A.
2232-U



ELECTRICAL SPECIALTIES

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A FINER CAR

COLE

EIGHT NINETY

Built in the Following Models

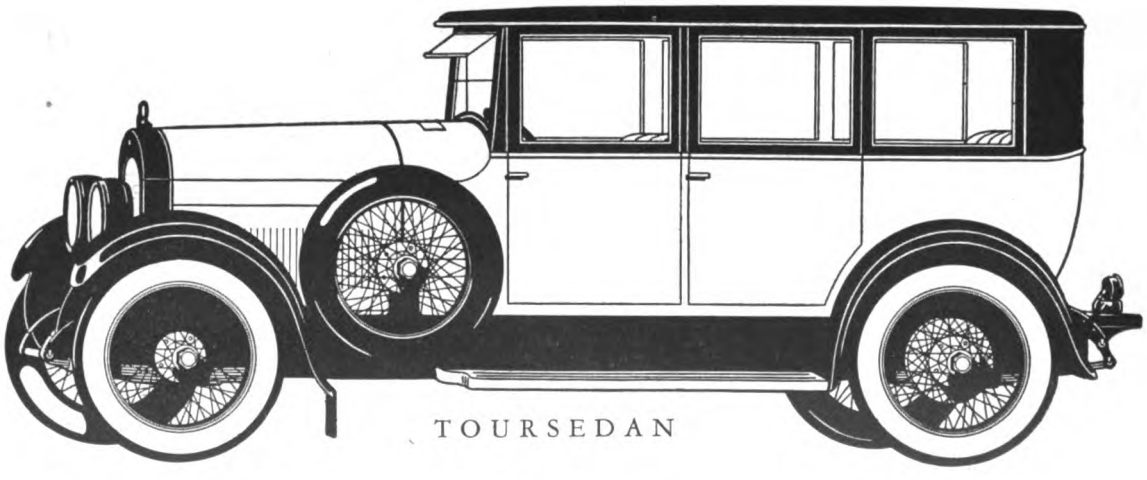
TOURSTER
SPORTSTER
ROADSTER
SEDAN
COUPE
TOURSEDAN
SUBURBAN
BERLINE

BACK of the public approval of the Cole, stands a product that is the result of many years of careful engineering and design.

The Cole is built to meet the public's wants—and it meets them. Power, stamina, easy riding, economy of operation, beauty—all of these have been brought to a point where the Cole is recognized as "A Finer Car".

Consideration on the part of automobile dealers is merited by the immediate acceptance of the refined Cole Eight Ninety.

COLE MOTOR CAR COMPANY
INDIANAPOLIS, U.S.A.



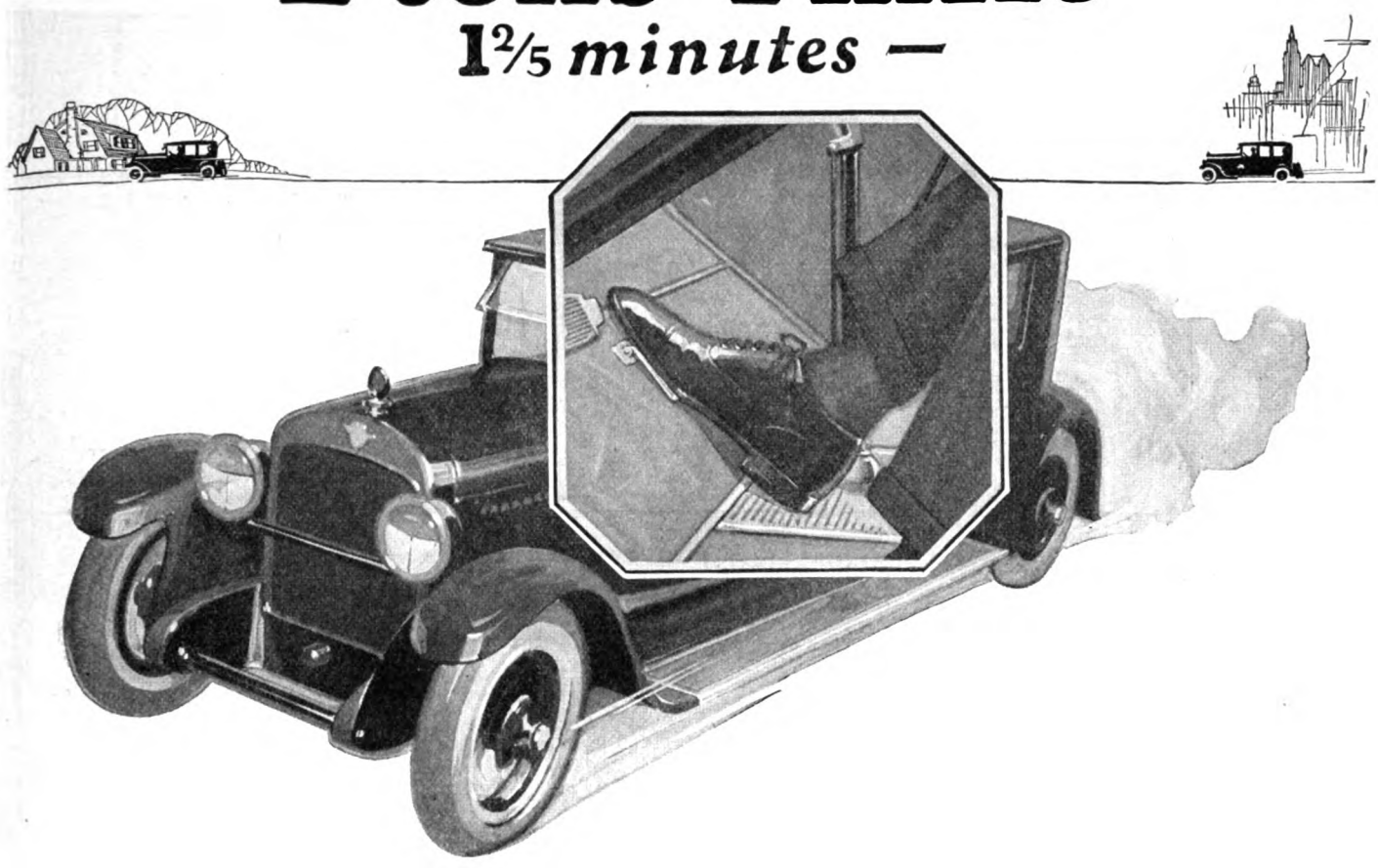
TOURSEDAN

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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2 tons-1 mile

1 2/5 minutes —



The next time you seat yourself at the wheel of your automobile make this interesting, almost miraculous experiment.

Realize, first, that this inexpensive mechanism you call an automobile may weigh more than 2 tons (4,000 pounds).

Realize, also, that the fastest a man has ever run the distance of a mile—has ever moved his own weight a mile—is 4 1/5 minutes.

Then start your motor, go noiselessly, rapidly through the gears, and keep depressing the accelerator. In such manner can you move—from a dead start—2 tons 1 mile in 84 seconds.

Several ounces of foot pressure and this miraculous mechanism called the automobile has done work 66 times greater than the best man has ever done by himself, even by expending thousands of times more energy—moved 22 times the weight the same distance in one-third the time, with no apparent exertion.

Of such force is automotive transportation.

An unseen Something, under your easy control, moves 2 tons 1 mile in 84 seconds.

It is Power.

Protect it with Timkens.

The Timken Roller Bearing Co, Canton, Ohio

TIMKEN

Tapered

ROLLER BEARINGS



© 1922, T R B Co, Canton, Ohio

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Another Step Forward

Westinghouse has already established 290 authorized Field Service Representatives in cities throughout the country. And, now the Service maintained by these Field Service Stations will be extended and supplemented by the distribution of the Westinghouse Service Encyclopedia and Parts Data, to garages everywhere.

In Volume I, the Service Encyclopedia, following the first two sections, which treat electricity and magnetism elementarily, giving definition of terms, elementary formulae and descriptions of the various classes of machines, every class of automotive electrical apparatus is clearly described and its functions given: where and how to test for trouble and the equipment necessary to conduct these tests; diagrams of the wiring in every car or truck that is Westinghouse equipped; exactly how to repair or replace any of the electrical equipment on these cars and trucks; in Volume II the model and style number of each of the units supplied by Westinghouse and a complete price list of parts, showing both the assembled units and each minute part.

In two handsomely bound Volumes of between 700 and 800 pages each, this complete reference book on automotive electrical equipment is being distributed to garage owners at approximate cost. The two Volumes for $24.00, or either volume purchased separately for $12.50. This cost includes the maintenance of the two volumes until January 1, 1923, thereafter a charge of $2.50 a year will be made to cover the cost of quarterly supplementary sheets.

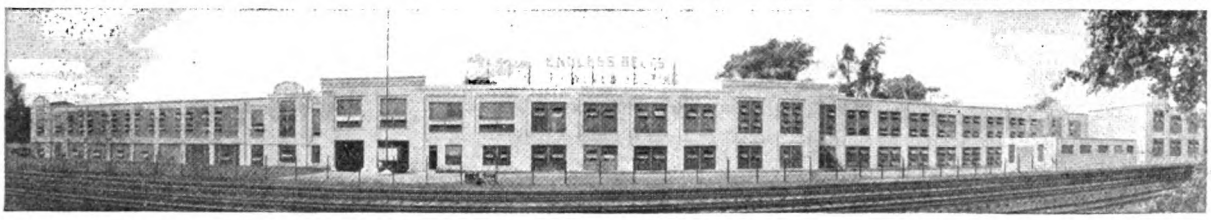
A Westinghouse Service Encyclopedia in every garage in the country is the goal of Westinghouse Service. When this is accomplished the excellent service given by each Westinghouse Field Service Station will be supplemented by a large group of garages. And every owner of a car or truck, Westinghouse equipped, can be sure of receiving real Westinghouse Service and genuine Westinghouse parts through his garage man when he needs them.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO. - *Automotive Equipment Department - Sales and Service Headquarters:* 82 Worthington St., Springfield, Mass.

Westinghouse

STARTING, LIGHTING & IGNITION

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TO HELP YOU SELL

Do you know that two ideas are carried through on every Gilmer product?

WHEN a new Gilmer product is thought out, worked out, made up and proved by factory tests to be the finest of its kind, it is only *half* ready to go to the trade.

The second and equally important step is to add every possible thought that will quicken its sale.

As an illustration, Gilmer originated the individually wrapped and the group idea for fan belts—ideas that allow the salesman to select immediately the right belt for any car.

Gilmer introduced the carton idea for woven automotive products. The attractive display made by these cartons helps to sell Gilmer products.

Gilmer was first to advocate to the motorist the necessity of proper fan belt adjustment. And the greatest of sales creators for fan belts was a Gilmer idea—"Carry a Spare." This idea allows the dealer to sell two belts where he used to sell but one.

On any woven automotive product that Gilmer may produce in the future, the two ideas and ideals will be incorporated. First, it will be the finest product of its kind that Gilmer can make. Second, every idea such as an attractive package, practicable suggestions to motorists, convenient arrangement of groupings, etc., to increase turnover and profit will be included.

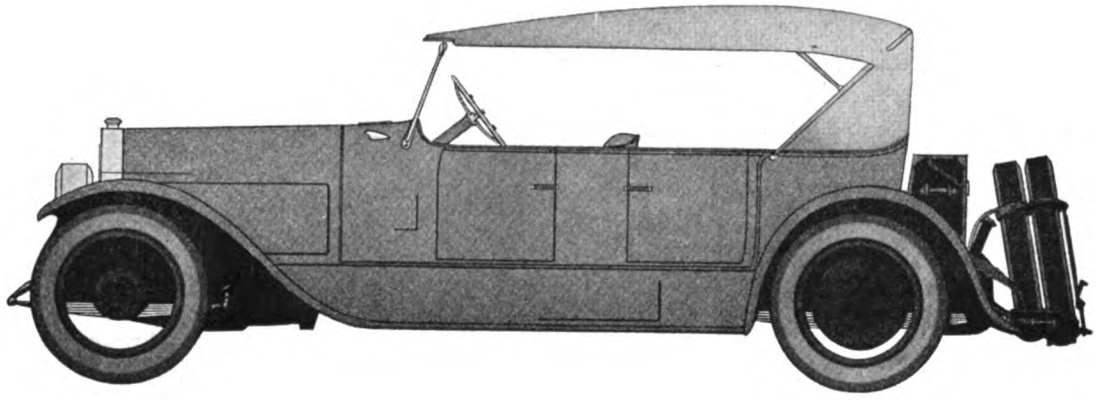
L. H. GILMER COMPANY, Philadelphia

Gilmer



It's a Gilmer Product—you can depend on it!

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Four-Passenger Touring $6,900

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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VACUUM CUP CHRONICLE

VOL. II JEANNETTE, PA., OCTOBER 21, 1922 No. 11

Vacuum Cups in the Argentine



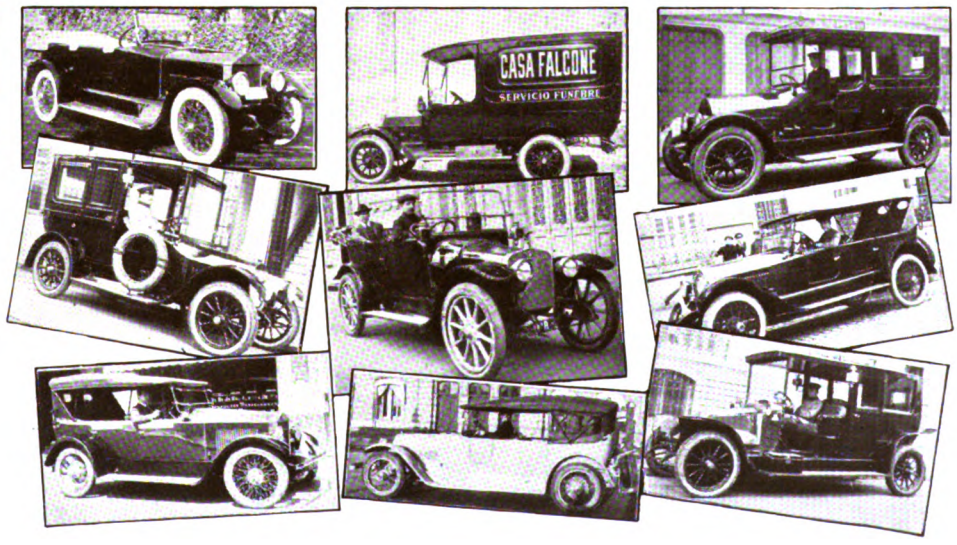
Said to be the largest Vacuum Cup Tire on record. Built for display purposes by our South American distributors, the Compania General de Aceites. The sign reads: "Avoid death. They do not skid."



Left—Car of Señor Sarentino, prominent in the Argentine motion picture industry.

Center—Vacuum Cup equipped car of Hipolito Irlgoyen, President of Argentina.

Right—Minerva, an Argentine army car, used by Lieut.-Col. Vasques, commander of the Argentine Military School.



Below—A few of the hundreds of pleasure and business cars whose tires are popularizing "The Sound of Safety" in the Argentine Republic.

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VACUUM CUP CHRONICLE

Published monthly by the Pennsylvania Rubber Company of America, Inc. Jeannette, Pa.



VOL. II OCTOBER 21, 1922 No. 11

Apropos of Fairs

SEPTEMBER and October mark the period of the year when our friends in the agricultural districts begin to ease off slightly. Coming into October, crops are all in, and our rural co-workers have time to straighten the kinks out of their backs and really play a little.

Then, too, this is the season of the State Fair and its lesser brother, the County Fair. Interest in these institutions, which threatened for a time to be neglected to the point of discontinuance, has swept back in an overwhelming tide.

Yet the fairs of today are not the modest, unpretentious ones we attended in our boyhood days. In this direction also the world has moved forward considerably. In the old days, a ribbon for the prize stallion or an interested knot of spectators around the pen of the heaviest Duroc—in the ladies' annex, deft samples of hand-made embroidery, tempting brown loaves from the culinary department, and jars of luscious pickles and preserves. But the present brand of fair has taken on an immensity not dreamed of in the most aspiring moments of the sponsors. For instance, at the recent Wisconsin State Fair more than $125,000 was distributed as premium offerings. Nothing amateur about this.

While it may seem incongruous to credit this wonderful progress in the conducting of fairs to the automobile, which is in itself anything except an agricultural product, yet we believe we are justified in placing at least a few leaves from the laurel wreath on this capable brow. No attraction can be a success unless lots of people attend, and in assuring attendance the automobile is a prime factor. It gets people there with a maximum of hurry and a minimum of trouble. To go to the County Fair no longer is a task that means the hooking up of the team before daylight and a tired and discouraged return long after nightfall.

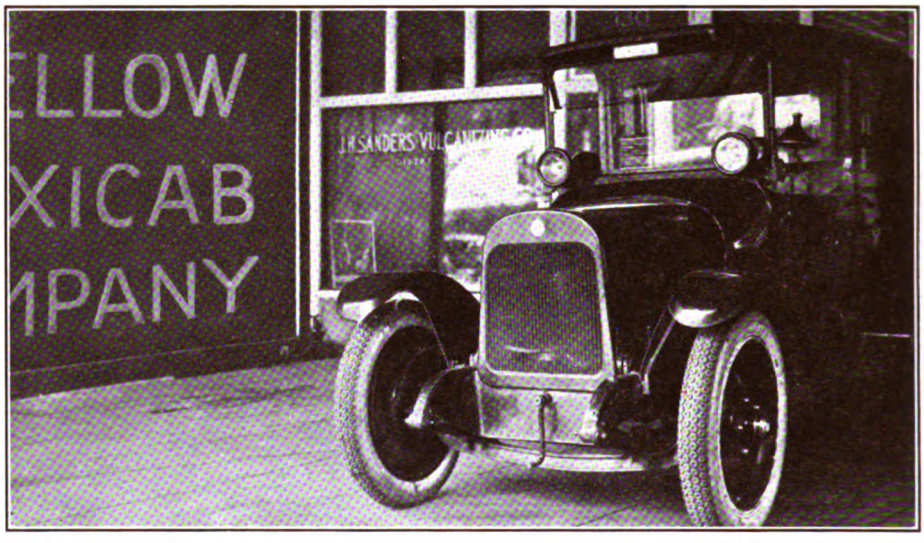
Most of us have seen a panoramic view of a big fair, taken from an airplane. An unbelievable number of machines, with their gleaming tops looking up into the eye of the camera. Looks at first glance like a huge field with thousands of bed spreads laid out on the grass to dry.

Yes, the automobile has solved the problem which is common to all industries, all vocations, all amusements. There is no longer any question of how to get there — the automobile is the answer. Incidentally, it is a pleasure to go to any big event and note the gratifying number of these cars equipped with Vacuum Cup Tires.

Yellow of Atlanta Uses Vacuum Cups

FOLLOWING the shrewd example of many another forward-looking taxicab company, the Yellow Taxicab Company of Atlanta, Ga., has equipped its fleet with Vacuum Cup Tires.

Reports from other concerns of this character never fail to emphasize the outstanding advantages of Vacuum Cup Tires as taxicab equipment. Exceedingly high mileage and faithful performance is the unvarying rule, while *"The Sound of Safety"* means everything it implies in safeguarding long and short trips—an item of paramount importance in public transportation in these days of traffic congestion.



The Atlanta company is no exception to the rule of highest commendation. They tell us that their Vacuum Cup equipment is proving wonderfully successful.

The picture shows one of the fleet with its full Vacuum Cup outfit. In the background is the store of the J. H. Sanders Vulcanizing Company, whose enterprise is responsible for putting Vacuum Cups on these popular taxis.

A Song of Safety

THOSE of us who are proud daddies with growing children sometimes are selfish enough to think that all the native supply of wit and originality has, by some stroke of Providence, been centered in our very own offspring. Such a feeling is a natural one; and yet, in all fairness, we must admit that other daddies' children show occasional flashes of brilliance.

Geoff Pownall, who is the distributor of Vacuum Cup Tires and "Ton Tested" Tubes for New Zealand, naturally glowed with pardonable pride when his daughter Beth recently handed him a slip of paper on which she had indited the following bit of timely verse:

The Vacuum Cup Tire
Is the one for the mire;
It gets a good grip
All through the trip—
I'll say that for a Vacuum Cup Tire.

Pretty good stuff for an eleven year old, we would say.

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A Mobile Ballad

OUR old friend, Shorty Milne, who is at the rudder of the Mobile Tire Works, which is responsible for the hundreds of Vacuum Cup Tires which you see on the streets of Mobile, Ala., has burst into poetry again.

"'Nuff Said"

Said an auto owner named Meyer
On my car there's a Vacuum Cup Tire
Its none but the best
It will weather each test
And nobody called him a liar

Pennsylvania Vacuum Cup Tires and Tubes

Sold Exclusively by

Mobile Tire Works

(SHORTY)

207 St. Michael Street

Shorty surely is a man of parts. He not only sells a lot of tires, but he has the ambition—and the inspiration—to dash off some deathless lyrics from time to time. His latest contribution to the literature of the country appeared in the accompanying newspaper advertisement.

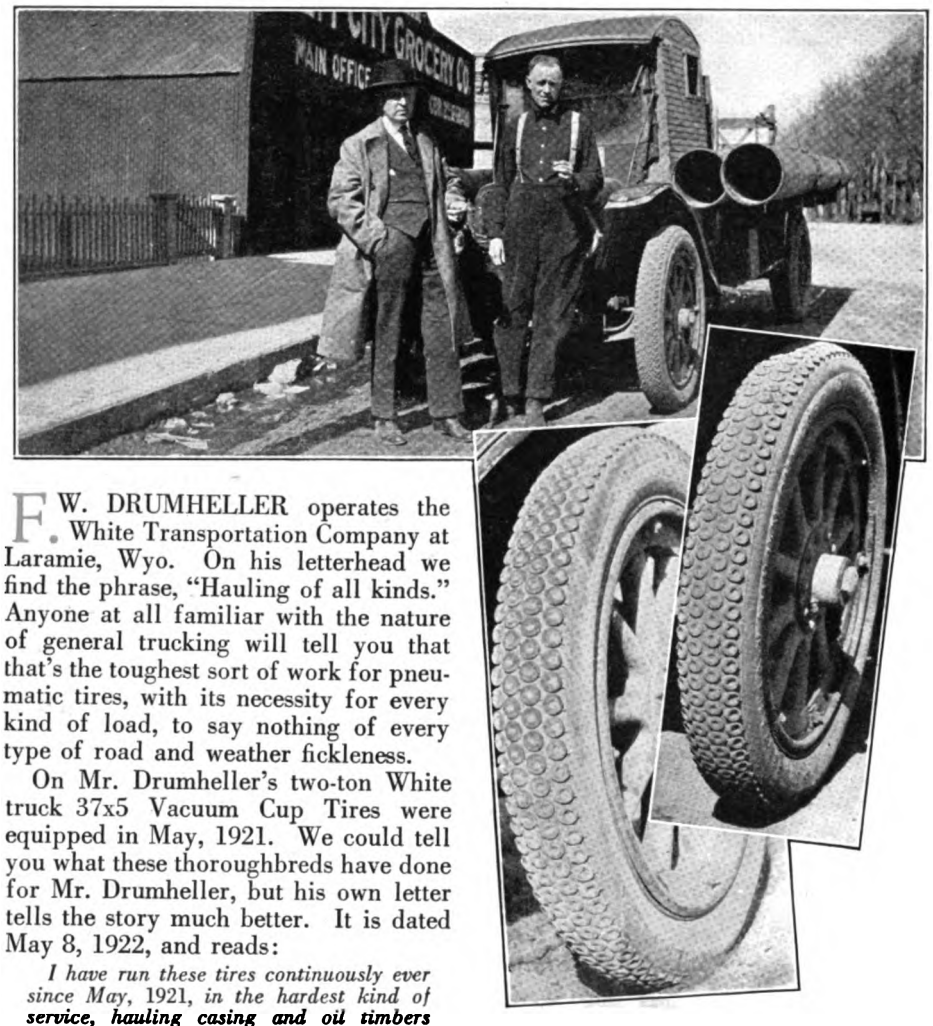
Give the Car a Run

IT indeed would be the height of folly for any dealer to say that Vacuum Cup Tires actually outlast an automobile, yet the Baily Tire Company, whose store is considered Tire Headquarters of Oklahoma City, Okla., might justifiably be excused for making such a statement. They recently received a letter from a customer, D. C. Constant, which reads like this:

Have just purchased two more 35 x 4½ *Vacuum Cup Cords of you. Will say those we put on in April and May,* 1921, *have passed the* 18,600 *mile mark and still running. If my* ———— *holds out, think I will easily get* 20,000 *miles off your tires.*

Using 35 x 4½ tires, you will note that it is one of the big, expensive cars, and yet this satisfied user suggests that the tires might outlast the car!

12,500 Miles and Hardly a Sign of Wear



F. W. DRUMHELLER operates the White Transportation Company at Laramie, Wyo. On his letterhead we find the phrase, "Hauling of all kinds." Anyone at all familiar with the nature of general trucking will tell you that that's the toughest sort of work for pneumatic tires, with its necessity for every kind of load, to say nothing of every type of road and weather fickleness.

On Mr. Drumheller's two-ton White truck 37x5 Vacuum Cup Tires were equipped in May, 1921. We could tell you what these thoroughbreds have done for Mr. Drumheller, but his own letter tells the story much better. It is dated May 8, 1922, and reads:

I have run these tires continuously ever since May, 1921, *in the hardest kind of service, hauling casing and oil timbers from Laramie to Saratoga over mountain roads in all kinds of weather. They have run* 12,500 *miles to date and from all appearances will be good for at least* 5,000 *more. They are the finest truck tires that it has been my experience to use, and I certainly recommend them for truck and car service in any location.*

The big picture shows Mr. Drumheller and a friend and the V. C. equipped White. The smaller pictures are close-ups of the front tires, showing their almost perfect condition after 12,500 miles of rough service.

Well Balanced Trim

In this effective window trim—the more effective because of the absence of crowded appearance—the Illinois Auto Supply Company, Decatur, Ill., utilize to good advantage the lifting feature of the famous "Ton Tested" Tube, from which it derives its name and its guaranteed tensile strength of 1½ tons per square inch.

The manner of festooning the ribbons about the tire is neat and the whole display shows the application of careful thought. Manager G. Brown informs us that exceptional sales results followed the trim.



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Say it with Figures

WERE we to set forth, in cold type, all the nice things that are said of Vacuum Cup Cord Tires, we would surely court the accusation of gross exaggeration or, at least, lack of a proper sense of delicacy. But there are times when these nice outbursts from satisfied users are so whole-souled and spontaneous that we must, for the moment, throw aside the cloak of modesty.



The big Packard car shown in the picture, and happily embellished with the three smiling young men, is operated by George D. Young on a regular schedule between Bellingham and Lynden, Wash. In a letter written on July 18 to Page & Snyder, Vacuum Cup dealers in Bellingham, Mr. Young said:

> *It is my pleasure to give you a written statement as to service given by Vacuum Cup Cords on my Packard stage operating between Bellingham, Wash., and Lynden, Wash.*
>
> *The mileage given by four of your* 37 x 5 *V. C. Cords show* 36,212, 28,308, 27,402, *and* 26,004 *miles respectively. The left front, at* 36,212 *miles, is still in service and in such condition that considerable mileage may yet be given. My present equipment shows every indication of giving a mileage equal to those heretofore used.*
>
> *I use these tires not only because of the exceptional mileage gotten but also for the further reason that they afford additional safety in the carrying of human lives, both of which are exceedingly important, I assure you.*

With some tires the dealer might be a little timid in selling them for such severe duty as called for in this work, but not so with Page & Snyder. They know that Vacuum Cup Tires will deliver cheerfully, and when once the stage is equipped its owner becomes a permanent Vacuum Cup booster.

Mr. Dealer: Have you ordered an ample stock of the new Vacuum Cup RED SQUARE Casings? Possibly no tire ever was accepted by the motorist with as much enthusiasm, and the demand threatens to swamp even our generous facilities.

Motor Supply Cashes in on Testimonials

ORIGINALITY and sales-making are combined in this advertisement of The Motor Supply, Vacuum Cup dealers with stores at Lake Spencer and Spirit Lake, Ia. Owing to the size of the advertisement, it has been necessary to omit parts of it, but the testimonial letters have been retained in order that our dealers may see how Proprietor Blaine Asher cashes in on Vacuum Cup popularity in his territory.

30x3 1-2 Fabric	$11.90
32x4 Fabric	$19.50
32x4 Cord	$29.25
35x5 Cord	$49.30

All other sizes in proportion

Read what these people you know think of them.

We could give you names of hundreds of more who have had equally good results.

I have used Pennsylvania Vacuum Cup Tires for the last two years and find they give me the best service of any tires I have ever used. H. E. GLOVER.

We are using Pennsylvania Vacuum Cup Tires on our Dodge Brothers truck and have driven them 12,000 miles, and they look good for several thousand more.
GIST & Mc DOWELL, Wholesale Poultry Dealers.

I have used Pennsylvania Vacuum Cup Tires and they have proven to me to be the best tires I have ever used both for their wearing qualities and non skid feature. I am glad to recommend them to any one. WOOD BATSON.

We have used Penn Tires and are well satisfied with the service we got from them. Any one wanting good tires will make no mistake in buying them.
J. W. DAVIES & SON.

I never knew what complete tire satisfaction was until I started using Vacuum Cups three years ago.
GEO. BROWN.

We are using a pair of Vacuum Cup Tires on the rear of our Dodge Brothers Commercial car that have run 15,000 miles, and look good for many more. We give these very severe service and these are the only tires that have been able to stand the gaff.
SPENCER WHOLESALE GROCER CO.

The Motor Supply

BLAINE ASHER, PROP.

Spencer Spirit Lake

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Interlocked spokes and steel felloe

The wheel that can be shipped WITHOUT the hub

EVERY spoke in a SCHWARZ wheel is self-supporting. For the interlocked spoke construction makes the spider itself almost as rigid and strong as the completed wheel.

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Add to the sturdiness of this construction, the great strength and rigidity secured in the SCHWARZ Interlocked Spoke Steel Felloe wheel by contracting the felloe upon the spokes under an enormous pressure of 15 tons and you will understand why it is that SCHWARZ wheels are standard equipment on many of the country's highest grade cars and trucks.

America's foremost builders of cars and trucks are invited to write for the blueprints and full particulars.

In addition, Schwarz Wheels with interlocked spokes also are furnished with wood felloes.

THE SCHWARZ WHEEL COMPANY
Frankford, PHILADELPHIA

NOTE THE WOOD WHEELS EVERYWHERE

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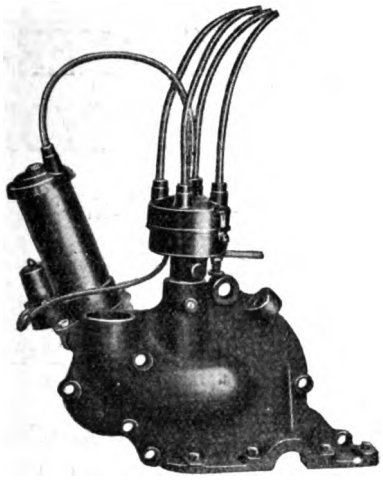
The satisfaction you derive from a body by Fisher is founded on superiorities which are the pride of both makers and sellers of better cars.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT.



BODY by FISHER

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A Real Source of Profit

The rapid increase in the number of electrically equipped Fords is making an ever increasing market for CONNECTICUT IGNITION.

This is the one thing needed to bring Ford performance up to that of bigger and more expensive cars.

The outfit includes the latest Model 18 Igniter, special mounting plate, all necessary high tension cables with cable bracket, special CONNECTICUT QD Terminals for spark plugs, and the

NEW CONNECTICUT 225-Y COIL

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- New power on hills.
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- Elimination of coil troubles.

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Terms and full information on request.

CONNECTICUT TELEPHONE & ELECTRIC COMPANY

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The illustration above shows the self measuring portable pump, for putting DIXON'S 677 into transmission and differentials. This is the quick, clean and convenient means of applying lubricant to the gear boxes. Keeps out dirt, works fast, and measures automatically. Should be in every public garage and service station, in large private garages, and particularly where trucks and busses are served.

DIXON'S 677 is the recognized scientific gear lubricant—lasts longer, makes gears transmit larger percentage of engine power and operate easily and efficiently in hot or cold weather. Now used wherever gear lubrication has been studied and found to be an important factor in the operation of a car truck, or bus.

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Jersey City, N. J. D X N TRADE MARK **Established 1827**

Makers of Quality Lubricants.

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Construction—Installation—Adjustment

By VICTOR W. PAGE, M.E.

THIS is a simple, comprehensive and authoritative treatise for practical men explaining all basic principles pertaining to carburetion, show how liquid fuels are vaporized and turned into gas for operating all types of internal combustion engines intended to operate on vapors of gasoline, kerosene, benzol and alcohol. All leading types of carburetors are described in detail, special attention being given to the forms devised to use the cheaper fuels such as kerosene. Carburetion troubles, fuel system troubles, carburetor repairs and installation, electric primers and economizers, hot spot manifolds and all modern carburetor developments are considered in a thorough manner. Methods of adjusting all types of carburetors are fully discussed as well as suggestions for securing maximum fuel economy and obtaining highest engine power.

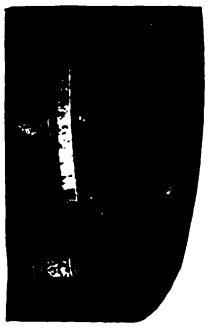
This Book is invaluable to repairmen, as it includes the most complete exposition on kerosene carburetors ever published. The drawings showing carburetor construction are made from accurate engineering designs and show all parts of late types of carburetors.

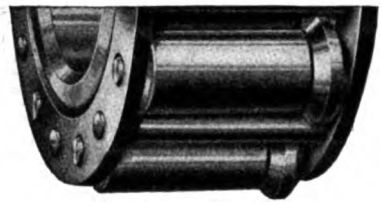
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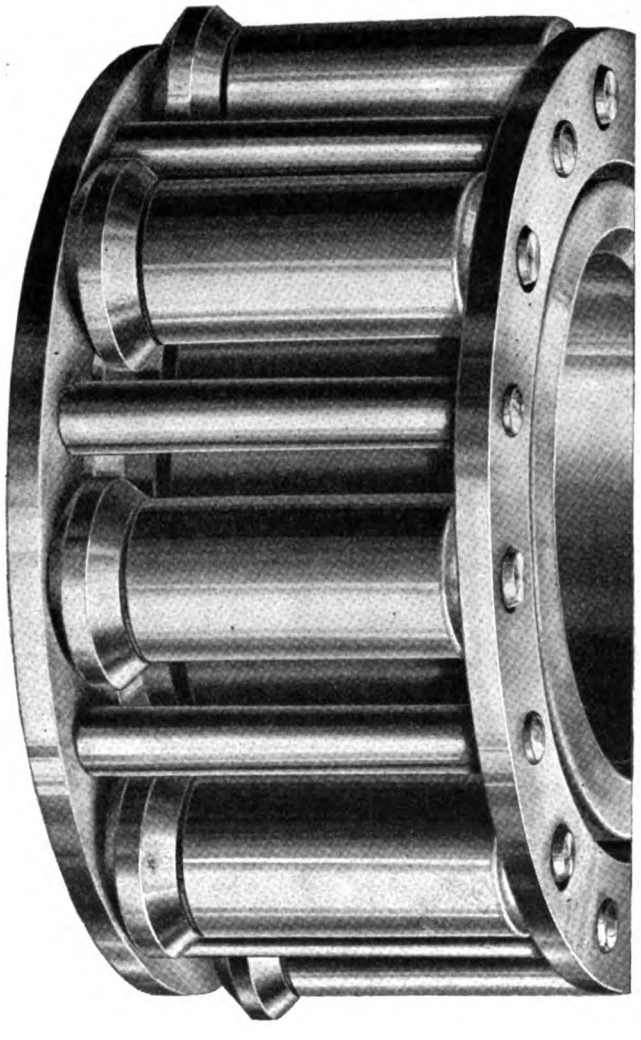


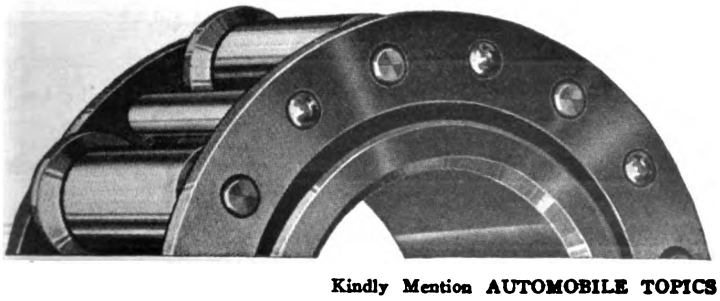
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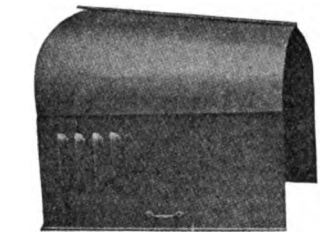
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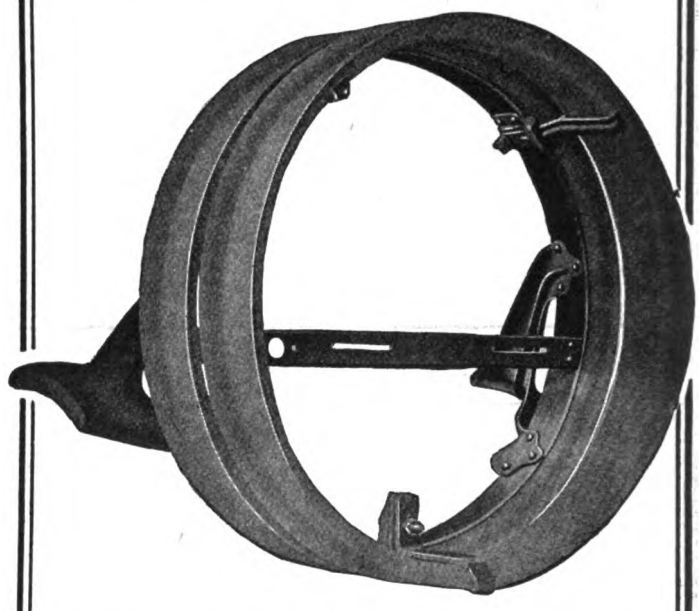
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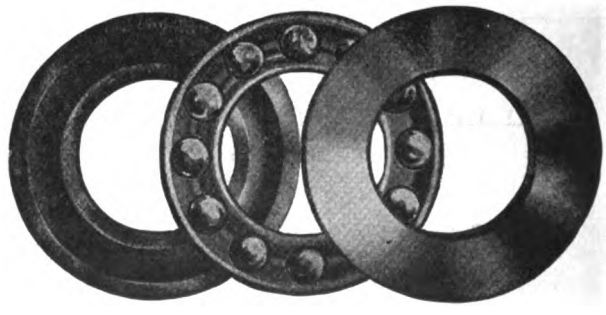
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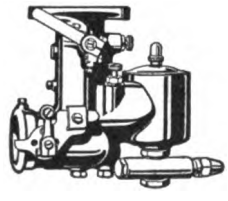
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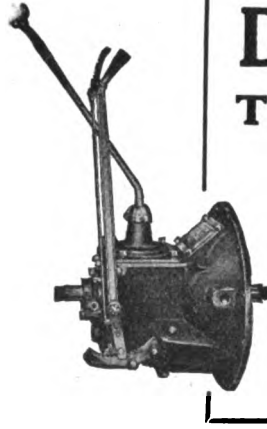
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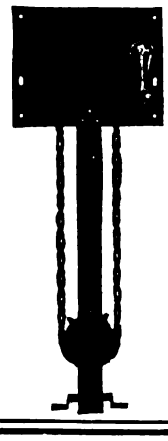


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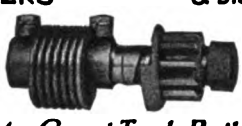
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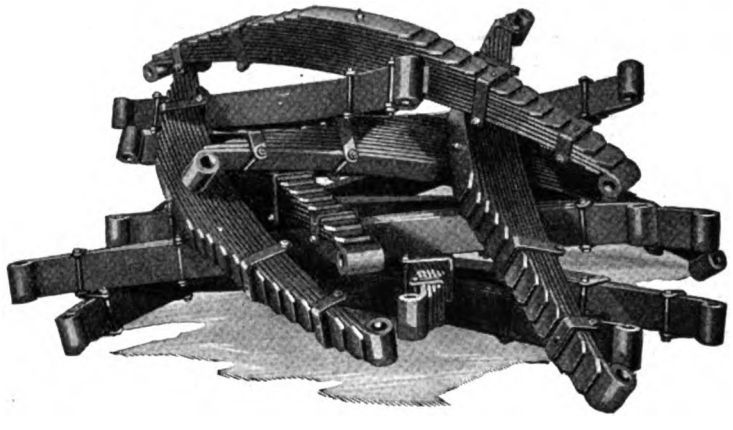


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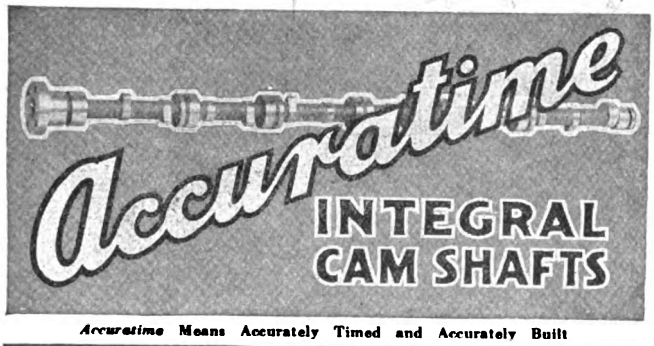
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General Sales Office:
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Accuratime Means Accurately Timed and Accurately Built



INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co. ..972, 973
Ahlberg Bearing Co. 1007
American Bosch Magneto Corp. 991
American Sheet & Tin Plate Co. 1012
Anderson Motor Co. 1011

B

Baker R & L Co. 994
Bassick Manufacturing Co. 1011
Bearings Co. of America.. 1008
Bosch Magneto Corp., American 991
Bowen Products Corp..... 1010
Bower Roller Bearing Co. . 1005
Boyriven Co., A. 1012
Brown-Lipe Chapin Co. ... 1010
Brown-Lipe Gear Co. 1010
Buick Motor Co. 921

C

Carr Co., F. S. 993
Champion Machine & Forging Co. 1006
Chandler Motor Car Co., Back Cover
Clark Equipment Co., Inside Back Cover
Cole Motor Car Co 996
Connecticut Telephone & Electric Co. 1003
Courier Motors Co. 1011
Crosby Co. 1006

D

Detroit Carrier & Manufacturing Co. 1008
Dixon Crucible Co., Joseph 1004
Dodge Brothers 922
Doehler Die-Casting Co. .. 1006
Durston Gear Corp. 1010

E

Earl Motors, Inc. 961
Eclipse Machine Co. 1012
Edmunds & Jones Corp. .. 1008
Essex Motors 910

F

Firestone Tire & Rubber Co. 992
Fisher Body Corp. 1002
Fisk Tire Co., Inc. 917

G

Gabriel Manufacturing Co. 914
General Motors Truck Co. 963
Gilliam Manufacturing Co. 916
Gill Manufacturing Co., 978, 979
Gilmer Co., L. H. 999
Glidden Co. 981
Goodrich Rubber Co., B. F. 923
Goodyear Tire & Rubber Co., Inc. 985
Grant Motor Car Corp. .. 1011
Gurney Ball Bearing Co. . 1011

H

Hayes Wheel Co. 986
Holley Carburetor Co. 1010
Houdaille Co. 988
Hubbell, Inc., Harvey. ... 995
Hyatt Roller Bearing Co. . 989

I

Indiana Parts Co. 983
Interstate Iron & Steel Co. 1008

J

Jorgensen Hood Silencer Co. 1010

Digitized by Google

INDEX TO ADVERTISEMENTS

K

Kelly-Springfield Tire Co. . 1016

L

Laidlaw Co., Inc., Inside Front Cover

Lavine Gear Co. 919

M

Mather Spring Co. 1013

Maxwell Motor Corp. ... 918

Mercer Motors Co. ...974, 975

Merchant & Evans Co. 1009

Metal Stamping Co. 915

Monogram Lens Corp. ... 1011

Moon Motor Car Co., Inc. . 984a

Morse Chain Co. 980

Motor Kleen Corp. 1006

Motor Wheel Corp. 1011

Muskegon Motor Specialties Co. 1014

N

Nash Motors Co. 924

National Twist Drill & Tool Co. 1012

O

Oakland Motor Car Co. .. 968

P

Packard Electric Co. 920

Park Drop Forge Co. 1012

Peerless Motor Car Co. .. 967

Pennsylvania Rubber Co. of America, Inc. 1000a

Perfect Window Regulator Co. 1010

Pierce-Arrow Motor Car Co. 982

Plunkett & Co., Paul. 1015

Pyrene Manufacturing Co. . 984

R

Racine Rubber Co. 965

Rickenbacker Motor Co. .. 990

S

Schwarz Wheel Co. 1001

Sharon Pressed Steel Co. . 1006

Smith Corp., A. O. 1012

Standard Steel Tube Co. . 1014

Stephens Motor Car Co., Inc. 987

Stevens-Duryea, Inc. 1000

Stewart-Warner-Speedometer Corp. 909

Stromberg Motor Devices Co. 1010

Studebaker Corp. of America 913

Stutz Motor Car Co. of America, Inc. 976, 977

T

Ternstedt Manufacturing Co. 940

Timken Roller Bearing Co. 997

U

Union Drawn Steel Co. .. 1009

United States Rubber Co. . 959

W

Warner Gear Co. 1011

Westinghouse Electric & Manufacturing Co. 998

Whitney Manufacturing Co. 1010

Wills & Co., C. H. .Front Cover

Wyman-Gordon 911

Y

York Corrugating Co. 1007

Z

Zenith Carburetor Co. 912

Andrew Carnegie

the canny Scotchman, appreciated, as few men have, the value of expert advice and assistance. He surrounded himself with men who knew the steel business from top to bottom, and with their help built up a vast industry and a tremendous fortune.

Similarly, upon retirement from active business life, and confronted with the problem of investing his profits, he sought the counsel of men skilled in the science of investment. With their help he built an investment structure that can well serve as a model.

Many people make money. A few keep it.

Our business is to help business men invest conservatively.

Particulars on request

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

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KELLY KATS
TRADE MARK REG.
THE TIRES WITH NINE LIVES

There is no Caterpillar tire but the one that Kelly makes

YOU have doubtless noticed the tremendous popularity of the CATERPILLAR cushion tire which is now used exclusively on scores of big truck fleets and hundreds of privately owned trucks throughout the country.

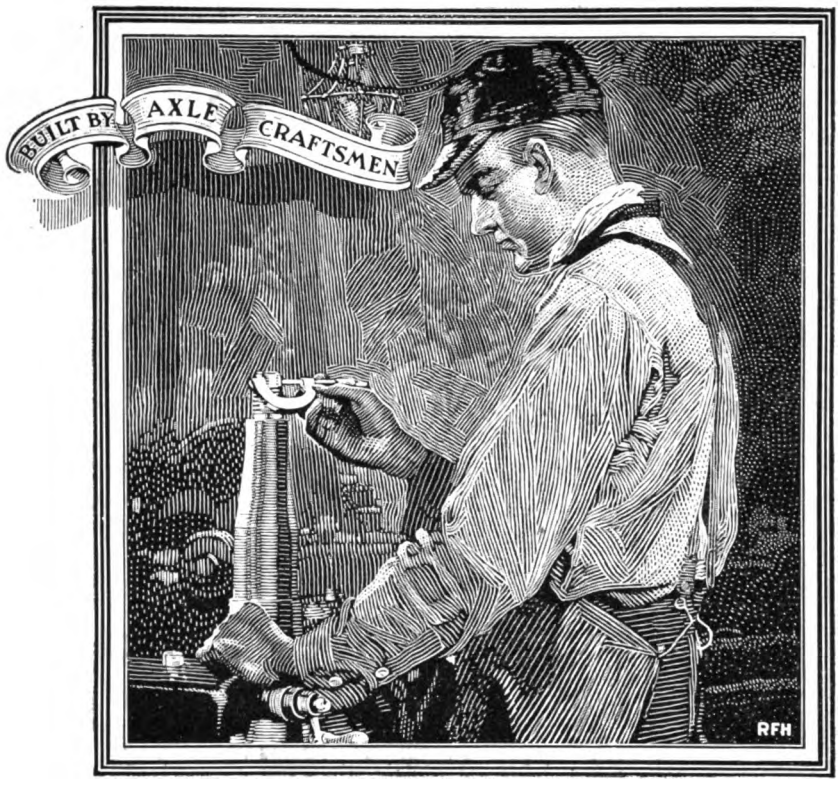
The reason for this popularity is that the CATERPILLAR offers a combination of traction, resiliency and mileage such as no other tire offers—at a price which makes its purchase a real economy.

The CATERPILLAR tire is a profitable tire for dealers to sell as well as for truck owners to use. Why not write us and find out if you can secure the agency in your locality?

Kelly-Springfield Tire Company

GENERAL SALES DEPARTMENT 250 WEST 57th STREET, NEW YORK

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Clark Axles are thoroughly tested. Every part is subjected to minute inspection during manufacture and every complete axle is tested before shipping.

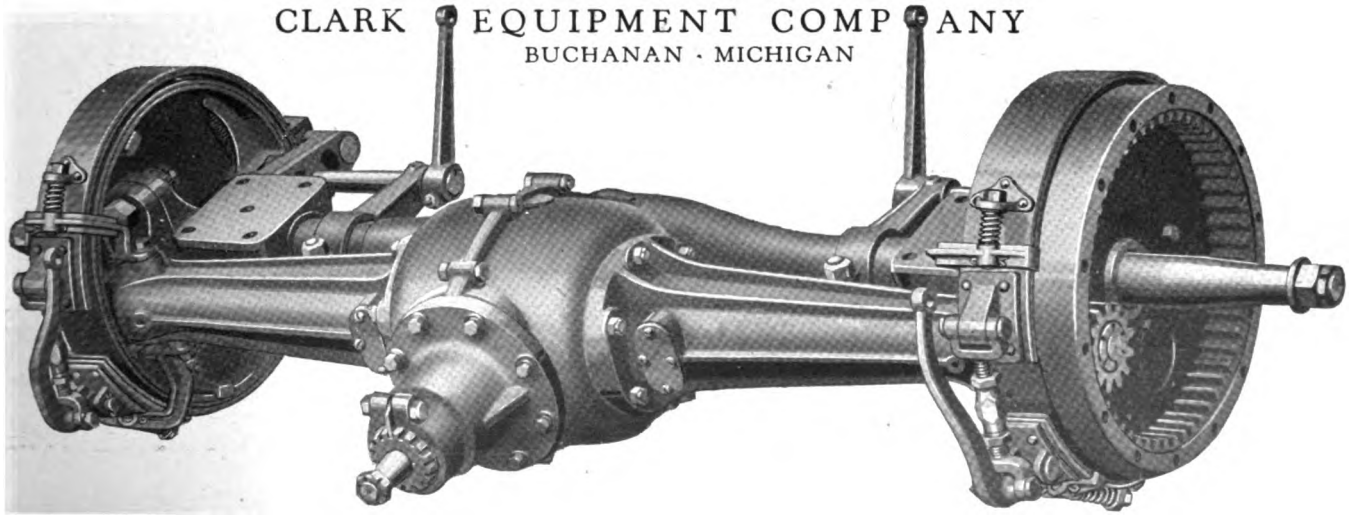
CLARK AXLES
are good axles

Users of Clark Axles are successful truck builders. Clark Axles are not found on "orphan" trucks.

Axle Models	Plants
5 Internal Gear	Buchanan, Michigan
3 Bevel Gear	Berrien Springs, Michigan
3 Special Motor Bus	Battle Creek Michigan

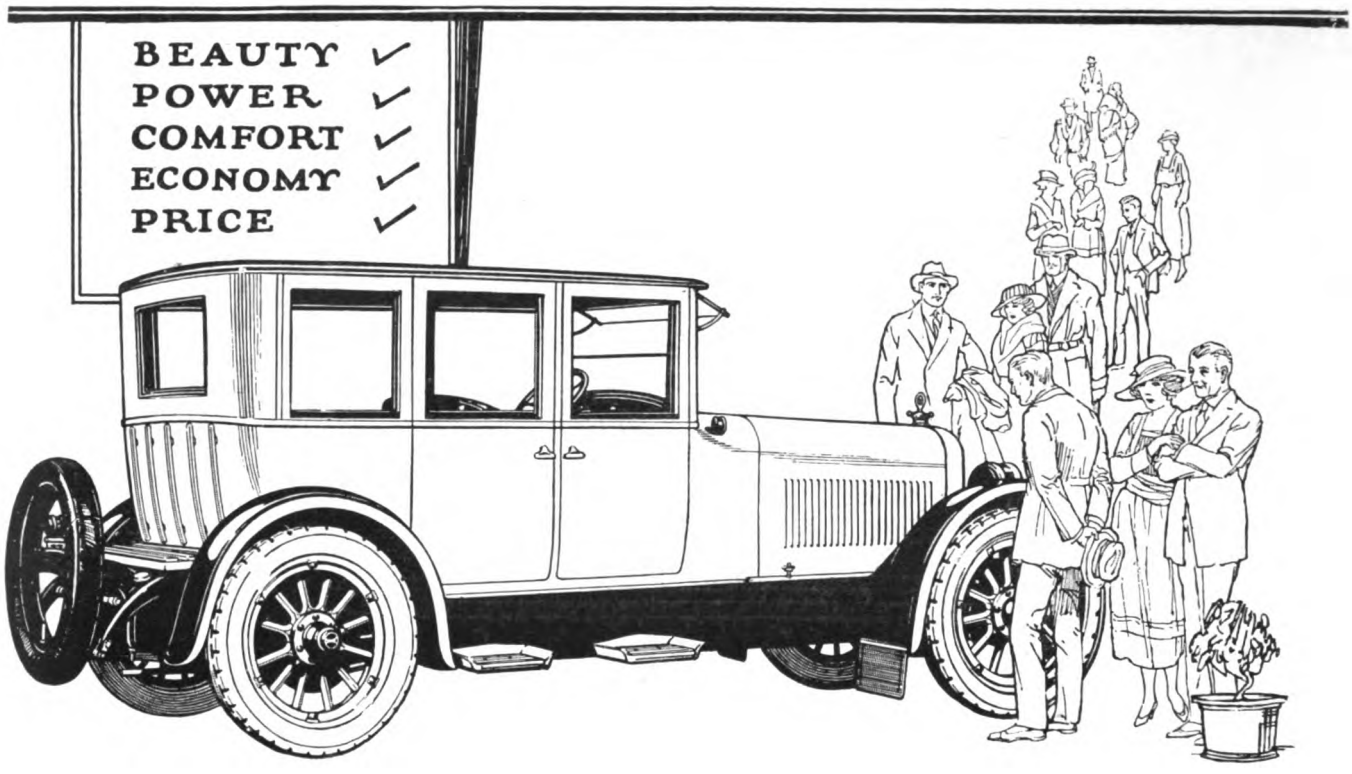
Also Builders of Clark Steel Wheels for Trucks

CLARK EQUIPMENT COMPANY
BUCHANAN · MICHIGAN



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Chandler Has What Dealers Want



DEALERS know what sells cars—and what cars sell.

No dealer anywhere needs to be told the reasons for Chandler Six success this year.

If a dealer can make a profit selling cars of restricted appeal, what couldn't such a dealer do with Chandler Six?

How do you know your territory is permanently closed? Find out.

$1495 TO $2375

All Prices F. O. B. Cleveland

THE CHANDLER MOTOR CAR CO., CLEVELAND

Export Dept: 1819 Broadway, New York City Cable Address "CHANMOTOR"

CHANDLER SIX

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 11 | PUBLISHED WEEKLY NEW YORK, OCTOBER 28, 1922 | FIFTEEN CENTS A $3.00 A

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.

A dealer who sold one hundred and fifty cars of one make lost money.

But he happened to have the Jordan and sold forty of these. His profits on the Jordan saved his business.

I have a letter which covers about four pages which will tell you all the reasons for this.

If you are a dealer, and you expect to continue to be a dealer, you may be progressive enough to want a copy of this letter. Just send me a postal or a telegram and you will get the letter.

Edward S. Jordan

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MARMON

The Foremost Fine Car



Why Marmon Sales Increase

WORD has spread through motordom that of all high-grade cars, the new Marmons are the most dependable and economical. Owners are telling their friends.

A recent survey made throughout the country of hundreds of Marmons in service shows the average monthly maintenance cost to be only $4.35. This is final evidence of the sturdiness and dependability of the Marmons of today.

For years everyone has conceded Marmon first place in performance, comfort and beauty. Now all concede its dependability and economy.

Thus the goodness of the Marmon, thus its superiority is being recorded amongst motorists themselves, insuring greater name and a more permanent fame than claims could ever build.

To Marmon dealers all this means added opportunity, increased sales. This is evidenced throughout the land by the increased number of Marmons in service.

NORDYKE & MARMON COMPANY *Established 1851* INDIANAPOLIS

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ANDERSON AUTOMOBILE SPRING LUBRICATOR

Spats for Springs

Do You Realize the Demand for Spring Covers?

Four out of eight of the better class cars are now equipped with spring covers. These owners appreciate the necessity as well as the convenience of automatic lubrication and protection for the springs of their cars.

Many of these car owners have bought Anderson covers because they preferred a cover that would require no attention for at least two years and that would not rattle, rust or squeak. Others have bought covers that may be satisfactory for a time but these owners too will eventually buy Andersons.

You can sell Anderson covers to every customer you have once you show them what these covers mean in protection against rust, dirt and water; how they keep the springs perpetually bathed in grease. Easy to install, no spring-clips to remove, no periodic refilling of oil or grease once they are attached.

Car dealers all over the country are sending out new cars equipped with Andersons—it pays in dollars and cents and in customer's good will. Our nearest distributor will give you the details of our selling plan as well as the names of some of the largest dealers in the country who sell Andersons—the one sure, dependable cover.

ANDERSON SPRING LUBRICATOR CO., Inc.

Factory and Offices

1928 Parkway at Spring St.

Everett Sta. (49) Boston, Mass.

DISTRIBUTORS

Baltimore, Md.
E. C. Equipment Co.
1914 Maryland Ave.

Boston, Mass.
Cadillac Auto Co. of Boston
70 Brookline Ave.

Chicago, Ill.
Courtesy Service & Sales Co.
1302 So. Wabash Ave.

Cleveland, Ohio
United Parts Co.
2350 Euclid Ave.

Detroit, Mich.
S. C. S. Auto Accessories Sales
243 Owen Ave.

Hartford, Conn.
Phelps & Co.
344 Pearl St.

Indianapolis, Ind.
Wilcox Sales Co.
646 North Meridian St.

Jacksonville, Fla.
Lovejoy Sales Co.
902 Main St.

Kansas City, Mo.
United Motor Products Co.
30th & McGee Trafficway

Los Angeles, Cal.
Lovejoy Pacific Co.
132 West 16th St.

Milwaukee, Wis.
H. M. Eldred
130 Oneida St.

New Orleans, La.
Triple XXX Inc.
899 Carondelet St.

New York, N. Y.
Clark Equipment Co.
631 W. 57th St.

Philadelphia, Pa.
Ross Walton Co.
312 North Broad St.

Pittsburg, Pa.
Lovejoy Sales Co.
231 Spahr St.

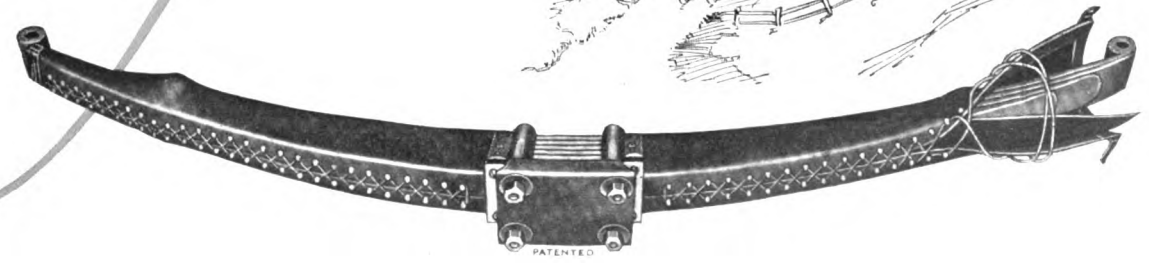
Salt Lake City, Utah
Alex. S. Sims
49 Bransford St.

Scranton, Pa.
Scranton Motor Car Co.
428 Dix Court

St. Louis, Mo.
Lovejoy Sales Co.
2807 Locust St.

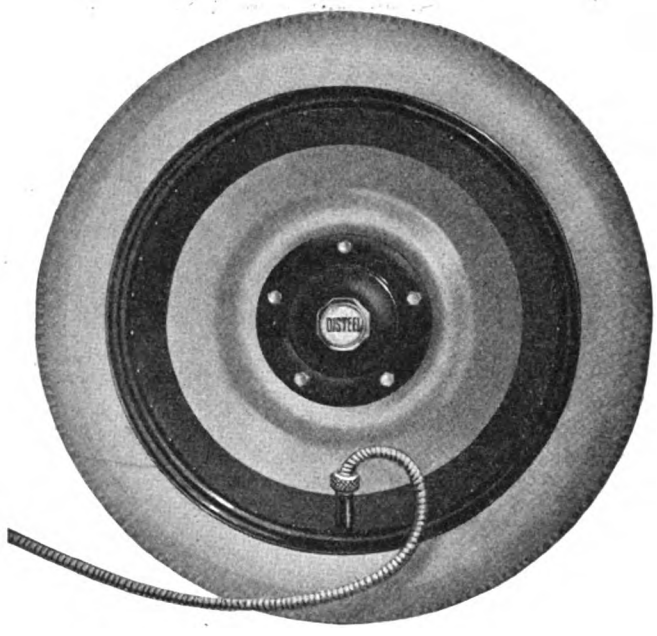
SPATS for SPRINGS
ANDERSON AUTOMOBILE SPRING LUBRICATOR
Trade Mark





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They Run True



WHEN you motor behind a car equipped with Disteel Wheels you cannot fail to comment on the absolutely flat plane in which the Disteels are turning.

This faithfulness to true is a universal Disteel characteristic—a direct heritage from this Company's years of experiment and pioneering in wheels of steel disk construction.

For a Disteel is so designed and built that, for its entire life, it can never run otherwise than absolutely true to its axle bearings—a characteristic possible of attainment only to a wheel independent of need for spoke adjustment.

Longer—far longer—wear from tires, and a confidence that comes only from machinery in perfect trim, are the rewards of the motorist whose car rolls on Disteels.

These benefits and others, practical and exclusive, are the sound foundation for that often-heard statement, "There is no adequate substitute for genuine Disteel Wheels."

Exclusive Manufacturers

DETROIT PRESSED STEEL COMPANY

6660 Mount Elliott Street Detroit, U. S. A.

DISTRIBUTORS:

189 Academy Street, LONG ISLAND CITY, N. Y.
732 So. Michigan Avenue, CHICAGO
662 Beacon Street, BOSTON
865 Post Street, SAN FRANCISCO

DISTEEL WHEELS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCT. 28, 1922 No. 11

TABLE OF CONTENTS

Educators Confer on Highway Needs..... 1033
Ford Cut to Create Millions of Owners 1033
D. A. McConnell Resigns as Klaxon Head 1034
Columbia Expands Its Foreign Fields Staff ... 1034
Amorous Made Manager of N. Y. Locomobile.. 1034
Peerless Production Highest in 21 Years 1035
20,000 Studebakers for Fourth Quarter 1035
M. A. M. A. Reports Seasonal Sales Decline .. 1035
Oakland Has Biggest Month in September ... 1036
Packard Export Trade Continues to Expand .. 1036
Durant to Build in Flint for Star Car 1037
Overland Is Having Its Best October 1037
Firestone Net Set at Over $7,000,000 1038
Holders of Common in General Motors Increase 1038
Price Control Suit Interests Industry 1039
Hudson Opens Depot for European Trade ... 1039
New American Motors Takes Assets of Old .. 1039
Standardization of Traffic Laws Urged 1040
Baltimore Dealers Adopt Boston Plan 1041
S. A. E. Production Meeting Significant 1041
Truck Business Due for Prosperity Era 1042
Adopts Rental Plan in Trailer Selling 1042
Kettering Sees Engine Still in Its Infancy 1042
General Tire Acts to Double Output 1043
Seiberling Upheld in Big Patent Suit 1043
British Motorists Move for New Tax 1044
South Buying Cars in Greater Numbers 1045
Better Business in South Is Predicted 1045
Consumption of Gas Sets New High Mark ... 1046
Highways Represent Half of State Debts 1047
Mitchell Completes "Million Mile" Test 1047

FEATURES IN THIS ISSUE

Lubricating Systems May Be Improved 1051
By F. R. Porter
House the Curb-Parked Car—We Need Room.. 1053
By Harvey D. Dunn
Selling Goods at Retail 1055
Be Your Own Press Agent, Scouten Advises .. 1056
Pitching Camp on the Prospect's Doorstep ... 1057
New Models Offered By Car Makers 1058
New in Motor Bus and Truck Fields 1060
Order in the Store Brings Orders to the Store 1062
In the Field of Accessories 1063
With the Wholesalers and Retailers 1065
Calendar 1072
Table of Passenger Car Selling Points (copyrighted) 1077

Alphabetical Index to Advertisers 1110

"NORMA"
PRECISION
BALL BEARINGS

To sacrifice quality to price—in any part of a car, truck or tractor—is as fatal to satisfactory service as to place an incapable man in a highly efficient organization. Super-quality in one part cannot make up for lack of quality in another part.

The absolute uniformity of "NORMA" quality has gained for "NORMA" Precision Bearings their position as the recognized standards for magnetos and lighting generators among manufacturers who place performance before price.

See that your electrical apparatus is "NORMA" equipped.



THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Successfully Supplying the Demand

On commercial vehicles today the widespread use of Remy equipment is not the result of favorable circumstances but the logical recognition of a good product.

Long ago we anticipated the need of complete starting, lighting and ignition systems for motor trucks and after carefully studying the requirements we built accordingly.

A product built right will perform right and upon this principle we are successfully supplying the electrical equipment demands of many leading truck builders.

REMY Equipped

TRUCKS

BROCKWAY
FEDERAL
G. M. C.
KISSEL
OGDEN
RUGGLES
SERVICE
STEWART
STOUGTON
TRANSPORT
UNITED

CARS

ANDERSON
APPERSON
AUBURN
CHALMERS
CHEVROLET
ELGIN
JEWETT
KISSEL
MAXWELL
MITCHELL
OAKLAND
OLDSMOBILE
PAIGE
STUDEBAKER
STUTZ
VELIE

REMY

STARTING LIGHTING IGNITION SYSTEMS

REMY ELECTRIC COMPANY ANDERSON, INDIANA

PRODUCTS OF REMY CONSTANT PERFORMANCE

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Studebaker

The Reason for Greater Value

If Studebaker built nothing but the Big-Six, the Studebaker dealer would never be able to offer this extraordinary car at $1650.

The expense of manufacturing and marketing Studebaker cars is shared by three distinct models, the Light-Six, the Special-Six and the Big-Six. This means one executive management, one manufacturing organization, and one selling cost—instead of three separate organizations.

We know of no car, even at twice its price, that will give greater satisfaction in endurance, appearance, comfort, serviceability and the refinements.

In everything that goes to make up the buyer's appreciation of a car, the Big-Six ranks with the finest built. But it distinctly *does not* rank with them in price!

This basic reason for Big-Six value is responsible in the same way for the greater intrinsic values represented by the Special-Six at $1275 and the Light-Six at $975.

Giving the most for the money is traditional with Studebaker. For 70 years the name Studebaker has been a synonym for honest values and fair prices.

With a complete line of cars of such high quality and fair prices it is no wonder that the Studebaker franchise has become the most desirable in the industry.

The Determining Factor

The theory that high prices necessarily mean fine cars is fallacious, simply because prices are not based upon intrinsic values but upon production costs of individual makers, which vary widely according to their ability and manufacturing facilities.

Obviously, high costs of production, inevitably arising from incompetence or inadequate manufacturing facilities, mean not only high prices but actually inferior cars.

The materials and workmanship in Studebaker Cars measure up to the highest standards known to the automobile industry.

With $80,000,000 of actual net assets, including $38,000,000 of plant facilities, and seventy years' manufacturing experience, Studebaker stands unsurpassed in ability and resources to manufacture *economically* and give the greatest *intrinsic value* possible for a given price.

MODELS AND PRICES—*f. o. b. factories*

LIGHT-SIX *5-Pass., 112" W. B., 40 H. P.*		SPECIAL-SIX *5-Pass., 119" W. B., 50 H. P.*		BIG-SIX *7-Pass., 126" W. B., 60 H. P.*	
Touring	$ 975	Touring	$1275	Touring	$1650
Roadster (3-Pass.)	975	Roadster (2-Pass.)	1250	Speedster (4-Pass.)	1785
Coupe-Roadster (2-Pass.)	1225	Roadster (4-Pass.)	1275	Coupe (4-Pass.)	2275
Sedan	1550	Coupe (4-Pass.)	1875	Coupe (5-Pass.)	2375
		Sedan	2050	Sedan	2475
				Sedan (Special)	2650

Cord Tires Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
SOUTH BEND, INDIANA

THIS IS A STUDEBAKER YEAR

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LEADERSHIP
Quality-Price-Service

Measured by mileage covered and tonnage hauled, Republic low cost transportation is without parallel.

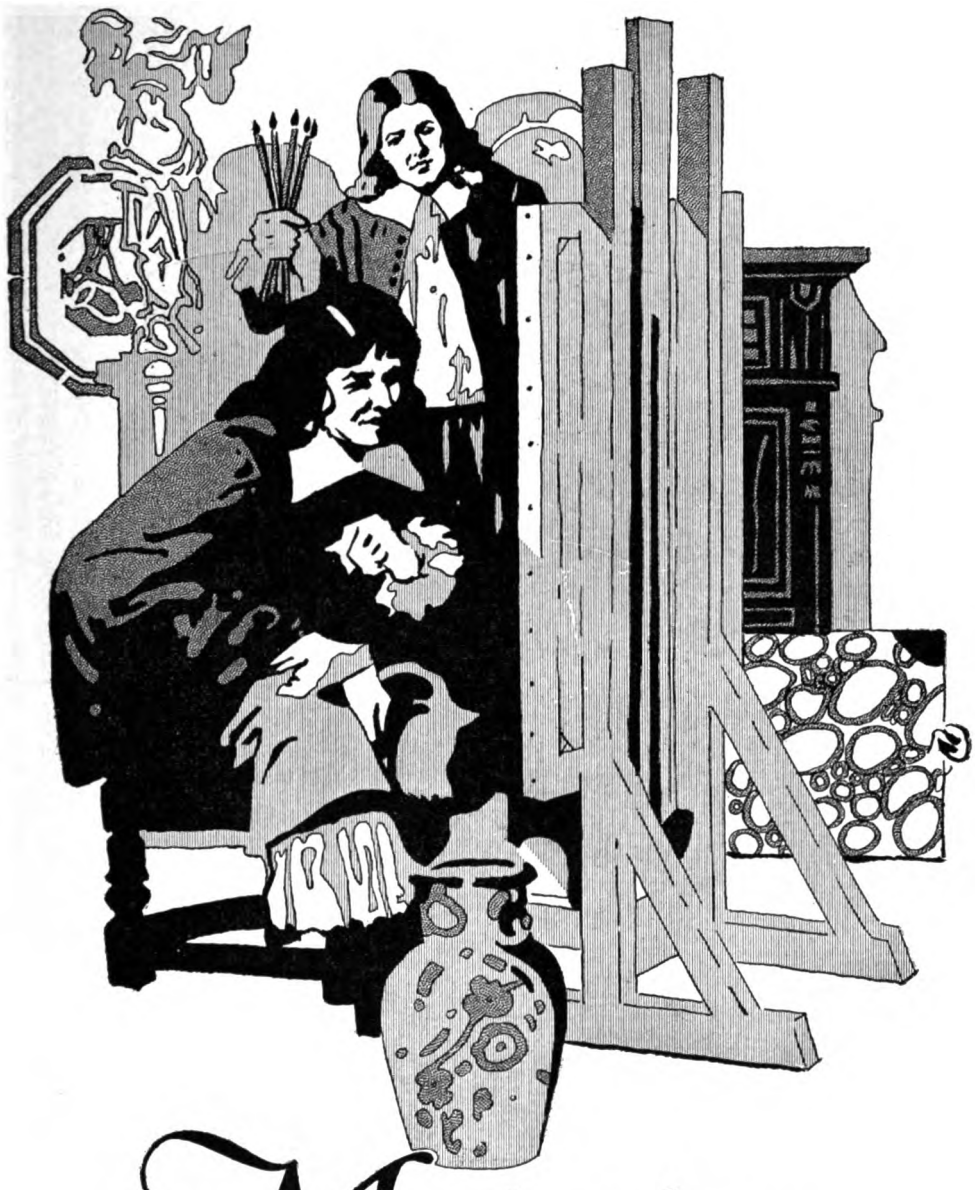
REPUBLIC TRUCK SALES CORPORATION
ALMA, MICH.

REPUBLIC

Republic has more trucks in use than any other exclusive truck manufacturer

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Masterpiece

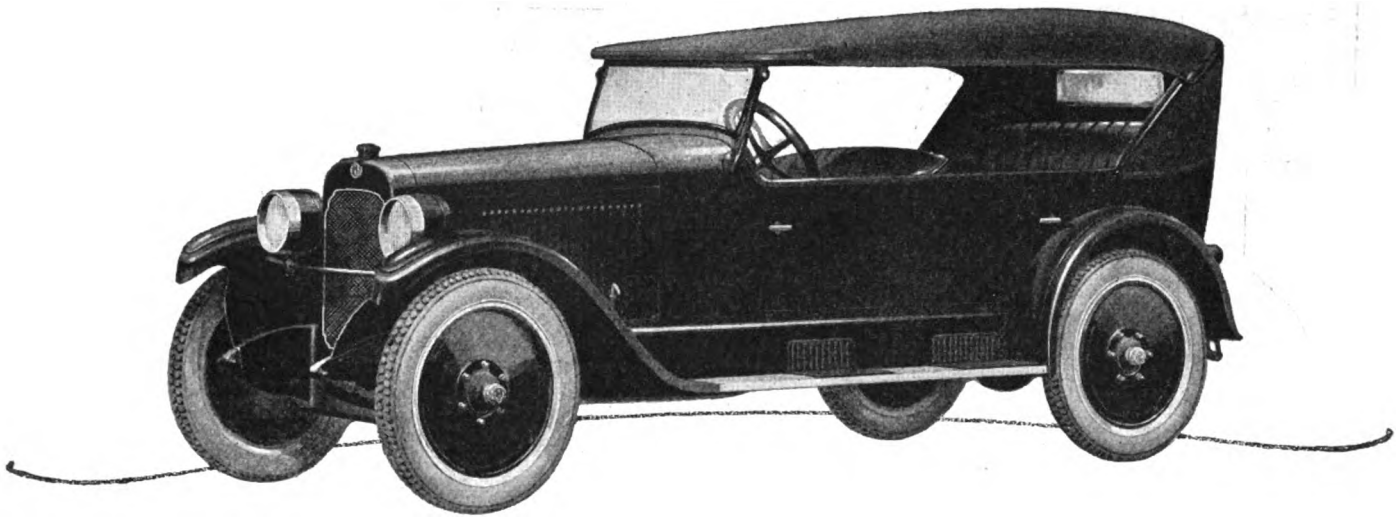
The mimer is ever to be at disadvantage; let him strive never so earnestly to counterpart the masterpiece—the master is busied in surpassing his own handiwork. So we have never been content with "good enough."

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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The beauty of the Chalmers Six in both line and finish singles it out in any company.

The general admiration aroused by its grace and completeness contributes greatly to the esteem in which it is held wherever fine cars are known best.

Coupled with its handsome appearance is six cylinder power developed to new heights of fine performance.

You owe it to yourself to have those facts about the Chalmers Six demonstrated to you.

Chalmers Six Prices

5-Pass. Touring Car - $1185 Roadster - - - - - $1185
7-Pass. Touring Car - 1345 Coupe - - - - - - 1595

Prices f. o. b. Detroit—Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada Limited, Windsor, Ontario

The CHALMERS SIX

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Red-Tops Run Record Mileage on Jitneys

The Union Garage has sold Red-Tops successfully for six years—always with an annual increase. Now, Red-Tops set up record mileage on jitneys in Woonsocket, and as a result Mr. Mailloux expects a hundred per cent increase. His letter follows:

UNION GARAGE
G. A. Mailloux, Prop.

Fisk Tire Company, Inc.,
Providence,
Rhode Island.

Woonsocket, R. I., October 16, 1922.

Gentlemen:

I have been selling your Red-Top Tires for the last six years and we have yet to find a dissatisfied customer and we have sold many Red-Tops.

I can also show records of Red-Tops on Jitneys in this city with records of most wonderful satisfaction and from inquiries I expect to double my sales in 1923.

Yours truly,
UNION GARAGE.
(Signed) G. A. Mailloux.

Such mileages on a jitney bus—hard driven to get every nickel, overloaded more than half the time, traveling all sorts of city and outlying roads—are the best evidence of the downright extra value of the extra ply of fabric and the extra heavy tread of the Red-Top.

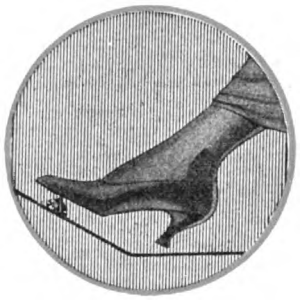
And they give the real reason why you should sell Red-Tops.

There's a Fisk Tire of extra value for every car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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Built With Number

Auto

Starting, Lighting

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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Fewer Of Parts

-Lite

& Ignition

THE ELECTRIC AUTO-LITE COMPANY

Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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HAYES

THE WORLD'S BEST — THEY STAND THE TEST

Trade HAYES Mark

WOOD, WIRE & STEEL WHEELS



The *Standardized* Wheel

From the infancy of the automotive industry the Hayes Wheel Company has been making the best wheels possible to produce.

No matter what type of wheel is required, wood, wire or steel, Hayes builds it and builds it as fine as long specialization can accomplish. The industry has not only standardized on Hayes wheels, but Hayes wheels have been standardized for the industry—the rims, the lugs, the bolts, the hubs, are interchangeable for different types of Hayes wheels.

To manufacturers or motorists it is a satisfaction to have the advantage of a wheel that is not only made better, but that has the additional advantage of interchangeability of a standardized line, which materially reduces manufacturing costs. These savings are passed on to the ultimate consumer.

HAYES WHEEL COMPANY *of New York,* JACKSON, MICHIGAN

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried in Principal Cities

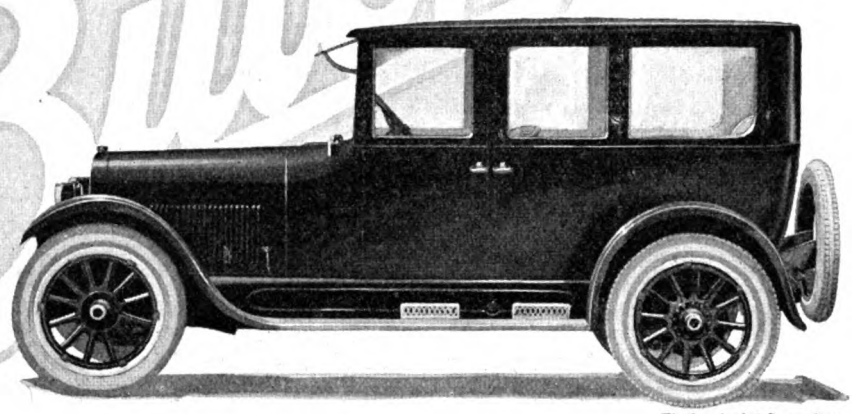
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WHEELS

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The American Magazine

VALVE-IN-HEAD Buick



The Standard of Comparison

A Sedan For The Family

Buick Six-Cylinder Five Passenger—$1985

Beautiful to look upon, the Buick five-passenger six cylinder sedan is equally comfortable to ride in and to drive. Broad doors open to both compartments of the Fisher-built body with its wide and deeply upholstered seats and luxurious interior trimmings.

In the driving compartment, every convenience has been carefully provided for. The steering column is set at an easy angle, the gear shift lever is long and fits the hand, and on the instrument board are distinc-

Buick Performance Sells Buick Cars

The unvaryingly fine performance of Buick cars is constantly at work selling more Buicks for Buick dealers. By praising Buick to their friends, Buick owners continually make other sales for dealers everywhere. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS SEDAN

Exceptional interest has been aroused by the practical arrangement of the interior.

The entire rear compartment furnishings—seat, seat cushions, back cushions, seat frame, foot rest, carpet and all—can be removed from the car in a few moments.

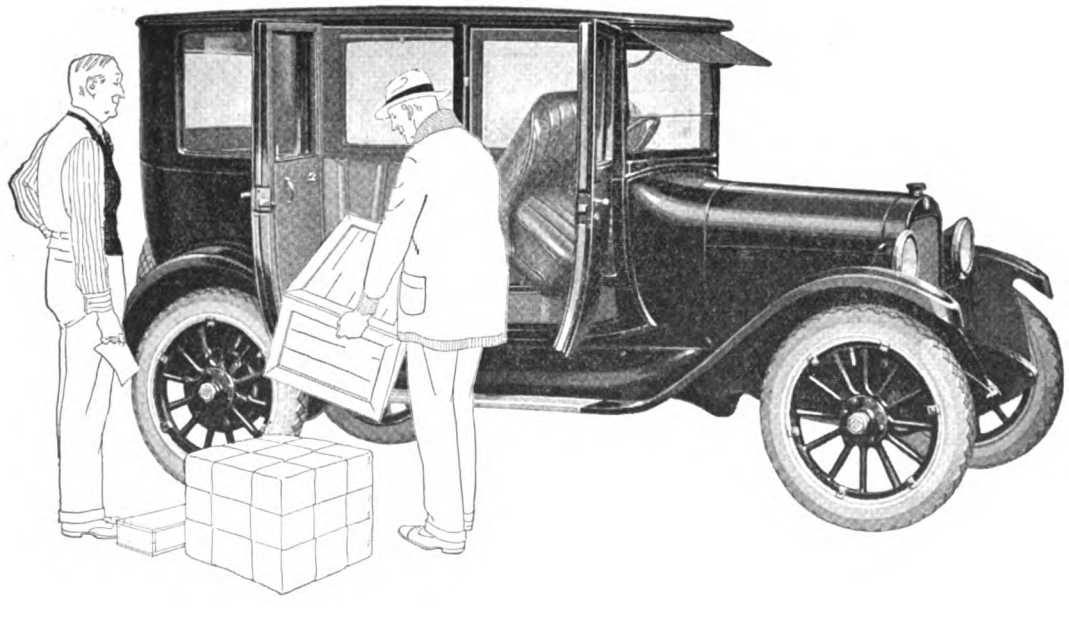
The front seat is then tilted forward, giving a gross clearance of twenty-two inches through the rear doors.

In this way, a space of sixty-four cubic feet in the rear compartment is made available for loading.

When the rear seat fixtures are back in place, the interior is complete and attractive in appearance. Its convertibility is not apparent to the eye.

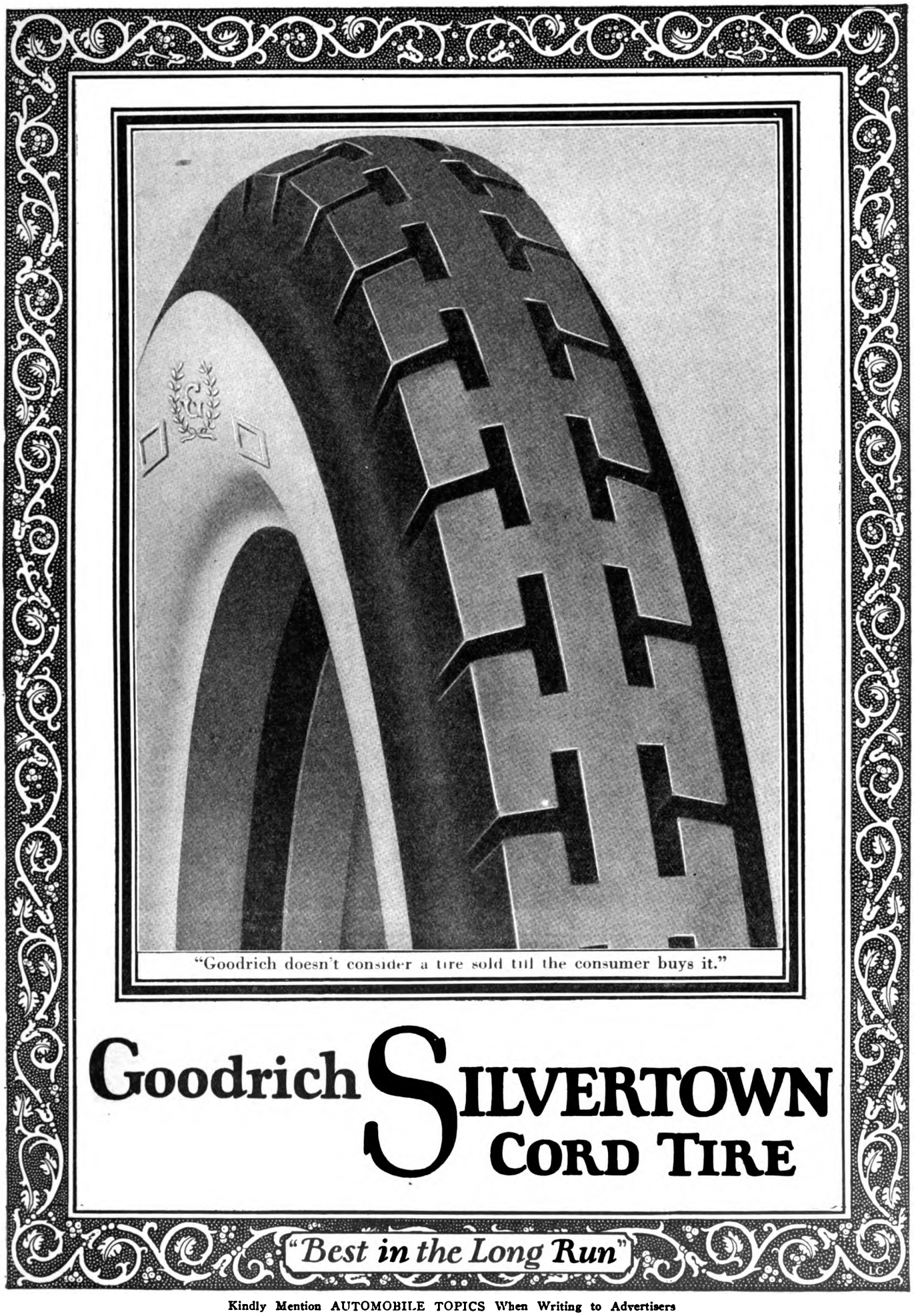
Business men, farmers, salesmen, campers, tourists and everyone who has occasion, at times, to carry bulky articles or luggage, will readily appreciate the great utility of this construction.

The Price is $1195 f. o. b. Detroit



Patents Pending

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Nash Leads the World in Motor Car Value

Think of the Closed Car Advantage Nash Dealers Have

In these days of hard-fought competition automobile dealers with a restricted line are awakening to the great sales advantage of a full line of enclosed cars.

Every Nash dealer enjoys a broad sales market because he can reach both the four cylinder and six cylinder prospects with a wide variety of models.

Furthermore, the price range runs from as low as $1195 on the Cab to $2190 on the 7-passenger Six Sedan.

Among the four cylinder closed models is the Cab for two passengers at $1195; the Carriole which has proved a mighty popular type at $1275; the Coupe at $1385; and the 5-passenger Sedan at $1545.

Included in the Six group is the Coupe at $1890; the new 5-passenger Sedan at $2040; and the 7-passenger Sedan at $2190.

We are going to allot some fine territories very shortly. Write at once.

Reduced Prices

SIXES		FOURS	
5-Passenger Touring	$1240	5-Passenger Touring	$ 935
7-Passenger Touring	1390	Roadster	915
7-Passenger Sedan	2190	Coupe	1385
5-Passenger Sedan	2040	5-Passenger Sedan	1545
4-Passenger Coupe	1890	2-Passenger Cab (enclosed)	1195
Roadster	1210	5-Passenger Carriole (enclosed)	1275
Sport Model	1645		

(f. o. b. factory)

The Nash Continuous Contract—Not Annual—Protects Dealers Against Decline in Price

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

Nash Leads the World in Motor Car Value (737

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, OCTOBER 28, 1922 No. 11

EDUCATORS CONFER ON HIGHWAY NEEDS

Five Hundred Professional Men and Engineers Gather at Second National Conference—Need for Trained Men Emphasized and Plans Discussed.

(Washington Correspondence)

Five hundred leading educators, professional men and engineers gathered at the New Willard Hotel, Washington, October 26, for the second national conference on education for highway engineering and highway transport, under the auspices of the Highway Education Board, heard heartening news from the automobile industry. The meeting was full of zest and the spirited discussions and eager interest of those present bespoke a wide-spread national awakening to the importance of the questions considered.

After being told of the vital necessity of both good roads and trained highway engineers to construct and maintain them, by Major-General Lansing H. Beach, chief of engineers of the War Department; and the essential importance of educating the public to the real significance of highway legislation by Thomas H. MacDonald, chief, Bureau of Public Roads, the conference learned from C. C. Hanch that the automobile industry is actually engaged in working out a plan to absorb promising graduates in highway engineering.

"Textbooks must supplement overalls," Hanch said. "The greatest cause of failure among college graduates in the automobile industry is the disinclination to get greasy on the job. By next June graduation the industry hopes to have working a plan to keep in touch with available graduate personnel. Whether this will be accomplished through the University Contact Bureau of the National Automobile Chamber of Commerce has not been determined. Nevertheless, a definite effort is now being made to perfect some plan along these lines."

Educators must realize that the automobile industry is entering a new phase, Hanch further said in substance. Today it needs the best minds on engineering research and public service questions. The future, in great measure, depends on recognition educators give to the magnitude of educational need involved, and the facility with which universities and the industry cooperate. The graduate, moreover, must be willing to begin at the bottom.

Arthur H. Blanchard, professor of highway engineering and highway transport at the University of Michigan, declared four thousand men should be in training yearly for properly servicing the Country's needs. Propaganda is required to educate highway officials to the need for engineers, so that the pay may be made more nearly equivalent to the services that should be rendered and the work correspondingly more attractive.

Truck makers, this speaker pointed out, are in chaotic condition as a result of

(Continued on page 1040, third column)

PRODUCTION IN SEPTEMBER DECLINES TO 186,562 CARS

Truck Output Still Increasing by Comparison with Last Year

Automobile production during the month of September was 186,562 passenger cars and 18,843 trucks, according to the figures of the Department of Commerce, published this week. This represents a decline of 62,663 from the August total, or 25 per cent. The September total, however, registers a gain of nearly 29 per cent over the corresponding month of last year, when 144,699 passenger cars were produced.

Truck production also shows a comparative gain, as the output for September, 1921, was 13,648. The August truck output this year was 24,200.

FORD CUT TO CREATE MILLIONS OF OWNERS

E. S. Jordan Says Industry Will Benefit by New Prices—Every American Family to Be Motorized at $298—Predicts 3,000,000 Car Output in 1923.

Ford's price reduction is hailed by Edward S. Jordan as a step toward the motorization of every American family. More than a week after the cut of $50 on all models went into effect trade sentiment toward the move is found to be unchanged, and by no means disapproving. The Ford has always been in a class by itself and the lowering of its price is merely a reassertion of that fact, made at a time which, all things considered, was well chosen.

Jordan's reaction is important as reflecting the viewpoint of a manufacturer destined to be only remotely influenced by developments in the low-priced car fields. Moreover, his reputation as a forecaster lends weight to his confident prediction that 3,000,000 cars will be built in 1923.

While trade observers are in agreement that next year is to prove a record breaker, Jordan is the first to reduce his belief to concrete figures. In a statement attributed directly to him, the president of the Jordan Motor Car Co., is credited as saying:

"The effect of the Ford reduction upon the automobile industry will be very beneficial. But the effect upon the motor cycle industry and the shoe industry may be serious.

"Ford is now working on a schedule of 6,500 cars daily. At $298 he will motorize every American family, because they can buy the car on time.

"This will create millions more owners in the kindergarten of the motor car

(Continued on page 1036, third column)

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D. A. McCONNELL RESIGNS AS PRESIDENT OF KLAXON

One of the Founders Retires from Famous House After Notable Career

D. A. McConnell, president and general manager of the Klaxon Co., has resigned and will withdraw from all interest in the Company after the first of next year. McConnell has been an important factor in the production of the famous Klaxon line ever since the formation of the old Lovell-McConnell Manufacturing Co., in 1906. F. Hallett Lovell, the senior partner, having devoted himself largely to sales and sales promotion work, the manufacturing end of the business was left almost wholly in McConnell's competent hands. Lovell withdrew, when the business was sold to the United Motors, which later passed into General Motors control, but McConnell, under the conditions of sale, remained in full charge.

The business in its present volume, represents a noteworthy achievement in both manufacturing and marketing. The Klaxon horn was introduced at a time when the old bulb horn was being generally used, and when the fate of even the buzzer type of electric horn was still in doubt. Use of an electric motor for signalling purposes was a radical, and by some regarded as a prodigal step. Success of the business demanded production of small high-speed motors on a prodigious scale, but the concern not only turned out the horns, but has always maintained the highest standards of quality. While the merchandising achievement involved constitutes a long and sometimes thrilling chapter in the history of the industry, McConnell's part in keeping the product up to its promised standard has stamped him a manufacturer of exceedingly high attainments.

Drumpelman on Tour

W. J. Drumpelman, sales manager of the Rickenbacker Motor Company, is taking a big swing through central and midwestern territory, making an investigation on which to base plans for the winter selling campaign. Chicago, Minneapolis, Omaha, Denver, Kansas City, St. Louis and Indianapolis are the principal points listed on his itinerary.

Miner Advanced by Multibestos

E. C. Miner has been promoted to the position of sales manager of the Multibestos Company. Miner was formerly advertising manager.

F. E. Booth Promoted in Hyatt

F. E. Booth has been advanced to the post of sales manager of the motor bearings division of the Hyatt Roller Bearing Co. Booth had extensive experience in sales and engineering lines before joining the Hyatt forces, and has been serving as assistant sales manager in the division of which he is now the head.

Paul Barnard Sells Shock Absorbers

Paul J. Barnard, together with John C. Boice and Clyde H. Pinney, has formed the firm of Boice, Pinney & Barnard, Inc., for the distribution of Lincoln shock absorbers within a radius of 100 miles from New York. Barnard will be recalled as general manager of the Wainwright Engineering Corp., of Connersville, Ind., prior to its acquisition by the McQuay-Norris interests. Boice and Pinney formerly handled the Vesta battery in New York.

COLUMBIA EXPANDS ITS FOREIGN FIELDS STAFF

Fitzpatrick and Russell Named to Look After Interests Here and Abroad

Foreseeing a considerable demand in foreign markets for its products, the Columbia Motors Co. is expanding its export department. Samuel Fitzpatrick, of wide experience in that line of endeavor, has been placed in charge of the export sales department. From 1909 to 1916 he was engaged in similar work for the Studebaker Corp., later going to Brazil for that concern. Since 1919 he has acted in the capacity of export manager for the Lalley Light Corp.

Another veteran in the field has been added to Columbia's staff in the person of H. W. Russell, who will be European representative. He has had varied experience, from 1912 to 1918 being traveling representative for the Studebaker Corp., in Central America, Scandinavia and Russia. For two years he was export manager for Chalmers Motor Car Co. until his health failed. He is now back in harness after spending some time on a ranch in Montana.

Stratton Quits Bureau of Standards

Dr. S. W. Stratton, widely known in industrial circles as director of the Bureau of Standards of the Department of Commerce, has resigned and will assume the presidency of the Massachusetts Institute of Technology. Secretary Hoover, who made the announcement late last week, expressed the regret of the Department in Dr. Stratton's resignation, characterizing it as "a national loss."

Swartout Leaves Ohio Body

B. K. Swartout has resigned as president of the Ohio Body & Blower Co., and with him H. H. Lind, who was vice-president, treasurer and a director. Nathan A. Middleton has been elected to succeed Swartout. The Company now will devote its entire attention to building automobile bodies.

AMOROUS MADE MANAGER OF NEW YORK LOCOMOBILE

Porter, of Chicago, Succeeds to Boston Post and Page Joins in Windy City

Clinton B. Amorous, manager of the Locomobile Co. of America's Boston branch and in charge of New England distribution, has been appointed manager of the New York branch of the Company. He relieves E. A. Travis, general sales manager of the Company, who has been temporarily in charge of the Manhattan office. Amorous is thoroughly schooled in the Locomobile business, having been with the Company a dozen years in capacities varying from purchasing to engineering and sales.

To succeed Amorous at Boston, W. S. Porter, who has been Chicago branch manager, has been brought back East. Porter is well known to the trade in the Windy City and also in Boston, having gone to Chicago from the Massachusetts city a year ago to reorganize the branch there. Porter is in turn succeeded by J. Murray Page, who has lately been handling Marmon interests in Chicago and the West.

Agnew Joins D-A-C

J. C. Agnew has been appointed assistant sales manager of the Detroit Air Cooled Car Co. He has been identified with the Chicago retail trade for several years.

Myers Goes to Europe for Speedway

T. E. Myers, secretary and general manager of the Indianapolis Motor Speedway Co., sailed for Europe on October 24 aboard the *Aquitania*, to review the prospects for European factory entries in the eleventh 500-mile classic next Memorial Day. On arriving in Europe, Myers will be met and accompanied on his further journeys by W. F. Bradley, representative of the Speedway company abroad. The itinerary calls for visits to factories in England, France, Belgium, Germany, Austria and Italy.

Firestone Heads Church Body

Harvey S. Firestone, president of the Firestone Tire & Rubber Co., has been elected president of the Ohio Council of Churches. He was formerly first vice-president of the church organization which covers the state.

W. M. Waller

W. M. Waller, who has represented the Perfection Spring Co. in its replacement sales activities throughout the Middle West and Southwest, passed away October 22, at his home in Waco, Texas, after an extended illness. Waller possessed those sterling qualities that won him the friendship of all those with whom he came in contact. Before joining the Perfection Spring organization he was associated with the Johnson Brothers Auto Supply Co. of Wichita, Kansas.

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PEERLESS PRODUCTION HIGHEST IN 21 YEARS

Company Now Shipping 40 to 45 Cars Every Day—With No Automobiles on Hand, October Business Four Times as Great as in Same Month Last Year.

With continuous production at its highest peak since the Company was founded, new shipping records are being established each day by the Peerless Motor Car Co. in an effort to catch up with orders for the new cars. Between 40 and 45 open and enclosed cars are being produced and are leaving the plant daily by freight, express and driveaway. A new record for weekly shipments was set last week, only to be shattered by this week's business.

Shipments for the month will be more than four times as great as those for last October. This month's business will be far in excess of any previous month in the twenty-one years of the Company's existence. The Company has not a single car on hand, it is asserted, and deliveries are still far behind the orders. The enclosed cars, in particular, are in such demand that the sales department is being besieged by distributers, dealers and private owners from all parts of the Country for immediate delivery.

Chevrolet Sales Increasing

Retail sales of the Chevrolet Motor Co. continue to increase. While present production is about 1,000 cars a day, the management expects to reach a figure of 1,250 as soon as the plant can be equipped for that purpose. Vice-President Colin Campbell declares orders more than justify capacity operations at the higher figure.

Cotton Market Rising

December cotton reached 24.14 cents on the New York Cotton Exchange October 24. This is a new high since September, 1920. The gain of the past week has been upwards of a cent and a half a pound, or about $7.50 a bale. Steady improvement in the textile situation, following the settlement of the long-term strike in the New England mills has caused a stiffening of demand that is being felt all along the line. Mills are running nearer to capacity than for two years, it is said, and many are sold well into 1923. Added to this, there is the prospect of a short crop. All of which is causing tire men and weavers of automobile fabrics to pay close attention to commitments.

Tire Sales Good

Tire sales are holding up remarkably well, thus confirming the general impression that the use of automobiles is gaining all the time, and with it, the demand for tire replacements. The wholesale end of the business, as well as the retail, is also favorably reported. The policy of long-term commitments adopted by some of the standard companies is working out well, with the result that dealers in the better-known lines are carrying heavier stock than every before, while factories are busily engaged in manufacturing for advance orders. Conditions in many respects are exactly the reverse of those prevailing during the past two years, and from this circumstance it is argued that affairs of some of the weaker and more youthful enterprises may be in jeopardy. If such is the case, however, the heavy retail volume at present seems to be postponing the issue.

FORD CUTS ADDED PROOF

Ford price cuts were tabulated in these pages last week. The listing of new prices from Highland Park the same week they were announced is but further proof that the Table is kept alive. It is revised each and every week, as advertised.

AUTOMOBILE TOPICS' Table is an official presentation of car selling points. Only data supplied and authorized by car makers themselves is listed. By regular periodic checking on the part of manufacturers the authoritativeness of this feature is kept up to date.

Listing of cars according to price rather than alphabetically is a unique and convenient arrangement. It permits instant comparison of lines in the same price class.

The Table this week will be found on pages 1077-9. It is revised to October 24.

M.A.M.A. REPORTS SHOW SEASONAL SALES DECLINE

September Total Behind August While Overdue Accounts and Notes Gain

September reports of the members of the Motor & Accessory Manufacturers' Assn. indicate, as compared with August records, the usual seasonal falling off in sales while past due accounts and notes outstanding increased. Total sales reported were $37,300,050, a 13.36-percent decrease from the August total of $43,053,700. Past due accounts were $4,220,400 for September, or 13.91 per cent higher than the $3,705,000 August total. Notes outstanding totaled $2,658,800, this being an increase of 10.86 per cent over the $2,398,350 of the preceding month.

Compared with September a year ago, however, the September sales represent an increase of slightly over 61 per cent. Despite the much larger sales this year, both past due accounts and notes outstanding were lower than they were for the corresponding month of 1921. The September figures for 1921 and 1922, with the percentage increase or decrease over August of the respective year, are:

	September, 1921	Per Cent Change
Total sales	$23,141,891	1.09 Dec.
Past due accounts	4,358,545	.22 Inc.
Notes outstanding	3,677,500	5.24 Inc.
	September, 1922	
Total sales	$37,300,050	13.36 Dec.
Past due accounts	4,220,400	13.91 Inc.
Notes outstanding	2,658,800	10.86 Inc.

20,000 STUDEBAKERS FOR FOURTH QUARTER

Estimate of 100,000 Cars for the Year Likely to Be Carried Out—30,000 Made and Sold in Third Quarter—Expects Output of 150,000 in 1923.

Production of 20,000 automobiles is scheduled for the final quarter of 1922 by the Studebaker Corp. Having to date made and sold approximately 88,000 cars, the year's total for the South Bend industry will approach 100,000.

As predicted, and so reported in AUTOMOBILE TOPICS under date of September 23, the end of that month found about 30,000 cars manufactured and in the hands of owners. Production during the first half of the year mounted to 58,000. With these figures in mind and in view of the almost constantly increasing demand, the Corporation believes a schedule calling for 150,000 machines in 1923 will be warranted.

As a result of these operations, net profits for the nine months ended September 30 exceeded $16,400,000. Taking this as a basis for estimate, the 20,000 output scheduled for the fourth three-months' period should bring the net figure for the year up to nearly $20,000,000.

Nash Gained in September

Nash business showed a gain of eight per cent in the month of September as compared with August. In revealing this continued upward tendency the Nash Motors Co. points to the fact that the business of the industry as a whole, exclusive of Ford sales, in the same month fell off 24 per cent by comparison with August.

Merger Rumors Again Heard

Merger rumors again are going the rounds, invariably involving the names of some of the best-known companies as pivotal points. While highly circumstantial in some instances, it appears that most of the stories are "news" to the very men who would be expected to know all the facts, were any facts actually involved.

Demand for Plate Glass Booms Price

Increasing demands on the part of car makers for plate glass and a threatened shortage of that commodity is responsible for a sharp rise in price. The price to jobbers has risen about 33 per cent in four months. It is the general feeling throughout the trade, moreover, that the market will remain firm for a considerable time to come.

Ford of Canada Also Cuts Price

Ford Motor Co. of Canada has followed the lead of the American concern and lowered its touring and roadster models $50 and the sedan and coupe $35. This is the second reduction within two months.

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OAKLAND HAS BIGGEST MONTH IN SEPTEMBER

Maximum Output Exceeded Each Day During That Period—October Promises Increase in Business—Plans Full Working Time Throughout Winter.

September was the biggest month of the year in production and sales of the Oakland Motor Car Co. During the month the plant surpassed the maximum output of cars daily. C. J. Nephler, general sales manager, further states that production will be greater in October, due in large measure to the two new closed models, the sedan and five-passenger coupe, which will be in production this month. Both the two-passenger coupe and the sport model are now oversold.

The schedule of production for next year is considerably greater than the present year and assures the running of the full working force throughout the Winter months. One of the features for next year is that more than 30 per cent of production will be devoted to closed cars.

W. R. Tracy, assistant sales manager, who has just returned from a two weeks' trip to Oakland branches and distributers in the Middle West, reports that in the industrial centers sales are holding up in good shape but that in the agricultural sections demand for cars is considerably below normal.

Waltham to Maintain Output

E. L. Vail, manager of the Waltham Watch Co., before sailing for Europe this week, assured a representative of AUTOMOBILE TOPICS that pending solution of its financial problems no inroads would be made on the operating end of the business of the Company. Production of automobile equipment will continue without interruption and without diminution of output. Protective committees were formed this week by the shareholders, it being asserted that heavy floating debt hinders the financial situation of the concern and is proving unsatisfactory to the bankers.

J. C. HOSTETLER RECEIVER FOR GRANT MOTOR CAR

Cleveland Concern Adjudged Insolvent on Claims of Three Creditors

Joseph C. Hostetler, attorney for the Grant Motor Car Corp., was appointed receiver for the Corporation by the Federal Court in Cleveland, October 20. Action was taken on petition of the Durston Gear Corp. and two other creditors, whose claims totaled about $1,300.

Bankruptcy action against the concern follows a long period of decline, in which an empty purse, hard times and a bad factory condition all played a part. The concern had struggled bravely to make a place for its product in the market, and that it survived so long is regarded as largely due to the persistent efforts of George C. Hubbs, who, as vice-president and general manager, carried most of the burdens of management on his shoulders. While more intimate causes combined to hasten the end, the actual cause of the concern's downfall was the excessive pressure of competition in its own particular field.

STEWART-WARNER ACTIVITY USES PLANT TO CAPACITY

Material Requirements Anticipated and Sales Continue to Grow

With plants working at capacity and no shortage of materials to hamper output, the Stewart-Warner Speedometer Corp. finds itself hard put to it to cope with the demand despite recent increases in floor space and the addition of more machinery. Anticipating all requirements of raw materials, the Corporation fortunately was not forced to buy steel plates and similar items when the car shortage became acute, prices advanced and necessities hard to get.

Sales of bumpers have steadily increased and contracts for plating work have had to be let to outside plants. The Company asserts it has made 90 per cent of all speedometers produced in this Country and it is now experimenting in the manufacture of carbureters on a small scale. Altogether no surplus of finished stocks has been accumulated and the practice of automobile makers of ordering about two months in advance leads the management to predict continued large business in the industry.

Crabtree Goes to New York

W. O. Crabtree has been appointed president and general manager of the Franklin Motor Car Co. of New York city. He has been with the Franklin organization for fifteen years in various cities. He succeeds Glenn A. Tisdale, well known through his activities in the New York trade, who has retired from business.

TOPICS' TOPICS

Ford for President Club begins operations in New York as corporation. Now to step on the political gas!

* * *

National Motorists' Assn. campaigns for "non-skid roads." What's wanted, ruts?

* * *

Publicity states two salesmen traveled 5,000 miles in Blank car encountering 15-inch snowfall, much tire trouble due to ruts and "miserable roads" but this being "not productive of any more bad weather," the trip was "enjoyable in every sense of the word." Wait! The cars had a "large compartment in rear deck." Aha!

* * *

Racing driver, who, according to news item, "treated pilots to a disappearing view of his exhaust pipe" should understudy Einstein. Might then develop smell-less smell of gasless gasoline.

FORD CUT TO CREATE MILLIONS OF OWNERS

(*Continued from page* 1033, *third column*)

field. All of these people are ambitious to graduate into the primary grades and eventually they may reach the high school if they work hard and save the difference.

"There are 11,000,000 automobiles in use in this Country, and most of them are open cars. Body manufacturers are now running three shifts a day, trying to produce enough enclosed bodies to meet the demand. It will be impossible for them to meet it for a year to come.

"This means another big year for the automobile industry, and instead of producing 2,000,000, as they have this year, I confidently predict that 3,000,000 automobiles will be built in 1923."

PACKARD EXPORT TRADE CONTINUES TO EXPAND

Single Six Finding Ready Sale in France Due to Gasoline Economy

Export business of the Packard Motor Car Co. has proven excellent in the last six months, Earle C. Anthony, Packard and Durant distributer in San Francisco, who has just returned from two months' vacation in France and England, reports. The export department could have used four times the number of new cars at its disposal during the past six months, Anthony found, after visiting the Detroit factory on his way to the Coast. He attributes the success of Packard abroad to an earnest effort to meet foreign demand even though necessitating minor changes in construction, such as right-hand drive, wire wheels and metric speedometer.

"The automobile business in Europe is by no means dormant but quite good," Anthony related. "Citroen in Paris is producing 50 cars a day and selling them, which is real quantity production for Europe. In spite of a tariff that almost doubles the price to consumers Packard is doing an excellent business in France with the single-six, due to gasoline economy. A new distributer has recently been appointed in Paris and reports the business outlook as better than ever."

Steel Output Exceeds Estimates

Early estimates of probable steel production this year have fallen short of reality. Production has run far ahead of estimates, due to the activity in the building trades, more being made in the last six months than at any time prior to April 1. The railroad strike has caused considerable inconvenience in shipments but a recent survey showed lower stacks of piled steel at mills than at any time since June, 1920. The existence of stocks of considerable size in the hands of some consumers is therefore suspected by those close to the situation.

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DURANT TO BUILD IN FLINT FOR STAR CAR

Half Million Orders Against 231,000 Scheduled Output Necessitates New Plant—Change Made in Distribution Plans Includes Direct Branches.

Ground will be broken before November first for a $1,000,000 plant at Flint, Mich., to be devoted exclusively to production of the Star car. This latest move by Durant Motors, Inc., is necessitated by the fact that orders for over 500,000 Star cars are now on hand whereas present production schedules for the next 14 months call for but 231,000. Another development of the week is that branches are to be opened in several cities for the distribution of the little car. The first of these is to be opened next week in Newark, N. J., under the name Star Motor Co. of New Jersey, Newark Branch.

The Star is now in production at Long Island City, Lansing, Oakland, and Leaside, Ont. Over 700 men are now employed at the Elizabeth, N. J., plant making material for the Star. Finished cars are expected to start coming through the big plant there November 15.

Schedules for the Elizabeth factory call for 1,225 Stars in November and 1,750 in December. Next year the program is set for 52,000, with the Jersey plant hitting its real stride in June, 1923, with 5,000 a month. Some parts for the Durant four are also being produced at this time at Elizabeth, and finished four-cylinder cars are expected to come through beginning November 15 along with the first of the completed Stars.

Between 30,000 and 35,000 Durant fours are to be made in the Jersey factory next year. About December 1, when it is expected transfer of the present operations to Elizabeth will have been completed, the Long Island City plant is to be turned over to production of the Flint six.

The change in the distribution plans for the Star becomes known through the scheduled opening next week of the branch at 1010 Broad street, Newark, for retail sales. The little car is to be distributed through Durant dealers and branches, according to present plans. A good many branches are to be established, these to be located for the most part where the Durant line is not now represented. Among the cities mentioned for such branches are New York and Flint. Possibly more than one may be opened in the former city.

The new million-dollar Star plant at Flint is to be erected on the same site as, and will be a duplicate of the Flint Motor Co. plant now in process of erection. It will provide 516,000 square feet of floor space and will have a yearly capacity of 96,000 cars. The construction contract calls for completion in May, 1923. Production is planned to begin early in the Summer.

The two plants at Flint, when completed and operating at capacity, will provide employment for 8,000 men. The Star plant has a frontage of 900 feet on the Dixie Highway, making the total frontage of the two plants on that thoroughfare 2,200 feet. Work on the Flint Motor plant is progressing nicely, the steel framework being up for the third story while masonry on the second story is completed.

Nash Operating at Capacity

Nash Motors Co. plant at Milwaukee is operating at capacity with night shift work, it is reported this week. Only inability to get enough bodies keeps production below record-breaking point. This is due, the Company explains, to the enlargement of the Seaman Body Corp. of Milwaukee, maker of Nash bodies, whose plant is being doubled to meet the steady and persistent demand. With completion of the addition to the Nash plant, expected by March 1, output will be increased to 125 automobiles daily. At present the 1,000 men employed turn out 75 a day.

FORD PRODUCTION OVER LAST YEAR'S FIGURES

Eight Months' Output 830,199 as Against 670,073 in Same 1921 Months

Despite the four-day shut-down Ford motor production for the month of September totaled 95,126 cars and trucks for home and foreign plants, according to Detroit dispatches. This compares with 136,132 for August. The six foreign plants produced 5,369 units in September against 6,031 in August. Ford of Canada turned out 3,511 in September, approximately the same as in August.

Production for the eight months of this year is 830,199 as against 670,073 in the 1921 period. Including September total Ford output this year is 925,325. It is estimated by those in close touch with the Company that production for the year will reach 1,300,000.

Jenkins Spring Business Grows

Another indication of the big development in the automotive equipment field following the expansion of car production is the experience of the Jenkins Vulcan Spring Co., Richmond, Ind., which reports September business the largest in its history. Moreover shipments for October are running higher than September and the plant is operating 20 hours daily.

Gilliam Trade Increases

Increased demand for the products of the Gilliam Mfg. Co., Canton, O., has led to the adoption of a program of expansion by that concern. A new wing to the assembly division has been opened and two more furnaces have been installed in the carbonizing department. Plans are being drawn for a new building to be erected on the site directly north of the present plant.

OVERLAND IS HAVING ITS BEST OCTOBER

Earnings for Third Quarter Will Exceed $3,500,000—Cash Position Favorable—New Prices Stimulate Sales—Willys Himself in Full Charge at Toledo.

Willys-Overland is experiencing the biggest October business in its history, both as to quantity and profits. It is understood that gross earnings for the third quarter of this year will exceed the three and a half million mark, while the Company's cash position, with something like $7,000,000 in the treasury, is more than comfortable.

Sales have been markedly stimulated by the reductions put into effect five weeks ago. One day last week, for instance, orders for 255 Willys-Knights were received at the factory. The Overland four, according to John N. Willys himself, is "100 per cent." Owners, he declares, are delighted with it.

When the first reduction was made on the smaller model it was understood that the Willys-Overland Co. was shouldering an actual loss in turning it over at the prices then current. Since then, however, economies in production, together with the largely increased volume, not only have absorbed the difference but converted the loss into a sizeable profit. Thus when the last reduction was made, the new figure left a comfortable working margin.

Sensing the fact that the merchandising end of the business is of the greatest importance at this time, particularly in view of the fact that the factory is adjusted to smooth working condition, Willys is planning to devote his undoubted talents as a merchandiser to the task of putting Overland sales in the place where he feels they rightfully belong. His program comprehends the sale of not less than 150,000 cars next year, while if conditions are favorable he plans to run the total up around the 200,000 mark.

Willys is making his personal headquarters at Toledo, where he intends to build a home next year. The organization has been pared down to the bone, he being practically the only official in charge with authority to control active operations. He declares this state of affairs is to be continued and a policy of rigid economy carried out, though no money is to be spared in the prosecution of sales effort and the strengthening of the line, in the minds of both trade and public.

Willys celebrated his fiftieth birthday on October 25, and it is only fair to say that he never looked more fit. He declared himself eager to plunge into the kind of work for which he believes himself best qualified.

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FIRESTONE NET SET AT OVER $7,000,000

Advance Report for Fiscal Year Which Ends October 31 Indicates Favorable Showing—Output Now 26,000 Daily—Ford Cut May Boost Production.

Forecasts on the Firestone Tire & Rubber Co., Akron, for its fiscal year which ends October 31, indicate net profits between $7,000,000 and $8,000,000. For the first eight months net profits were $5,000,000, according to President Firestone.

This predicted showing will compare favorably with previous years, as the following compilation of profits and surplus for the years since 1917 indicates:

	Profits	Surplus
1921	$949,354	*$19,010,115
1920	9,396,912	*1,549,782
1919	9,306,978	5,397,272
1918	8,356,230	3,910,442
1917	5,051,798	3,316,395

*Deficit.

Early in the year production went above 23,000 tires a day. It reached a peak of 28,000, from which it has eased off to 26,000, where it has remained.

By virtue of its large Ford equipment business, it is expected that one of the Firestone plants will be operated at capacity to meet the increased demand which Ford expects to follow his price reductions. The rim plant, which the Company expected to enter three months ago, is still idle, although indications are that it will be occupied in the near future. During the year a new tire subsidiary was put into operation at Hamilton, Ontario, with an initial capacity of 1,500 tires daily, with provisions for doubling this output when demand increased to a point warranting such a step.

Continental Motors Increases Capital

Authorized increase in the capital stock of the Continental Motors Corp., has been approved by stockholders of the organization. This brings the capital stock to 3,000,000 shares of no par value, of which 1,500,000 shares are to be exchanged for the present stock of $10 par value.

Reynolds Spring Reveals Balance

After allowing for dividends on its preferred stock, the Reynolds Spring Co., reported for the three months ended September 30, a balance of $118,339 available for the 78,500 shares of common stock outstanding. Earnings for the first six months of the year were at an annual rate of $3 a share on the common.

Would Reorganize Ames Holden

Bondholders of Ames Holden Tire, Montreal, which is being divorced from the parent company as the result of failure to maintain its bond interest guarantee, propose forming a new company with bond issues totaling $1,490,000 and 15,000 shares of common stock. Old bondholders would get 100 per cent for their holdings under the plan.

Air Reduction Shares Listed

Fifteen thousand additional shares of common stock, no par value, of the Air Reduction Co., Inc., have been admitted for listing on the New York Stock Exchange. Last Summer, it will be recalled, the Company started construction on additional plants at Milwaukee, Pittsburgh and Birmingham.

HOLDERS OF COMMON IN GENERAL MOTORS INCREASE

Large Gains in Number Having 50 Shares or Less Is Recorded

Large increases in the number of holders of common stock in General Motors Corp. has been recorded by that concern in the last few months. On October 9, the latest date of record, there were 20,377,798 shares outstanding of which 2,375,572 were held by brokers and the balance by investors. The total number of stockholders of all issues showed a slight decrease, the Corporation finds, but the number holding small lots of 50 shares or less grew greatly.

The growth of brokers' holdings is shown by comparison with the figures for April 7 when 1,743,829 shares were held, thus revealing an increase of approximately 631,000. This ratio of increase is about the same as applies to the October 3, 1921, total. Holdings of the preferred and debenture issues increased as regards the investors but decreased as far as brokers are concerned.

DIVIDENDS DECLARED

General Motors Corp.—Regular, quarterly dividend of $1.50 on the preferred stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.50 on the 6 per cent debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

General Motors Corp.—Regular, quarterly dividend of $1.75 on the 7 per cent debenture stock; payable November 1, 1922, to stockholders of record October 9, 1922.

Fisher Body Corp.—Dividend of $2.50 on the no par common stock; payable November 1, 1922, to stockholders of record October 21, 1922.

Hood Rubber Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

Hupp Motor Car Co.—Regular, quarterly dividend of 2½ per cent on the common stock; payable November 1, 1922, to stockholders of record October 14, 1922.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8 per cent preferred stock; payable November 15, to stockholders of record November 1, 1922.

Nash Motors Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 1, 1922, to stockholders of record October 20, 1922.

Packard Motor Car Co.—Regular, quarterly dividend of 2½ per cent; payable October 31, 1922, to stockholders of record October 25, 1922.

Packard Motor Car Co.—Extra dividend of 2½ per cent on the common stock; payable October 31, 1922, to stockholders of record October 25, 1922.

Stewart-Warner Speedometer Corp.—Regular, quarterly dividend of $1; payable November 15, 1922, to stockholders of record October 31, 1922.

United States Rubber Co.—Regular, quarterly dividend of 2 per cent on the first preferred stock; payable October 31, to stockholders of record October 16, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automobile securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended October 25. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	17	16¾
†Advance Rumely, preferred	51	50½
Ajax Rubber	14⅛	13¾
Allis-Chalmers	50¼	45⅞
Allis-Chalmers, preferred	96¼	94
American Bosch Magneto	42¼	38½
Case (J. I.) Plow	5	4¼
Chandler Motor	63¾	59⅛
Chicago Pneumatic Tool	85	84
Cleveland Motors	30	30
Continental Motors, common	10¾	9⅜
Daniels Motor	11	10
Durant Motors	51¾	49⅜
Durant Motors of Indiana	14	13½
Fisher Body	145¼	139¼
Fisher Ohio Body, preferred	95	95
Fisk Rubber, common	13	12½
Gardner Motors	10¾	10⅛
General Electric	185½	178¾
General Motors, common	14⅞	14⅛
General Motors, 6% deb	84¼	83⅝
B. F. Goodrich, common	34⅛	33½
B. F. Goodrich, preferred	84½	84¼
Goodyear, common	10½	9½
Goodyear, preferred	27½	27
Gray & Davis	13½	12
Hayes Wheel, w. i.	41	34½
Hudson Motor Car	21⅛	20¼
Hupp Motor Car, common	22⅜	21⅜
International Harvester, new	110¾	107½
International Harvester, pf. (7)	118½	118½
*Kelly-Springfield Tire, common	44¾	41¾
Kelly-Springfield, pf. (6)	97	97
Kelly-Springfield, pf. (8)	102½	102½
Kelsey Wheel	99¼	98¼
Keystone Tire	7¼	6½
Lee Rubber	26⅛	25¼
Lincoln Motors	2⅛	2
Mack Trucks, Inc.	57½	52¼
Mack Trucks, 1st pf.	92½	90
Martin-Parry	29½	28
Maxwell Motors, Class A	58¾	49
Maxwell Motors, Class B	16½	13½
Mercer Motors	2¾	2½
Moon Motors	17	15½
Mullins Body	20	20
Parish & Bingham	13	12
Pierce-Arrow, common	13⅛	11⅛
Pierce-Arrow, preferred	34½	27
Reo Motors	13½	13⅛
Republic Motor Truck	2	2
Saxon Motors	4	3⅝
Stewart-Warner Speedometer	53¼	50
Stromberg Carburetor	55¾	52½
Studebaker, common	135	126¾
Studebaker, preferred	115¼	115⅛
U. S. Light & Heat	1⅝	1½
U. S. Rubber, common	57¾	53½
U. S. Rubber, 1st preferred	100	99
Westinghouse Air Brake	99	98½
Westinghouse Electric & Mfg.	63⅛	62
White Motors	50¼	48½
Willys-Overland, common	6½	6⅛
Willys-Overland, preferred	42½	35⅝

†Par $50. *$25.

Prices for automobile securities quoted in Detroit during the week ended October 25 are as follows:

	High	Low
Auto Body	3¾	4⅛
Charcoal Iron, common	1¾	1
Charcoal Iron, preferred	3	2¾
Columbia Motors	2⅛	2¾
Commerce Motor	5	3
Continental Motor	11⅛	10
Edmund & Jones, common	25	24
Federal Truck	22	22
Ford of Canada	410	397
Motor Products	94	89
Motor Wheel, common	94	89
Packard Motor, common	19½	17¼
Packard Motor, preferred	93½	92
Paige-Detroit Motor Car, common	26½	25
Reo Motor (new)	13½	13⅛
Timken Axle, common	28	27
Timken Axle, preferred	100	89

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PRICE CONTROL SUIT INTERESTS INDUSTRY

Mennen Co., Toilet Products Makers, Sued for Selling at Different Price to Different Buyers — "Buying Clubs" Involved Under Another Guise.

Industrial concerns of the Country are watching with interest the court proceedings in the suit brought against the Mennen Co., manufacturers of toilet products, by the Government, which asserts the Company has been selling at different prices to different groups of wholesalers. Though the suit is of two years' standing, arguments were heard only last week.

The Government does not contend, in this case, that the Company may not sell at one price to the retailer and at another to the wholesaler but insists that it is in restraint of trade to discriminate in price between one wholesaler and another or one retailer and another. The question is complicated by the fact that many retail stores have joined hands and formed cooperative buying agencies, seeking to buy at wholesale rates. The same problem is before the automobile industry to a certain extent in the so-called "buying clubs."

The Federal Trade Commission has held that where these "clubs" expand their business into a general one, selling not only to their members but to the public as well, they are entitled to wholesale rates from the manufacturers. The Mennen Company's counsel holds this ruling means ruin to the producers.

"The obvious result of this," declared counsel for the Company, "would be the impairment of the business of the wholesaler and of the retailer and a serious derangement and disorganization of the manufacturer. It is not too much to say that the result would be little short of chaos. Nor is the illustration chimerical or fanciful. It but depicts the natural consequence to be expected from a paternalistic and meddlesome interference by Government with the conduct of private business."

Marlin Rockwell Properties to Be Sold

Negotiations are being carried on for the sale of four properties of the Marlin Rockwell Corp. which have been set aside for disposal at $1,500,000. None of the properties are now in use by the Corporation, which is making ball bearings exclusively. Proceeds of the sale will be used to pay off unfunded debt maturing next Summer.

Republic Reorganization Progresses

Reorganization of the Republic Motor Truck Corp. has reached the point where the bankers are waiting for the auditors' report and appraisal of the company's property. Upon receipt of this, expected about November 1, a general creditors' meeting will be called for consideration of the completed plan and also for the immediate removal of the organization from the hands of the receivers.

NEW AMERICAN MOTORS TAKES ASSETS OF OLD

Philadelphia Bankers to Take Over Stock Not Held by Other Interests

Taking over of the assets of the American Motors Corp. by the reorganized company was accomplished this week. As indicated in these columns under date of August 21, the affairs of the concern have progressed satisfactorily since the reorganization last January which brought it into new hands with Carl H. Page as president. The final amount due on the $200,000 price set by the courts was paid the receiver and the assets of the old organization have now been formally absorbed.

Under the reorganization plan, interests identified with the original company provided new capital to the extent of $250,000. It is now explained that a group of Philadelphia bankers will take the balance of the stock and provide an additional amount of $250,000 making altogether $500,000 working cash. Meanwhile operations have been continued on an unabated scale at the Plainfield (N. J.) plant and the present outlook is such as to lead the management to predict a 1,000-car per year basis within the next 60 days.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended October 25 are as follows:

	High	Low
Firestone	79	70
Fisher Body, Ohio, preferred	50	50
Goodyear	10½	9½
Grant	⅛	⅛
Grant, preferred	5⅞	4
Jordan, common	235	210
Jordan, preferred	85	80
Peerless	59	55⅝
Standard Parts	3¼	1½
Standard Parts, preferred	20	12
F. B. Stearns	23¾	20½
Torbensen Axle	25	23
W-S-M, preferred	73	65
Winton, preferred	35	30

Prices for rubber securities quoted in Akron during the week ended October 24 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	70	70
Firestone, common	5	5
Firestone, 6% preferred	78	70
Firestone, 7% preferred	98	92½
General Tire, common	88	84½
General Tire, preferred	300	250
B. F. Goodrich, common	33½	35
B. F. Goodrich, preferred (7)	86½	85
B. F. Goodrich, preferred (6½)	102¼	101½
Goodyear, common	10½	9½
Goodyear, preferred (7)	28½	27
India, common	86½	80
Marathon, common	2¾	2
Mason, common	10	8½
Mason, preferred	52	50
Miller Rubber, common	75	70
Goodyear, preferred (8)	62	60
Mohawk Rubber	15	10
Mohawk Rubber, preferred	80	75

HUDSON OPENS DEPOT FOR EUROPEAN TRADE

President Chapin, Home from Europe, Tells of New London Establishment—Will Push Foreign Business—Around 5,000 Cars Produced in September.

Roy D. Chapin, president of the Hudson Motor Car Co., Detroit, returning from a ten-weeks' trip to England and France, brings back word that a general European distributing depot for Hudson and Essex cars has been opened in London. He also gives his observations of the European market. As for American cars in this Country, Chapin expresses the opinion that present prices will stand as long as the public demand continues in its present volume. Coincident with his remarks, Hudson's production for September is reported around 5,000, with sales still holding up well.

"We have established a general European depot in London for the distribution of Hudson and Essex cars," says Chapin. "We intend to go into European business on a much larger scale than ever before, and the establishing of this depot will facilitate business from an exchange and delivery standpoint.

"While in Paris I attended a motor car show at the Grande Palais where all of the principal European and eight or ten American manufacturers showed models. There is a distinct tendency in Europe to go in for the small car. This is due to the high taxes on auto vehicles and to the price of gasoline. There is also a tendency in Europe to use motor vehicles less commercially and more for pleasure than we here in America.

"Cars of the same quality of European manufacture are far more expensive than those of American manufacture. This is caused by the limited volume of production in Europe.

"As long as the American public continues to buy in the same volume as they are now, prices of American cars will remain the same."

During September approximately 5,000 cars were produced by the Hudson company. This, while 2,100 under the August output, is considered satisfactory in view of the usual Fall slack in sales. Orders continue at a good volume and it is estimated by sources in close touch with the Company that production for the final quarter will probably be from 7,500 to 8,000 cars. Profits for the second half are not expected to run as high as the $3,000,000 net before taxes earned in the six months ended May 31, on account of lower prices, although for the full year a net of $5,000,000 is predicted.

Ferris Definitely Discontinued

Receivers of the Ohio Motor Vehicle Co., Cleveland, have officially given notice that the Company has discontinued automobile manufacture. It was at one time producer of the Ferris car.

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STANDARDIZATION OF TRAFFIC LAWS URGED

American Society for Municipal Improvements Offers Plan—Sane Regulations Designed to Promote Safety and Conservation of Highways.

Tentative regulations for traffic on highways throughout the Country offered this week by the Committee on Traffic and Transportation of the American Society for Municipal Improvements, mark a very real advance in the study of the problem, according to experts. The views of the committee are seemingly in consonance with those prompting the series of traffic articles appearing in these columns during the past four months and many of the rules suggested may be compared with those advanced by AUTOMOBILE TOPICS, showing practically the same ideas.

Launching into the problem with recommendations for truck weights, loads and construction which are identical with standard practice, the committee proposes that financing of the reconstruction of streets be borne by general appropriations and not by individuals whose properties abut on the particular streets. It advances the idea that only the State impose license fees. Franchises for freight and passenger transport by inter-city and rural lines should be obligatory, it is recommended.

Raised car-stop safety zones are considered preferable to limit lines, stanchions or mushrooms. Signs should be posted along highways at important inter-sections and maps of districts erected at city limits on such through-routes. It is urged that railroad crossings be made more safe and that danger signs, electrically lighted in red be suspended over the center of grade or street crossings in municipalities.

Turning, then, to vehicular traffic regulations, the committee explains that those noted are the ones concerning which there may be difference of opinion and asks the members to discuss them with local police chiefs for future recommendations. Briefly, those urged are as follows:

Rates of Speeds—15 miles an hour on boulevards and in congested city areas: 20 miles an hour elsewhere in municipalities.

Direction of Traffic—All traffic to the right of intersection centers in turning corners, cars to stop at center of street until police permission is given to proceed; keep right when turning right; driver approaching from right has right-of-way; turnarounds only at intersections.

Parking—Must be within one foot of curb; plainly visible signalling when moving in any direction at, to or from curb; no stopping anywhere with left side of machine to curb; no vehicle of more than 20 feet overall length to park diagonally or at right angles to curb.

Safety—All vehicles equipped with warning signals, horn or bell, and suitable headlights at night.

Driving—Not more than two persons in front or driver's seat, except one child under 10 years as third person; no person, adult or minor, seated in driver's lap nor driver seated in any person's lap.

Pedestrians—Must cross at intersections and at right angles of sidewalks in congested areas; must obey police signals.

Fight California Light Law

Capt. A. G. Waddell, advertising manager of the Durant Motors Co. of California, is staging a legal battle against the Golden State's headlight law. He believes, on advice of counsel, that the law is not constitutional. The matter will be taken up in the El Cerrito court late this month.

Holds Station Wagon Passenger Car

Any indecision as to the classification of the "suburban" or station wagon has been set at rest by a decision handed down by the Appellate Division, New York. This holds that this popular type of vehicle is a "passenger car" and as such is entitled to the lower license rate collected by the Automobile Bureau.

HEADLIGHTS ON HIGHWAYS

NINETEEN thousand three hundred and eight miles of Federal-aid road had been completed on August 31.

Ten million six hundred and twenty thousand four hundred and seventy-one motor vehicles were registered in the United States on July 1, according to the Bureau of Public Roads, United States Department of Agriculture.

There are 2,500,000 miles of rural highway in the United States.

Over 33,000 motor vehicles have been received as surplus war material by the Bureau of Public Roads of the United States Department of Agriculture and distributed to the States for use in road construction.

Texas leads in miles of completed Federal-aid roads with 1,733 miles. Minnesota is second with 1,416.

In mileage of Federal-aid roads under construction Texas is first with 1,408 miles. Nebraska second with 970 miles, and Iowa third with 945 miles.

Texas and New York are the States which receive the largest allotments of Federal aid for highways, which is distributed on the basis of population, area, and mileage of rural highways.

In August Missouri placed 126.7 miles of new Federal-aid work under construction.

One thousand three hundred and fifty-two miles of road have been completed by the Bureau of Public Roads of the United States Department of Agriculture in our national forests, and there is under construction 617 miles, which open up regions of great natural beauty and rich in natural resources.

—Department of Agriculture

EDUCATORS CONFER ON HIGHWAY NEEDS

(*Continued from page 1033, second column*)

improper utilization of trained transport men. Sales forces should be composed of men trained in the fundamentals of highway transport and the efficient use of trucks. Blanchard recommends that at least ten universities throughout the Country offer short-term advanced courses in highway transport, in order that the present deficiency in trained personnel in this line may be quickly overcome.

Greetings from President Harding opened the morning session of the Conference on Thursday, and were received with cheers. The President was unable to attend the Conference in person, but expressed his great interest in a letter to Dr. Walton C. John, executive secretary, to whom he wrote:

"The whole program of transportation —in all its phases it must be regarded as that of a single problem, presenting a great many aspects—is among the most pressing and difficult that the entire world is facing at present. As you and your associates are probably much better aware than most other people, the transport facilities of the whole world, whether by rail or by water, or whether represented by the great network of public highways, have been confronted with a most difficult situation for a number of years. It is one which demands the very best and wisest treatment from the standpoint of both the technical and economic and financial authorities.

"We are all agreed that the Country needs good roads and more of them, but we also have been brought to realize that they are not to be had without very great expense.

"Your organization is one of those particularly well equipped to deal with the industrial and technical side, as well as the financial aspects of this problem and I most earnestly hope that your Washington convention will produce some useful illumination of the problem."

The program covered a wide range of interrelated subjects and proved of lasting value to those who attended. Prominent among the speakers were Edward S. Jordan, who on this occasion represented the National Automobile Chamber of Commerce.

The banquet at the New Willard hotel the evening of October 26, brought Dr. John J. Tigert, U. S. Commissioner of Education, to the toastmaster's chair. George M. Graham, of the N. A. C. C., H. S. Firestone, president of the Tire and Rubber company bearing his name, who on this occasion represented the Rubber Association of America, and A. N. Johnson, dean of the College of Engineering of the University of Maryland and president of the American Association of Engineers, were the speakers of the evening.

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BALTIMORE DEALERS ADOPT BOSTON PLAN

Establish Bureau to Exchange Used Car Prices—Plan Recommended as Essential Protective Measure—1,330,000 Used Cars in Dealers' Hands Today.

(Baltimore Correspondence)

Baltimore dealers have agreed to establish a used-car platform identical with that operative in Boston and Philadelphia. The decision was reached October 25 following an address by L. B. Saunders, secretary of the Boston Automobile Dealers' Used Car Statistical Bureau, explaining the plan. Thirty-five of the 40 dealers present, representing nearly 100 per cent of membership in the Baltimore Automobile Trade Association, signed the agreement putting the plan into effect.

Saunders drove home telling statistics of the bureau, whose work he directs, and which is an adjunct of the Boston Automobile Dealers' Association. He said the used-car abuse is largely responsible for the dealer mortality figures of the industry. This is reckoned as showing last year a business death rate of 29,000 dealers out of 35,000, leaving only 6,000 survivors. The gaps were filled, of course, by newcomers from time to time.

One of his most telling shots was the comparison of an alleged total of 1,330,000 used cars in dealers' hands today with current reports of new-car production. On October 21 official figures quoted in these columns showed a total production of new cars for the first eight months of the current year as 1,667,052. Of these upwards of 1,500,000 were passenger cars.

"Boston dealers in the last nine months took in 5,157 cars having a total exchange value of $3,945,898, spent $280,768 in repairing them and resold them for an aggregate of $4,310,461, turning a profit of $83,795," Saunders said. This represents, in round figures, an average allowance of $765 per car, a repair expense of $54 and a profit of $16 in an average resale price of $835. Saunders went on to say:

"Dealers continuing on the old catch-as-catch-can basis merely pave the road to bankruptcy. They must learn cooperation, quit knifing each other, be merchants, not peddlers. Most of them entered the business by chance. They have continued by chance. Now they must quit or fail."

The plan which the Baltimore dealers have adopted provides for an interchange of prices paid for used cars without dealer identification. It is safeguarded in various ways to ensure the completeness and exactitude of its working.

"Pay just prices, divide your business into new- and used-car departments, operating separately. Concentrate salesmanship on used cars when overstocked. Decide maximum allowances for take-ins on a percentage basis," Saunders further advised.

Continuing, he pointed out that the public should be educated to charge off mileage on the used car just as though they were reckoning railroad travel. The public regards the automobile dealer with suspicion, due to the history of the business. Consequently he tries playing one against the other.

Higher standards must be established, therefore. The individual dealer must solve the problem on his own account, then band with others in his local association in a platform combining the three essentials of loyalty, truthfulness and cooperation. Backsliders ruin themselves.

Last year's figures exemplify the condition. While 85 per cent of the cars are made by only 12 manufacturers, 75 per cent are sold by a thousand dealers. There are only 5,248 dealers rating $10,000 or better, according to the commercial agencies. Failure, it was declared, faces those dealers not adopting some cooperative plan in the buying of used cars.

Baltimore dealers are enthusiastic over the plan. The platform as worked out in Boston, was approved without a dissenting voice.

Overland Inaugurates Flat Service

Willys-Overland Co. intends to establish its new flat rate system in all service stations handling its lines. Information compiled in booklets will be distributed to all dealer organizations. Rates for adjusting cars have been worked out at the factory and have been put at the lowest point consistent with good workmanship. The system, as worked out in Overland branches, has proved entirely successful, and it is now to be given to the dealers at large.

Akron Closed Car Show Goes Big

Packed floors and an encouraging record of sales cheered the dealers whose lines were exhibited at the Akron closed-car show in the Armory last week. An attendance of 6,000 was recorded on one night. Sale of refreshments for the benefit of local charities proved a good move, as it added considerable outside interest. Saturday morning the show was thrown open to school children, who were admitted free.

"Service More Than a Sale"—Harrington

A. C. Harrington, vice-president of the Packard Motor Car Co., whose 20th anniversary of joining the concern was celebrated by a banquet extended by fellow employees and executives, at the Waldorf-Astoria hotel in New York city on October 13, declares service is more than a sale. "Early in my business experience," he said, "I recognized that fact and have applied it to my subsequent endeavors." Harrington at various times has been general sales manager at New York, vice-president of sales and eastern representative for the National Truck Division of the Packard Motor Car organization.

S. A. E. PRODUCTION MEETING SIGNIFICANT

Proves Management Turning Attention to Details—Shop Control Is Being Solved in Engineering Fashion—Group-Bonus Plan Discussed.

(Detroit Correspondence)

Factory managements are turning renewed attention to details small in themselves yet huge in the sum total, and solving problems of shop control in true engineering fashion. This is the deeper significance of the first production meeting of the Society of Automotive Engineers, held this week in Detroit.

Papers presented at the two-day session covered a wide range of subjects. All embodied suggestive thought toward improving quality and reducing cost. Examples from these ranged from the showing of enormous reduction in coal requirements of companies producing a million cars a year to tool control methods that save a dollar per car in another plant listed among the industry's leaders.

The high point of the first day's session was an analysis of the group-bonus payment method. This was started as a means to reduce the clerical work entailed upon the payroll department, and was also found to result in a greatly increased output.

This meeting of production executives and factory men, the first of its kind, denotes an extension of the Society's policy to devote specific attention to the interests of certain classes of membership, all to the end of rounded development of the industry. The high interest in the meeting's purpose was attested by the large attendance.

The great auditorium of the General Motors building was a suitable setting for this purpose. Furthermore, holding the meeting in Detroit proved wise in that it helped swell attendance by several hundred from among men who usually are so busy producing they rarely have time to gather for talk. The program included sessions in the mornings and visits to plants in the afternoons.

At the opening session, October 26, E. Karl Winnerlund, of the General Motors advisory council, gave the meeting an immediate and proper send-off with the presentation of a paper on the group-bonus and its applications. In itself interesting, the presentation was also typical of the thoughts of production men who are entrusted with the double duty of improving goods and cutting costs—all under fierce stress of competition.

Briefly, Winnerlund's arguments were that the day's pay method was wasteful and piece-work considered too expensive to administrate when production is large and operations many. The group-bonus

(Continued on page 1044, second column)

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TRUCK BUSINESS DUE FOR PROSPEROUS ERA

Pulcher Tells Federal Distributers They Are About to Realize on Their Investment and Efforts—Sees Next Five Years Best in Truck History.

Truck manufacturers and their distributing organizations who were still left in the business after the trying depression of 1921 are about to reap returns not only on their tremendous investment but on their efforts to build up a paying industry. They will also see the results of their endeavors to benefit the Country's "disorganized transportation system." Furthermore the next five years, with a prediction of rapid growth of the truck as a means of transportation, will be the most prosperous in the history of the truck industry. Briefly, such are the opinions of M. L. Pulcher, vice-president and general manager of the Federal Motor Truck Co., Detroit, as expressed before the annual convention of Federal Truck distributers.

More than 75 distributers from all parts of the Country were in Detroit for the meeting, which was held during the week ended October 21. Convention sessions ended on Thursday with a dinner given by the Company at the Detroit Athletic Club. On that occasion the principal speaker was F. W. Fenn, chairman of the truck committee of the National Automobile Chamber of Commerce. James Schermerhorn, widely known humorist and observer of current events, was toastmaster.

At the close of the dinner the distributers boarded a special train for Muskegon. There they spent Friday inspecting the plant of the Continental Motors Corp.

Throughout the week a portion of each day was given over to discussion, at which times the distributers had an opportunity to give factory executives their views of the truck situation. October 16, the opening day, was given over to talks on Federal trucks by C. L. Wood, chief engineer. On Wednesday, F. L. Pierce, general sales manager, told of the size of the Federal field organization, pointing out that in addition to the distributers present, the Company had about 600 dealers with the organization even extending to foreign fields. L. B. Dudley, advertising manager, and R. H. Crooker, sales promotion manager, outlined the programs of their respective departments for the coming year.

A. E. A. Elects Two More

Philadelphia Storage Battery Co. and the Vesta Battery Corp. have been elected to membership in the Automotive Equipment Assn. J. M. Skinner and W. S. Cranner will represent the former and F. S. Armstrong the latter in the organization. The A. E. A. is making a careful study of battery distribution and service.

KETTERING SEES ENGINE STILL IN ITS INFANCY

Plant Growth to Provide Fuel of the Future, He Predicts

Astonishing things may result from scientific study and expansion of the internal combustion engine, which is still in its infancy, C. F. Kettering, president of General Motors Research Corp., told those attending Olds Motor Works service managers' convention at the factory last week. Makers of automobiles have not started as yet to develop the motor car to anywhere near the point it will reach, he declared, adding that the automobile will become the fundamental part of the transportation of the Country within the next few years.

Kettering surprised the gathering by the assertion that within the next few years "we will be obliged to raise our own fuel for automobiles by plant growth." He explained that it was with this idea in mind that the General Motor laboratories are now experimenting along this line. While scientists do not believe the fuel will be exhausted in the lifetime of this generation, Kettering pointed out that it is hoped to discover some means of providing a fuel, suitably efficient and cheap, to replace gasoline and kindred products when their scarcity causes the price to soar to prohibitive heights.

Chicago Registrations Grow

City license collections in Chicago show 170,021 passenger cars and 33,774 trucks in use to date. These figures compare with 137,755 cars and 29,239 trucks at this time last year.

A. E. A. ELECTS 13 MORE TO MEMBERSHIP IN SEPTEMBER

Four Jobbers and Nine Manufacturers Added at Mid-Convention Meeting

Thirteen new members were elected by the Automotive Equipment Assn. at the Mid-Convention Meeting held in Chicago recently. Four jobbers were added, these being the Julius J. Bantlin Co., Cincinnati; Belcher & Loomis Hdwe. Co., Providence, R. I.; Corpus Christi Hardware Co., Texas, and L. L. Ensworth & Son, Hartford, Conn.

The nine manufacturers added to the roster were the Buffalo Forge Co., Buffalo; Douglas-Dahlin Co., Inc., Kansas City, Mo.; General Automotive Corp., Chicago; Globe Mfg. Co., Battle Creek; Kokomo Automotive Mfg. Co., Kokomo, Ind.; King Sewing Machine Co., Buffalo; David Lupton's Sons Co., Philadelphia; The Perfection Heater Mfg. Co., Cleveland, and the Webster Electric Co., Racine, Wis.

ADOPTS RENTAL PLAN IN TRAILER SELLING

Martin Rocking Fifth Wheel Co. Offers Its Products for Rent—Charges at Rate of $1 a Day Per Ton Capacity—To Demonstrate Worth to User.

In an effort to spread more widely the knowledge that the trailer is a money-saver, the Martin Rocking Fifth Wheel Co., Springfield, Mass., is now offering its products on the rental and rental-sales basis. The plan is seen by the Company to offer a means to demonstrate adequately to prospective buyers the economy of using trailers and at the same time receive some remuneration for the demonstration. Discussing the new departure, C. H. Martin, president, says:

"We find that there are many merchants having much trucking to do, such as the lumber dealer, the contractor, the truckman, who realize in a general way that the trailer would materially reduce their hauling costs, yet for various reasons hesitate to adopt them. We decided by taking this step and assuming all risk ourselves that we could conclusively demonstrate that the trailer is a big money-saver—yet, by receiving rental, we would be paid for the demonstration.

"The very small charge that we make —$1 a day per ton capacity—will pay us and also pay a handsome return to the renter. For instance, a trucking company running between Springfield and New York, getting a dollar a hundred and making two round trips a week, has an earning capacity with a 5-ton trailer (which he can easily pull in addition to his regular load) of $400 a week and our rental charge is only $35.

"While the economies of the trailer system have been known for some years, general conditions have been such the past two years that very little new equipment of any kind has been sold but the indications are now that the trailer will come into its own.

"Great Britain is ahead of us in the use of the tractor-trailer principle. Authorities there are advocating it as the most effective means of curbing the constant ruthless wear and tear of the highways. Just as large loads can be carried when the weight is distributed over a number of axles as when it is all put on one axle."

Autocar Passes 25th Birthday

Autocar Co., rounding out 25 years of business life, last week made occasion to review its history. The first commercial car put out by the concern was sold in 1908. Today the principal stockholders are the individuals who started the business, the Company finds, and 90 per cent of the common stockholders are employees.

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GENERAL TIRE ACTS TO DOUBLE OUTPUT

Extensive Plant Expansion Revealed to Territorial Men at Annual Meeting—Buildings to Be Completed Within 60 Days—New Tire Tread Disclosed.

Extensive plant expansion which within 60 days will double the output of the General Tire & Rubber Co., Akron, was revealed to 150 territorial representatives, gathered at the factory for a three-day convention this week. To the private gathering were also disclosed first samples of a new tread tire to be added to the General line.

The General factory is behind on orders for immediate delivery. This, despite its present production of 2,500 tires a day.

By far the biggest news of the clan's gathering was that conveyed by stakes run in lines from the present large factory. It was explained that contracts have been let for three buildings, each to be three-story structures, forming wings to the present plant.

One of these wings is to be 60 x 100, another 36 x 100, and the third 40 x 180. These will permit the installation of two complete mill lines with an equipment consisting of heaters, molds and tire-building machinery. Thus General's promise to its trade of a doubled output is taking tangible form. Contracts for the additions call for completion of the work in 60 days.

The October gathering, an unusual affair of General men, was enlivened by sessions in which each man present played the part of schoolmaster and "showed" the rest. This stunt, begun on Monday, lasted through until Wednesday. These sessions were further stimulated by a series of genuinely inspirational talks which were delivered by factory executives.

The new tire served as a climax after the disclosure of the plant expansion. This new offering, incidentally, is still to be shown to the trade at large.

Mason Advances Tire Prices

Notice has been given by the Mason Tire & Rubber Co. that all pneumatic tires and tubes made by the concern will be advanced in price five per cent. The new quotations are effective November 15 and are caused, the company asserts, by the increasing prices of crude rubber and cotton.

Ford Business Boosts Cotton Goods

Heavy purchases of cotton goods by Ford are held responsible in large measure for the added impetus given that market. One selling agency alone is reported to have received orders for 2,000,000 yards of goods during the past two weeks, this material intended for conversion into seat coverings, tops, and side curtains. Present indications point to the fact that Ford is covering his requirements for the next three to six months.

Straight-Side Tires on Baby Rolls

Further particulars of the new "baby" Rolls-Royce, which the parent British concern is developing show that it has a six-cylinder engine of 3 x 4½-inch dimensions and overhead valves. The chassis has a wheelbase of 129 inches and is shod with 32 x 4½-inch straight-sided tires on Dunlop detachable wheels. The significance of the tire specifications lies in that this is the first car from a maker of prominence to be equipped with the straight-sided tire, British makers thus far having clung to the old clincher type long after its practical disappearance from high-priced cars in this Country.

Answers Filed in Goodyear Suit

Answers have been filed in the Common Pleas Court in Cleveland in the suit of a stockholder seeking to have the reorganization of the concern set aside. The Union Trust Company and John Sherwin, as co-defendants, set up the plea that they are merely carrying out their contracts with officers of the Company, to act as trustees for the bondholders in connection with the reorganization. Plaintiff in the suit had asked to have the $30,000,000 bond issue set aside.

Lumber Industry Booms

Production by all lumber mills of any size in the Country reached the total of 236,958,030 feet for the week ending October 14. This is a new high mark and only the difficulty of obtaining cars in which to ship the output has troubled the industry. Motor makers report receipt of some lumber in open cars with tar-paper covering and many may resort to that practice if the shortage of rolling stock continues.

Overflow Show in N. Y. Projected

An overflow show for those unable to secure space in the Grand Central Palace at the national automobile show in New York is projected for Madison Square Garden, January 8-11. According to William H. Wellman, who is promoting the affair, its appeal is to be directed to car, truck and accessories manufacturers who are not members of the N. A. C. C. or the M. A. M. A. A Ford section, where novelties for owners will be shown, is promised as a prominent feature, while others will be "a general store" where makers not exhibiting themselves may put their wares on display with a staff of clerks to book orders, and a shop equipment exhibit.

SEIBERLING UPHELD IN BIG PATENT SUIT

Court of Appeals Reverses Decision of Trial Court in Case Against Maker of Tire-Building Machinery—Outcome of Importance to Tire Industry.

A decision of major importance to the tire industry was handed down this week by the United States District Court of Appeals at Philadelphia in favor of Frank A. Seiberling in his patent infringement suit against the John A. Thropp & Sons Co., Trenton, N. J. The court reversed the trial court's decision and handed down its decision in favor of Seilberling, president of the Seiberling Rubber Co. and founder and former president of the Goodyear organization.

The suit was based on his invention of the first tire-building machinery said to be used in this Country. Immediately following the decision it was said that the case would be carried at once to the United States Supreme Court.

The final outcome of the suit will closely affect the tire industry inasmuch as the Thropp company, one of the largest manufacturers of tire-building machinery, supplies such equipment to more than 60 tire factories in this Country. The outcome will also have an important bearing on a similar suit filed some time ago by Seiberling against the Firestone Tire & Rubber Co., in which case Firestone received the verdict in the District Court of Appeals at Cincinnati a year and a half ago, and which is now pending on appeal.

The Seiberling suit charges infringement of two of Seiberling's tire-building machinery patents, which he invented and used at the Goodyear plant in Akron. The litigation specifically involves spinning rolls and high speed cores used on machines spinning the cotton fabric into the tire carcass.

Prior to the final argument of the case before the trial court, the United States District Court of New Jersey, last February, Seiberling withdrew his infringement claim on his first patent and filed a disclaimer which sought to read into the latter patent a particular process of tire-building.

The District Court in its decision ruled that the patent infringement claim as modified by the disclaimer was invalid, on the ground that the process or method specified was nothing more than had formerly been followed by hand in tire construction. The Court of Appeals, however, in its decision now reverses the trial court and validates Seiberling's claim of a patent infringement.

Weekly-revised Table (page 1077) is an official listing of car makers who supply and check data listed.

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BRITISH MOTORISTS MOVE FOR NEW TAX

Join Hands with Automobile Industry in Plea to Return to Modified Excise on "Petrol"—Favor Moderate Impost on Owners as Adjunct.

Declaring they believe the present system of taxation on automobiles is wrong, eleven large organizations of British motor car owners and automotive industrial establishments are preparing to petition the Ministry of Transport to change it to one taxing according to gasoline consumption. Many interesting suggestions are brought forward by the societies, but all objections center around the belief that a taxation system without regard to road usage is a mistake.

It is claimed that the annual tax now in effect—which closely approximates in application that in this Country—defeats its own purpose, the construction and maintenance of roads—by levying the same tax on every owner whether he uses the road for 400 or 40,000 miles travel a year. It is also asserted that the tax tends to restrict the use of cars, fails to take into consideration the less damage done roads by light than heavy cars, tends to disrupt the industry by making demand spasmodic, and finally, that the duty of one pound per horsepower is too much.

As a substitute the objectors offer an improved tax schedule consisting of a flat rate duty per gallon of gasoline imposed on all imported "motor spirit," no rebates—which killed the former gasoline-duty law—abolishment of the registration books and a small tax on the vehicle itself. The present law went into effect in January, 1921, and so cannot be changed until the end of 1923 but a determined fight will be made to obtain sanction of the plan of the societies by the government at that time.

MICHIGAN "U" OFFERS MANY GRADUATE HIGHWAY COURSES

Schedule of "Short Periods" Covers Wide Range of Subjects

Proving more and more popular every year, the graduate short period courses in highway engineering and transport offered by the University of Michigan were made public this week. That the interest in these courses is not purely scholastic is evidenced by Prof. Arthur H. Blanchard, professor of the two subjects, who finds that last year 90 men, ranging in age from 22 to 54 years and coming, many of them, from actual work in State and other offices, attended.

The courses for this year number nearly twenty and range through the entire industry of making better highways. The University conferred 16 master's degrees on graduate students last June and is said to be the only similar institution in the Country offering such courses for credit towards advanced degrees.

Anderson Line Goes to China

E. R. Harvey, manager of the Christian and Missionary Alliance, Hankow, China, has been given the Anderson line for that country. Harvey reports sales in China largely depend on the car's appearance.

Petroleum Institute to Meet

St. Louis will be the place, and December 6, 7 and 8 the dates of the meeting of the American Petroleum Institute this year. To be held at the Statler it will be the third annual convention.

Gasoline Going Down

Standard Oil of New Jersey this week reduced the tank wagon price of gasoline one cent in North and South Carolina. This is the second cent reduction within two weeks.

S. A. E. PRODUCTION MEETING SIGNIFICANT

(*Continued from page* 1041, *third column*)

plan, on the other hand, simply sets a standard for closely-defined group operations—the closer the better—and rates efficiency according to the total parts taken off the end of the production line of that group.

Bonus paid pro rata, he pointed out, meets the first requirement, namely, that of reducing the labor of the checking individuals. But it goes even further, keeping groups in close boundaries and helping to secure interest of workers in the speed and accuracy of their fellows. Stricter inspection is found advisable under this, as under any plan which secures speeding up. But, he emphasized, with proper allowance for normal percentage of rejects, it enables defective material to go back in the line and come through again without a separate job ticket or accounting.

Discussion following the paper brought out that this plan, or adaptation of it, is already successfully used in many of the industry's most efficient plants. Some, as in the case of Winnerlund, simply use it where it is the best suited method, since day rate or piece-work methods also are admitted to have uses. It is particularly valued where many minor operations by different hands go to produce a single small unit.

Through the medium of lantern slides, which whetted appetites for personal visits in the afternoon, the convention was taken through the engine block department of the Ford River Rouge plant. How with minimum handling, iron and coal from mines proceed in a smooth stream to the foundry was made plain by views and diagrams.

These views proved that the popular conception that engines were cast from the blast furnace is not quite exact. On the average, 30 per cent of each casting is produced by blast furnace heat. Practical need of correcting the formula to standard specifications makes it necessary that ladles carrying iron from the furnace be diluted with a corrective portion of molten iron from the cupola.

This employing of original heat saves a tremendous amount of coal that would be required to reheat pigs were that method used. Cupolas are heated by by-product gases from coking plants, and these gases are also used with a coke screening in the power house to generate the power that operates a highly developed conveyor system and other specialized foundry and machining operations.

AIDS TO SALES ABROAD

Surveying the markets for automotive products in foreign fields, the Department of Commerce this week points to the reports listed below. Culled from the findings of the Department representatives in many lands, the information here is passed on as particularly interesting to those of the American industry who bid for sales abroad. The following thus summarizes the situation:

Rumania—German manufacturers steadily losing hold on Rumanian market for automotive electrical equipment after having dominated field for years. Generally speaking, opportunities for development of American trade improving. Although there are only about 5,000 motor vehicles in Rumania, which has population of 17,000,000, the number will be largely increased with return of normal conditions.

Argentine—During September, 224 American passenger cars and 25 European were imported as compared with 193 and 23 respectively for August. Assembled locally during September, 680 passenger cars and 91 trucks. Five European trucks were imported. Improvement of the market contingent upon crop output.

Persia—Practically all of nine hundred motor vehicles in Persia are light weight, as roads are few. Almost all fifteen trucks used by local government for postal service. Quite possible that good market for this class for urban use soon if prospects for development of industry and exportation of minerals are realized.

Algiers—American manufacturers to do business must accept payment in Algeria for goods delivered c. i. f., at Algiers, to allow credit when conditions warrant, and to give machines on consignment at the start.

Netherlands—Interest in motor cars on increase, and it is thought that there is profitable market for a moderate priced car. Automobiles not used extensively in Holland, owing to high tax and great popularity of bicycles.

Portugal—Trade in new imported American automobiles suddenly revived in Lisbon about two months ago, and many were sold at good prices. During period, about 30 of one make were sold, but sales were effected because merchant was able to sell through social connections.

Columbia—Market for motor vehicles quiet, as country is recovering from long business depression. Improved conditions may be looked for from now on. Low priced cars are in greatest demand and all well known American makes are in use. Very few trucks are found.

Hungary—Importers experiencing difficulties as a consequence of the recent establishment of central exchange office. Before placing orders for new cars, dealers must first assure themselves amount of exchange necessary will be on hand at time payment is due, and so are unable to promote sales of foreign products, except on consignment basis, which German manufacturers are preparing to arrange.

Brazil—Conditions of local market improving, but large sales of American cars not being made on account of unfavorable exchange. Five-passenger, low-priced cars sold in largest quantities. Seven-passenger cars selling from $2,000 to $3,000, are second in demand. Trucks of 1½ tons proving most popular, while 7½ tons is second.

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SOUTH BUYING CARS IN GREATER NUMBERS

Dealers Report Sales on Higher Level Than in Several Years—Cotton Crops Favorable in Some Sections — Used Car Situation "Spotty."

Sales of automobiles in the central and eastern southern states continue on the upgrade. Some dealers report more cars sold this year than for two years past. Used car stocks vary. Some find their floors crowded with this type of merchandise while others have few or none in stock.

"The trend of the automobile business in this section is better than it has been in approximately two years," says H. S. Stoutz, president of Demack Motors Co., Inc., New Orleans, handling Overland, Chandler and Willys-Knight. "Our sales have been at least 33 1/3 to 50 per cent above what they were this time last year. Our stock of new cars is low as we have been unable to get sufficient shipments from the factories. Our used car stocks are in very satisfactory condition; we are disposing of them about as fast as we get them and are being very careful in allowances."

Cotton crops having proven very good, the farmers in and around Laurel, Miss., are coming into the automobile market with renewed eagerness, according to reports from that section. The Standard Motor Co., Maxwell and Chalmers, finds sales beyond expectations, those of September being double those of August. The Company is four months ahead on the year's quota of Maxwell cars and used cars are moving freely.

Likewise, the Wright Buick Co., Eufaula, Ala., has experienced a decided increase in sales in this southeastern section of the state. Stocks of used cars are high, however, the Company reporting no new cars but plenty of old ones.

L. A. Jones, Dodge Brothers at Miami, Fla., finds prospects brighter than ever before, orders during September being about 50 per cent higher than in the same month of 1921, despite inability to get cars from the factory in sufficient quantities to satisfy the demand. Used car stocks are practically non-existent.

Sales of the Sloan Motor Co., Alexandria, La., Overland, Willys-Knight and Studebaker, are about on a level with the past few months and 50 per cent better than last year at this time. The used car market is good for light cars but heavier types move slowly.

Los Angeles Show in November

Los Angeles will stage its tenth annual automobile show under the auspices of the Motor Car Assn. of that city the week of November 11. One hundred makes of machine will be shown in space aggregating 135,000 square feet. A huge tent will house the exhibitions. Few 1923 models have been shown hitherto by the dealers, who are reserving them for the show patrons.

CALIFORNIA MAXWELL MEN FORM DEALER ASSOCIATION

Follow Lead of Other Sections to Give State-Wide Service to Owners

Maxwell dealers of northern California have formed an association similar to those already established in other sections of the Country, for the purpose of giving owners state-wide service. Under the direction of George Campe of the Campe-Rose Co., San Francisco distributers, an organization of every member of the dealer family has been accomplished.

"Following the policy of the Maxwell Motor Sales Co., we have endeavored to build into the Northern California Association of Maxwell Dealers the policy of the best possible man for each department," Campe explains. "In our San Francisco branch, for instance, we keep open our service and sales department until midnight and all day Sunday. This is the service idea we want to provide all Maxwell dealers."

Jersey City Stages Third Show

More than thirty makes of cars will be exhibited at the third annual show to be staged by the Hudson County Automobile Trade Assn. in Jersey City, November 11 to 18. The 41 spaces provided for displays have been sold and manufacturers are said to have promised local dealers 1923 models for the event. A. R. Southworth is chairman of the show committee.

WRIGHT-MOSES ERECTS NEW SALES-SERVICE STATION

Portland, Me., Dodge Brothers Dealer Invests $40,000 in Building

Wright-Moses Motor Co., Dodge Brothers dealer at Portland, Me., is erecting a new $40,000 sales and service station at 324-326 Forest avenue. The establishment, one of the largest on the local automobile row, is to be a one-story, brick structure with cast stone trimmings.

The plans call for a salesroom 35 x 53 feet with offices immediately to the rear. Behind the offices is built a large stockroom and accessory department. The balance of the building, on a site covering an area of 16,000 square feet, is to be devoted to a well proportioned service station. The building will be completed and ready for occupancy by March 1, it is expected.

Barley Moves Chicago Branch

Barley Motor Car Co.'s Chicago branch has been moved from 2700 to 2458 South Michigan avenue. The new premises were formerly occupied by Hill & McShane.

BETTER BUSINESS IN SOUTH IS PREDICTED

Gibbes, of Machinery Concern, Finds Prospects Good—Settlement of Railroad, Cotton Mill and Coal Strikes Puts Men Back to Work.

Settlement of the labor troubles on the railroads, in the cotton mills and in the coal mines has put a million men back to work and removes the chief impediments to progress in the South, F. H. Gibbes, president of the Gibbes Machinery Co., Columbia, S. C., believes. Gibbes points out that the increased purchasing power thus conferred on the working class means more sales to the merchants and more business for the automobile dealer.

"Higher wages and excellent harvests also will make particularly heavy demands on local transportation facilities," Gibbes further explains. "Shippers in the South, I venture to say,—in the majority of cases—will find the motor truck is the most valuable unit available for short-haul distribution.

"One particularly large shipper that I know of stated that the reasons for this pronounced preference for the truck were that larger loads could be carried by trucks; the combined loading and unloading time per unit was far less than for the number of horse-drawn vehicles required to handle the same load; and, less running time was necessary to handle the same amount of material.

"The American Railway Express, has found that increased economy, larger volume of business and greater satisfaction result from truck usage and that the truck is not affected by weather or road conditions. The Post Office Department, after seven years experience with motor vehicles, has come to the conclusion that they have many advantages over horse-drawn equipment, even where the distance to be traveled is short."

Trade Grows in Pacific Northwest

Bruce Daniels, Pacific Coast representative of the Stutz Motor Car Co. of America, reports business conditions in the northwestern section of the Coast as showing material improvement and the outlook for Winter very good. Daniels spent three weeks touring the district as far north as Seattle and closed a contract with the Autocrest Motor Sales Co. for distributership for Oregon territory. The concern handled Stutz cars some years ago.

Hold Chicago Closed Car "Show"

Members of the Chicago Automobile Trade Assn. during the past week cooperated in holding a closed car "show," displaying these types in their individual show rooms and advising the public of the function. All dealers kept their show rooms open until 9:30 p. m. or later. No attempt was made to check results in exact figures.

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MICHIGAN PIKERS TO TOUR CANADA IN 1923

Starting from Detroit, Route Will Reach from Ottawa to the "Soo"—Schedule 1,600-Mile Trip—Gilbreath and Other Officers Re-elected at Annual Meeting.

Michigan Pikes Assn. is committed to an international tour in 1923 as a result of the resolutions adopted at the annual meeting, held at Detroit on October 4. The route authorized has as its eastern terminus Ottawa, Can., its northern point Sault Ste. Marie. The start and finish will be in Detroit.

The tentative date fixes the start the second week in July and the mileage is approximately 1,600. The schedule is to be 14 or 16 days with a day layover in the "Soos" and Ottawa. It will be the ninth annual good roads tour of the M. P. A. and the third international tour in its history.

Nine directors elected at the annual meet convened after the general meeting and elected officers for 1923. Capt. W. S. Gilbreath, manager Detroit Automobile Club, was re-elected to the presidency. Willard K. Bush, Detroit, and Fred E. Shearer, Bay City, were re-elected secretary and treasurer, respectively. Herman Lunden, Lewiston, Mich., was elected first vice-president.

The directors elected for the ensuing year were: W. S. Gilbreath, William E. Metzger, Willard K. Bush, D. C. Richardson, Horatio S. Earle and Harry H. Jackson, all of Detroit; Fred E. Shearer, Bay City; Fred S. Case, and Elmer W. West, Sault Ste. Marie.

Willys Cars in Reliability Runs

Three Overland "four" touring cars and a Willys-Knight touring entered by J. Hamlet & Co., Ltd., dealer in New Zealand, were given perfect scores of 1,000 at the completion of the recent reliability run of 143 miles from Christchurch to Akaroa and return. There were 26 cars in the contest and road conditions and a driving rain made the trip extra hazardous. The Overlands averaged 27.24 miles to the gallon of gasoline and the Willys-Knight 19.22.

Plan State Automobile Insurance

Plans are afoot for the introduction at the next session of the Pennsylvania legislature of a bill to create a State fund for the writing of all automobile insurance. A number of automobile clubs of the State are said to be back of the plan.

Movie Shows Automobile Crash

Just what happens when an automobile crashes into a tree or like obstruction when equipped with bumpers is shown by slow motion photography in the Biflex Products Co.'s new film, announced this week by the Automotive Equipment Assn. The bumpers are seen to absorb the shock, bending around the tree and saving the car from damage. "Protection with Distinction" as the film is titled, is an additional chapter in the "Shop Profits" and "Ask 'Em to Buy" series being distributed by the A. E. A.

Motorized Trains Succeed

Experimental operation of gasoline motor driven cars by the Great Northern and Northern Pacific railroads has proven successful, the Companies report. Extension of such service, involving a type with large seating capacity and a trailer and good-sized baggage compartment, is favored.

M. A. M. A. Endorses A. A. C. W. Work

Motor & Accessory Manufacturers' Assn. has heartily endorsed the work pursued by the Associated Advertising Clubs of the World. In a resolution adopted by the M. A. M. A. directors on October 4, that body offers to "assist by reasonable financial as well as moral support" the activities of the A. A. C. W. in its drives for "truth in advertising."

METROPOLITAN SECTION OF S. A. E. PLANS FINE PROGRAM

Speakers and Papers to Be Presented Form Most Constructive Schedule

Metropolitan Section of the Society of Automotive Engineers has programmed the most constructive schedule of meetings for the coming Winter it has ever had. The first of these was held on October 19, when William B. Stout, of the Stout Engineering Laboratories, Inc., Detroit, spoke on the "Modern Airplane and All-Metal Construction."

Other meetings scheduled are as follows: on November 16, A. L. McMurtry, who recently resigned as consulting engineer for the State of Connecticut "Regulations Governing the Use of Rural Highways"; December 14, Charles P. Grimes, research engineer, "Air Cooling in Automotive Engines"; January and February are left open, the former month bringing with it the annual meeting to be held in New York at a date to be announced later, and February being devoted to other matters. On March 15, William P. Kennedy, president of the Kennedy Engineering Corp., will speak on "Trolley Buses and Flexible Vehicles for Street Railway Service."

Gasoline Prices Continue Down

Following the lead of competitors, the Texas Co. last week reduced the price of gasoline one cent a gallon in New Jersey, Maryland and District of Columbia and in certain points in the South. Under the new price schedule, tank wagon price is now 23 cents.

CONSUMPTION OF GAS SETS NEW HIGH MARK

Growth of Automobile Sales Reflected in Government's Figures on August Situation—Production Falls and Stocks Are Drawn Upon.

Consumption of gasoline in the United States attained a new high record during August, the Bureau of Mines determines in presenting its usual statistics on the "gas" situation for that period. The increase, as compared to July's figures, which themselves recorded an immense growth in the consumption of fuel, was 3.1 per cent and reflected the sales of automobiles in August which, as will be recalled, reached a sum only exceeded in any one month this year by June's output.

Production during the month did not equal that of July, however. Twenty million gallons less is approximately the recession the figures being July, 569,711,000, and August, 549,958,000. Stocks were accordingly drawn upon and fell off 69,000,000 gallons to 772.908,000.

THE GASOLINE SITUATION AUGUST, 1922

(In gallons, last three figures omitted)

	August 1922	July 1922	August 1921
Income—			
Stocks[1]	772,908	824,966	684,236
Production	549,958	569,711	431,577
Imports	2,829	4,840	5,097
Total	1,325,696	1,399,517	1,120,911
Outgo—			
Exports[2]	38,270	60,497	49,752
Consumption	583,687	566,111	503,513
Stocks[3]	703,738	772,908	567,645
Total	1,325,696	1,399,517	1,120,911

[1]First of month.
[2]Includes shipments to insular possessions of U. S.
[3]End of month.

Exports of gasoline during August amounted to 35,747,004, or a decrease of 23,000,000 gallons as compared with July. Imports were 2,829,062, a decrease of about 2,000,000 gallons. Shipments to insular possessions of the United States were 2,523,141.

During August the daily average of 1,571,000 barrels of oil run through the stills of 295 refineries were reported to the Bureau as operating. This is a decrease of one per cent in the amount of oil run and a decrease of 10, or 3 per cent, in the number of operating refineries as compared with July.

Indiana Has Many Automobiles

Standard Oil Co. of Indiana, in surveying the field in its territory, finds 3,800,000 automobiles registered. Applications for Illinois passenger car and motor truck licenses this year are close to 800,000, the Company finds.

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MITCHELL COMPLETES "MILLION MILE" TEST

Last of 109 Stock Cars Finishes Long Run—Average Mileage 91 for 120 Days—Gasoline Consumption Found to Be 17.9 Miles Per Gallon.

Mitchell Motors Co., Inc., completed its "million mile" test on October 14. In the time elapsed between July 4 and the conclusion of the demonstration, 109 "white streaks" were engaged in rolling up a total of 1,109,880 miles, an average of 10,920 miles each, with sealed hoods and without any mechanical attention.

The demonstrations began on the Pacific Coast when Charles Ray, the motion picture actor, officially sealed the hood of No. 2 car and the seal remained unbroken until the closing date. It was found that not only had the motor remained in excellent condition but that the chassis had withstood the journey's strain without harm.

The other cars, operating in various sections of the Country, were run on about the same schedule and with the same results. They averaged 91 miles a day for the 120 days with an average performance of 17.9 miles per gallon of gasoline.

American Issues Folder

Attractively printed, an eight page folder has been issued by the American Motors Corp. describing the 25,000-mile warranty, and, in part, the terms offered dealers to handle the American car. Emphasis is placed on features of the long-term, dealer-contracts whereby no cancellations by the factory "except for cause" and leeway to reduce shipping orders up to 50 per cent of the contract schedule are included.

10,000 MILES OF HIGHWAY ADDED WITH FEDERAL AID

Present Calendar Year Smashes All Records for Road Construction

Ten thousand miles of completed Federal-aid highways were added to the mileage of the Nation's good roads during the last fiscal year, according to a compilation just completed by the Bureau of Public Roads. The bureau administers the Federal-aid program and its summary of results will be placed before the forthcoming annual conference of the Highway Education Board to be held in Washington, October 26 to 28.

The bureau finds that the present calendar year has broken all records for road construction. Based on all available data, which are not complete, however, the bureau estimates the total sum to be spent in the United States this year on highway construction at $742,000,000. The figures include Federal-aid roads and projects built in addition by the states and smaller municipal units without the aid of Federal funds.

Builds 243 Garages in New York

Joseph B. Thomas has leased ground from Vincent Astor, New York capitalist, and has filed plans for building 243 one-story garages and a gasoline station on a large site between 149th and 150th streets, in the metropolis. Each garage will be 10 x 17 feet and will cost $150.

Parts Trade Lively in Texas

Wholesale automobile accessory dealers in Texas, meeting in convention in Fort Worth last week, reported that the past six months has seen the best business as far as volume is concerned since 1919. Prospects for the rest of the year are reported good.

LAY FOUNDATION FOR GOOD ROADS CONGRESS

Convention and Show at Chicago Will Follow Features of Predecessor

Extensive preparations are being made by the American Road Builders' Assn. for the staging in Chicago from January 15 to 19, 1923, of the Thirteenth American Good Roads Congress and the Fourteenth National Good Roads Show. The program for the sessions of the meeting presents the only radical change from last year's policy. It will be held in the Congress hotel, instead of the Coliseum, as heretofore, the big structure being reserved for the show.

Reorganization of the Association's official structure last year following the show, has resulted in greater coordination and efficiency as applied to the 1923 affair. The exhibitors have perfected the Highway Industries Exhibitors' Assn. and will thus obtain better results in staging the displays. The special convention and show committee was also created and this year will demonstrate its value in carrying on the program.

Neel-Cadillac Club Reorganizes

Following reorganization, the Neel-Cadillac Club, composed of employes of the Neel-Cadillac Co. of Philadelphia, has elected the following officers: Joseph Comly, president; C. Emery Williams, vice-president, and Hugh McHenry, treasurer. The board of directors consists of Henry M. Gilmore, W. J. Neel, W. P. Smith and Harry Ettinger.

Naylor Gets Nash Franchise

Distributing franchise of the Nash at Salt Lake City has been granted the L. O. Naylor Nash Co. This point formerly was controlled by Pacific Nash Motors Co., Nash distributer in the San Francisco territory.

HIGHWAYS REPRESENT HALF OF STATE DEBTS

Bank of America Analyzes Billion Dollar Bonded Indebtedness of Nation—Construction of Roads and Bridges Found to Be Leading Single Purpose.

More than a third of the $1,071,506,981, the total of the outstanding bonded indebtedness of all the states, has been incurred for highway projects, according to a nation-wide survey of state debts and securities just completed by the Bank of America, New York. Another 20 per cent of the aggregate represents bond issues for waterways and harbor improvements.

The construction of highways and bridges is by far the leading single purpose for which the outstanding debts were incurred. The total of $367,687,100 in highway bonds represents 34.3 per cent of the entire indebtedness of the states.

These figures are further significant, the bank points out, when it is remembered that the development of state highway systems is comparatively recent and that a large proportion of these sums has been doubled by Federal aid. And yet for all this highway development vital to our life and commerce the per capita state debt is only about $3.50.

Among the noteworthy highway systems financed by large bond issues now outstanding are those of California ($55,000,000), New York ($100,000,000), Oregon ($31,700,000) and Pennsylvania ($50,000,000). Illinois, Maryland, Massachusetts, Michigan and West Virginia have bonds for more than ten million dollars now outstanding issued for highway purposes.

Waterways and harbor improvements—the development of port and canal facilities—come second in the list of purposes of state indebtedness with a total of $213,891,400. This includes the $154,800,000—the largest individual item in any classification—with which New York State has been financing its great canal projects.

It is interesting to note that the total for the state debts at present is very nearly the same as the Federal debt before the war. In 1913 the public debt of the United States Government was $1,028,564,000 or about $10.60 per capita. It is now about $23,922,000,000 or about $226 per capita.

Dort Dealer Becomes Distributer

D. A. Heindel, Youngstown, O., has taken on the distributership of the Dort car. He was formerly a Dort dealer with that city as his headquarters.

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points appears on pages 1077-9 of this issue.

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S T A N D A R D O F T H E W O R L D

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CADILLAC MOTOR CAR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

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City Engineers Enterprising

All proper credit is due the American Society for Municipal Improvement for its enterprise in entertaining automobile traffic regulation as a subject for standardized treatment. Traffic reform, badly as it is needed, can come only from the concurrent efforts of the several parties at interest. But of these it would seem that in many ways the members of this particular group are better qualified than almost any others to take the initiative. For this reason it is agreeable to those having the automobile viewpoint, to find that the ideas of the civil officials are running pretty nearly parallel with those expressed in the proposed uniform law, with which automobile men are already familiar.

Luggage Racks

Nickel-plated rods, running up and down the back of the car are getting to be quite the thing. In some instances they mean absolutely nothing, while in others they suggest that the ultimate consumer is meant to use his own discretion in picking out a trunk to go on behind. In some cases where trunk racks are provided, but not in all, provision for carrying spare tires on the running-boards is made. In others, the luggage rack is a ridiculously narrow shelf serving no possible purpose, except, perhaps to mount an ornamental, but not particularly useful piece of special luggage.

But is it not time for the automobile maker to consider more seriously the real needs of the consumer with respect to luggage-carrying capacity on the so-called touring car? Get out on the road and watch them go by. Every fourth or fifth car carries something in the way of a load, either stuffed away in the tonneau or lashed upon the running-boards. Some are dangerously overloaded. Evidently the manufacturer who first solves the problem in a distinctively satisfactory way, will receive all the credit he deserves.

Provision of slats and strap-loops on the sides of the body have been suggested. But side loading is always bad, because it throws the car out of balance and invites the thoughtless driver to put on articles which overhang and may cause him to obstruct traffic. Probably a really substantial luggage rack in the rear, provided, perhaps, with a tarpaulin boot, such as is used on some of the California stages, for example, would be far better. It must not be forgotten that its utility is the great winning feature of the passenger car. Let its utility be cultivated in all ways, and the trade will never regret.

Where Are They?

Can it be that there is a dearth of capable and experienced men in the automobile industry, men who are capable of assuming responsible and important positions in the larger organizations? Is this a time when a shortage of executive material should be anticipated?

Recently one of the largest automobile manufacturers advertised for a number of men competent to assume posts of no small importance, at the same time identifying themselves with an organization of sorts. Replies flowed in to a gratifying extent, quantitatively speaking, but their qualitative value was dubious. Most of them came from men who needed jobs, rather than from seekers of opportunity. Consequently the question arises whether this be a sign of the times, or an indication that partial success breeds too great contentment?

"Cooling"

Discussion of airplane exploits, in connection with the recent races for the Pulitzer trophy, brings out the fact that in a typical instance as much as forty horsepower is absorbed in just pushing the radiator of the plane through the air. "Parasite" resistance, they call it, resistance which must be overcome without producing any lifting effect. And in certain cases it may be considered the limiting factor in speed.

But if so, why the radiator? Why not air cooling, for instance? All of which brings to mind the fact that the word "cooling" as applied to the temperature control of an internal combustion engine, is more or less of a misnomer. To prevent overheating is essential, of course, but to establish and maintain uniform temperature conditions is equally important if economy and a smooth flow of power regardless of the temperature of the atmosphere, are to be attained.

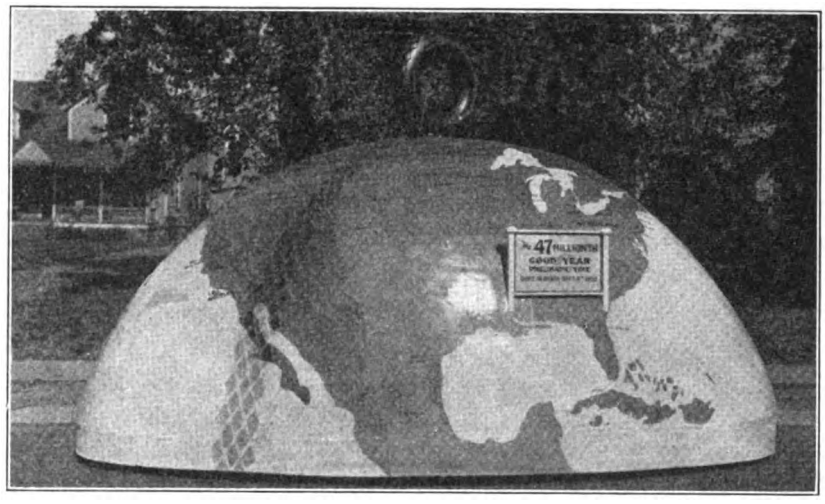
Control, rather than cooling, therefore, is the motive that sustains the radiator, even in airplane practice. Incidentally, some of the later theory concerning it, which is still to be released for publication, has brought forth some striking developments, causing quite a little stir in the engineering world.

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'Tis Pleasant Sight When Makers "Show Off"

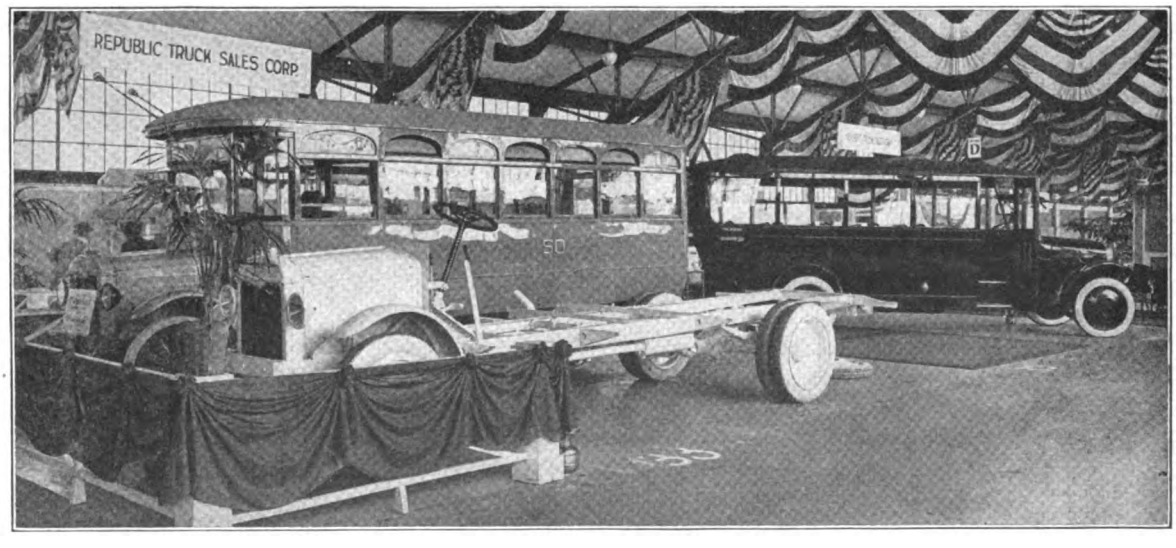
Tires, Cars, Buses — All in Recent Activities

IN the parade celebrating the opening of the $2,000,000 viaduct in Akron, Ohio, the Goodyear Tire & Rubber Co. staged this float. The general note of association of the tire with the world's activities as shown in Goodyear's national advertising, has been conveyed in the float. It was conceded that the exhibit was the most consistent piece of advertising shown





STANDING on the rear seat of one Buick and using a Pennsylvania tube as a cable, Tom Cameroni hauled another Buick, filled with newsboys and girls with their wares, through San Francisco traffic. The car never faltered as the procession moved to the Auditorium —nor did Tom



At the American Electric Railway Association Convention, held recently at the Chicago Municipal Pier, the four types of the Knight-motored bus, exhibited by the Republic Truck Sales Corp., were studied by the delegates

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Lubricating Systems May Be Improved

Dry Sump System Recommended—Constant Temperature and Pressure Seen as Essential Features

By F. R. PORTER, M. S. A. E.
From a paper read before the Metropolitan Section, Society of Automotive Engineers

A BRIEF review of the former art, up to and including present practice, reveals very little change in principle, and discloses no particular increase of types of lubricating systems, but indicates progress more along the lines of intense development of well known methods, more particularly as to the apparatus used.

Contrary to the general trend, there is one type, that of the "all loss" system, which the writer believes worthy, with modifications, of further development, which is fast disappearing from use in general practice. The "all loss" system is defined as one wherein the oil distributed to the several surfaces to be lubricated is intended for total consumption, either by leakage or burning, and is supplied in as nearly the right quantities as possible to prevent undue waste.

Early practice along these lines shows every indication of, and did, without doubt, follow the lines of steam engine lubrication, since the majority of designers at that period were graduates from the steam engine school. Following the period of hand filled sight feed oilers in connection with this system, mechanical oilers directly connected to the engine came into use, and were very effective except for the fact that, the supply control being a function of engine speeds, great difficulty was experienced in maintaining a proper supply over the full range of engine speeds.

The necessary waste in connection with such systems resulted in the addition of a "semi-splash" system, wherein the excess oil was led to the crankcase and utilized by splash for cylinder, connecting rod and main bearing lubrication. This system was quite successful during the period of large bores and low mean temperatures and is still found in use to some extent.

Owing, no doubt, to the difficulty and intricate apparatus necessary for keeping the rate of supply within the limits of consumption, this system was abandoned largely in favor of the "straight splash system," wherein a given quantity of oil was placed in the motor base and renewed from time to time, thereby maintaining a more or less constant level. This system, known as the "splash system" is still in use, but in the writer's mind is not deemed worthy of consideration in connection with future development.

Another development from the original "all loss" system is that of the "forced feed and splash system," that differs only from the straight splash system in that pump circulation is used for a more thorough distribution of oil to the numerous friction points, with a return to the sump of all unconsumed oil—which resolves itself into a continuous circulation system far superior to the "splash system," inasmuch as a better distribution of the oil is had for the use intended and a sufficient supply at all points is always assured as a result of the moderately high pressures carried.

A further refinement of this system is that of the "dry sump," or, more commonly termed, the "forced feed system of lubrication." This system exists in two forms, the first of which is the truly "dry sump system" wherein the lubricant is carried in an outside container, or separate tank; and secondly, where the lubricant is carried in the base of the motor, but is beyond the reach of the crank or reciprocating parts so that no splash effect is had. Both of these systems are in effect equally good, except that the outside or separate container materially helps in the matter of oil cooling.

The "dry sump system," with separate container, also lends itself more readily to the use of a sediment sump, or means for accumulating the impurities in the circulating oil due to decomposition and accumulation of foreign matter; and of the two is the system more to be recommended from an efficiency standpoint—but from a cost standpoint is somewhat more expensive and does not lend itself so readily to application on the present day pleasure car. This latter objection, however, is not so pertinent to the commercial truck application.

The three systems enumerated above, i. e., splash, forced feed and splash, and the dry sump system, practically cover the types of oiling systems now in use as applied to the automobile industries.

A brief review of the motor vehicle field discloses the following distribution of systems:

	Pass. Cars	Comm. Veh.
Straight Splash	9	69
Force, or Dry Sump	72	364
Force and Splash	83	229
Total models	164	662

The above figures disclose the straight force feed, or dry sump, system predominating in the commercial vehicle

LUBRICATION ADVANCING

IT is long since special emphasis has been placed upon either of those three fundamental accessories of the modern internal combustion engine, the carbureter, ignition and the lubricating system. But it does not follow that there has been an end of development in either case, or that further improvement is impossible. Rather, commercial problems have come so urgently to the fore, while the average car has performed so satisfactorily, that the urge for progress has been rather faintly heard by the man in the street. In fact, many a consumer could not distinguish these features of his car from the corresponding features applying to another make, while many a dealer is hardly better informed, save in those descriptive terms that are useful in mystifying the prospective purchaser.

But lubrication is important, and so closely related to the problems of the fuel and the carbureter that even the experienced engineer often is puzzled to tell where one leaves off and another begins. Therefore, this address by Finley R. Porter, veteran designer of fine cars, touches on a strangely unfamiliar subject that is absolutely vital, touches on it, too, in a way that is really interesting

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field, while the combined force and splash predominates slightly in the pleasure car field.

In the nomenclature of the automotive fields, the dry sump systems are designated as forced feed systems, but for the sake of comparison and discussion will be referred to hereafter as dry sump systems—which it is believed will more clearly designate them when compared to splash, and force and splash systems.

In view of the figures given above, it is obvious that the splash system is so nearly obsolete that further discussion of it is deemed unnecessary.

Pressures of Force and Splash System

The force and splash system, as used at the present time, utilizes pressures ranging between 10 and 30 pounds, and in most cases uses this factor as a means of controlling the delivery to the several points of lubrication. This, to the writer's mind, is fundamentally wrong, in that a uniform pressure is had throughout, while bearing pressures vary according to the different inertia forces involved; which means that very small orifices must be resorted to where quantities of oil are not required.

It is customary, generally, to deliver oil from circulating pumps to the main bearings, thence through tubular crankshaft to the connecting-rod bearing with a continuous registration of the oil inlet to the crankshaft. As a result, the amount of oil thrown on the cylinder walls and pistons is controlled largely by the fit of the connecting-rod bearings and is the factor that more commonly designates the pressure to be employed. In most of these systems, it is common practice to depend upon lubrication of the timing gears and camshaft compartments by oil vapors created largely by agitation and heat. With overhead camshaft construction, however, a lead is tapped from a main bearing that conveys the oil to the camshaft compartment; the lubrication of the vertical shaft and gears depend on the return flow of the oil delivered to the upper camshaft compartment.

In some cases, however, control of the oil delivered to the camshaft and other compartments, as well as connecting rod bearings, is had by a partial registration at the main bearing—which permits of full pressure being carried on the main bearing and a modified supply to other parts enumerated. This is without doubt a much better interpretation of this system.

Dry sump systems as used in the automobile field today are, in the main, an improvement insofar they do not incorporate the disadvantages of the splash system. Otherwise, the two systems are identical.

In the airplane field, however, the dry sump system has been more refined since the means of distribution have been much better worked out and the question of oil temperatures taken into consideration. Most motors of this type utilize an overhead camshaft, and representative types employ as high as 100 pounds pressure on all main bearings, controlling the supply to the connecting rod bearings by partial registration, thereby limiting the amount of oil thrown into the cylinders. A direct supply from the main pump is carried to the camshaft compartment, either by a drilled duct or outside pipe, which terminates at one of the camshaft bearings where plain bearings are employed. At this point further control is had by partial registration with a hollow camshaft at which point the amounts delivered to the several bearings and cams are controlled in the same manner. A direct supply to the timing gears, vertical shaft bearings, etc., is also taken from the main line and the supply limited only to the extent that it does not affect the main bearing pressures.

The return system comprises one or more compartments that are in turn controlled by a sump pump of excess capacity that delivers the oil back to the main reservoir. In the more modern engines cooling devices are employed in the suction line of the circulating pump—attempting as they do to maintain the oils at temperatures below 160 deg. F.

This system is representative of the general principle of all modern airplane engine lubrication. The several systems, however, differ in methods and devices employed, some of which are governed by types of engines and the purpose for which they are intended.

Some foreign airplane engines use oil radiators of the direct air-cooled type, and their makers recommend oil temperatures as low as 125 deg. Fahr. This system, where heavy horsepowers are involved, calls for an unusual amount of radiating surfaces and has the disadvantage of lack of control in extremely low or rapidly changing temperatures. It is, however, worthy of development, and will no doubt play an important part in future oiling systems as applied to airplane engines.

Inasmuch as the airplane engine is of necessity more refined than the pleasure car or truck engine, greater attention has been paid to oiling system details—but in no case is the added complication such as to be prohibitive in connection with pleasure and commercial vehicles, and consequently it is proposed to limit further discussion to the more modern lubricating systems as employed in airplane engines, with a view of developing a more ideal system that could be readily employed in any field.

The ideal would be an all-loss system wherein fresh oil at a temperature not to exceed 150 deg. Fahr. would be supplied to timing gears, vertical shaft and camshaft bearings, main bearings and connecting rod bearing and wrist pins, with all returns collected and distributed in proper proportion to the cylinder walls at a temperature not to exceed 170 deg. Fahr.

Since this is obviously impossible, it is proposed to consider a dry sump circulating system with initial pressures ranging between 80 and 100 pounds and oil temperatures being maintained between 100 and 160 deg. Fahr. A separate reservoir should be employed connected to the suction end of the main circulating pump of the gear type with a cooler located between the reservoir and pump with radiator outlet water used as a means of controlling the temperature.

As to the Discharge or Pressure Line

The discharge, or pressure, line should lead directly to all main bearings, gear sets and camshaft compartment. The supply to connecting rod bearings should be through a hollow crankshaft with properly drilled ducts to the crankpins controlled by partial registration at the main bearing. Supply to the wristpins should be through a small tube, or hollow connecting rod, to the inside of wristpin. The wristpin bosses should be the closed-end type with distribution holes drilled through the wristpins to the working surfaces.

Control should be had by proper length radial grooves that register only on the top stroke, since the registration would be direct with oil hole from main bearing. Sufficient lubricant would be assured regardless of the big end bearing fit or the amount of oil being fed to the connecting

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rod bearings. In effect this would be at extreme outer stroke, a direct connection to the pressure feed on main bearings.

A direct line for the camshaft compartment should terminate at the end bearing at full pressure with distribution through a hollow camshaft controlled by proper registration, with means provided for the excess oil returning directly to the sump without contact with heated surfaces as far as possible. Surplus oil from the other cam bearings and cams should be returned in the same manner. The supply of oil to each cam should be by a small hole drilled on the negative face of cam and to the cam bearings through a small hole, without grooves.

The supply to all gears should be through a high pressure jet of sufficient size sprayed directly on the meshing side of each gear train, with the overflow, or return so conducted to the main sump as to avoid contact with main crankcase compartment.

The main pump should have a sufficient capacity to maintain full pressure even after considerable wear has taken place in the main bearings. This would necessitate an efficient relief valve when all bearings were a perfect fit. Assuming the working temperature of the inlet water to be not in excess of 170 deg. Fahr., it would easily be possible to assume the radiator outlet temperature to be something below 150 deg. Fahr. This water should be carried at full capacity of the water circulating pump through the oil cooler placed in the suction line. If used in connection with a thermostatic control of the motor temperature, rapid warming of the oil in cold weather would be realized, thereby assuring perfect circulation almost immediately.

A separate sump pump should be utilized with an excess capacity for the return of all oil to the main reservoir. The main sump should be so arranged as to provide an adequate settling basin for the accumulation of all sediment. The method of control proposed for the supply to connecting rod bearings and wrist pins can be worked out very definitely, having in mind as the controlling factor the amount of oil necessary for cylinder lubrication.

Since cylinder walls rarely ever reach excessive temperatures, decomposition of the oil by contact with highly heated surfaces, can be almost totally eliminated. It is also obvious that since it is proposed to maintain the main oil supply at reasonable temperatures, the more detailed distribution means much higher viscosities at the points of use.

No mention has been made of crankcase dilution, since the writer feels that this is a matter of carburetion and cannot be even partially eliminated with any degree of success by a variation of the oiling system.

House the Curb-Parked Car—We Need More Room

City Garages a Solution of Housing Problem of Day-Time Stored Cars

By HARVEY D. DUNN

RECENT discussion in the New York newspapers and the publication of letters in the Philadelphia newspapers, relative to the alleviation of traffic congestion in those cities, must sound a note of warning to many other cities where motor-vehicle congestion exists. The constantly increasing numbers of automobiles in use force us to a serious consideration of some practical solution of the problem of securing the maximum capacity of the streets for vehicles.

Obviously, the first step toward such a solution is the removal of automobiles parked along the curb. It is hardly necessary to point out the undesirability, from every point of view, of these parked automobiles. The possible size of the traffic stream, its rate of progress and the safety of all kinds of traffic, both vehicular and pedestrian, are enormously lessened by rows of empty motorcars crowded into every available roadway.

It seems wholly feasible to provide proper garage accommodations for housing the automobiles of those who may be engaged through the day in office buildings, department stores and similar places of business; garage buildings which may be located at strategic points throughout the business and theatre sections of the city, preferably on streets so situated as to divide traffic as equably as possible.

Such a system of garages, properly designed and constructed to provide efficient interfloor travel, would not only remove all congestion of the streets due to parked automobiles, but would also prove a source of tremendous satisfaction to owners of cars who have been inconvenienced and worried by having to leave their automobiles all day exposed to the tender mercies of weather, street urchin and sneak-thief. Ladies driving from the suburbs to attend to shopping in the city would find a conveniently located garage an inestimable boon.

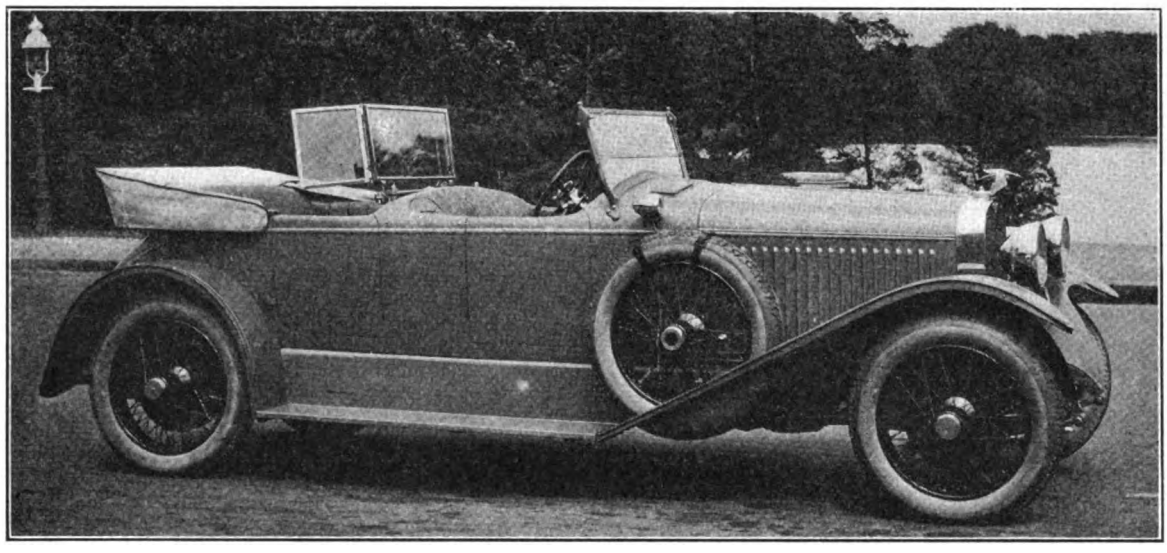
THERE is practically no limit to the advantages derived from such a reasonable and wholly possible solution of the housing problem of owner-driven, day-time stored automobiles. The difficulties in the way of a realization of such an ideal situation are at first view rather disconcerting; the high cost of land in locations suitable to meet the requirements, the cost of erecting the garage buildings, and finally the zoning laws which obtain in the larger cities.

Were the garages to be municipally owned and operated, most of these difficulties could be overcome with comparative ease, however. By constructing the garage on a small plot and running up a number of stories, the cost of the ground could be reduced to a minimum. Property owners would undoubtedly find it preferable to amend existing zone laws and to welcome the modern type auto-apartment, rather than continue the present impossible traffic congestion, with all the undesirable features which are becoming increasingly apparent.

The swarms of parked automobiles which line the pavements everywhere are unquestionably a far greater detriment to a locality than a modern, fireproof, attractive garage could be.

In any case, the problem is one which must be met, and, however we decide to solve it, let it be quickly, for the next few years are going to witness a tremendous increase in the use of motorcars, and the traffic conditions are not going to improve because of this increase.

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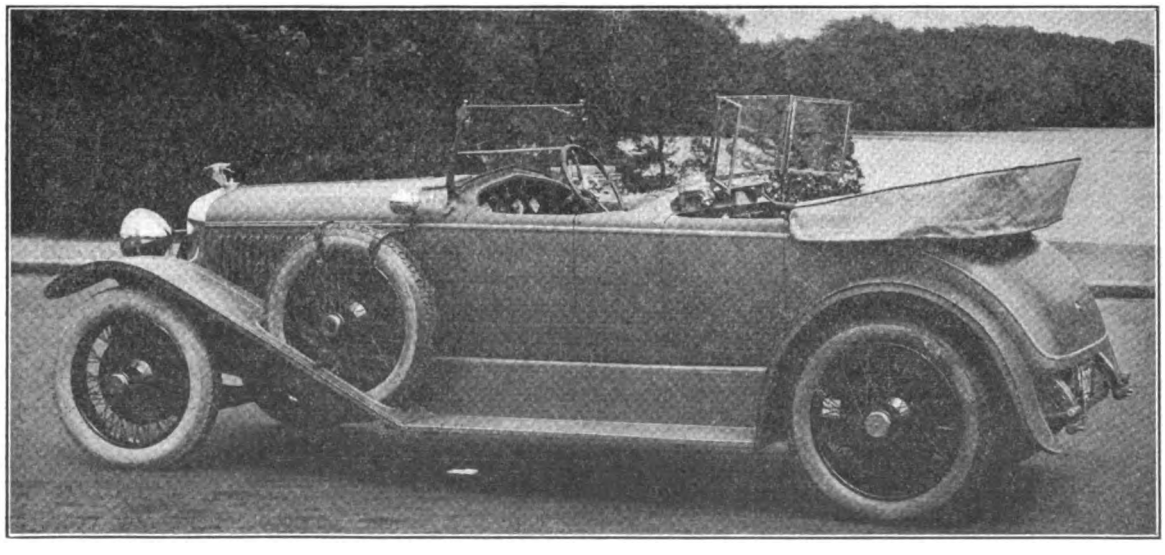
Striking New Notes in Open Body Design

DEVELOPMENTS in body design are more than keeping pace with chassis engineering advances. While the most marked progress is inspired in custom-built coachwork, many innovations of the Country's foremost coach builders lend themselves to quantity-production bodies. A custom-built job that offers possibilities in this direction is the four-passenger phaeton illustrated on this page.

In the first place, the cowl and also the construction at the rear of the front seat is made to harmonize with the lines of the radiator. At the back of the front seat is a walnut cabinet and windshield wings.

Lines at the rear of the body conform to the contour of the fenders, yet without sacrificing grace. The design permits, also, a luggage compartment in the rear deck.

Moulding, running through from the radiator and around the rear end of the body, accentuates the length and reduces height. In reality the moulding effect is pronounced, since the body is finished a dark green-gray and the moulding in lighter Ailsa gray. Wheels are black. Leather upholstery is Simplex green and the top a light gray hurbank with natural walnut bows. Both windshields are all-nickel. The body was built on a Hispano-Suiza chassis by Brunn & Co., Inc., Buffalo, for Edsel B. Ford.



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SELLING GOODS AT RETAIL

ORDER in the store brings orders to the store." There's a lot of truth in this statement which heads an article to be found on Page 1062 in which is related the experience of a man who started as stenographer in an automobile jobbing house, worked himself to general manager, and now heads his own organization.

Shelves on which merchandise is scattered about with no apparent arrangement or order is a poor advertisement for the business. That is the opinion of Fred Buccino, proprietor of the Automotive Accessories Co. of East Orange, N. J.

If there is any doubt as to the truth of this, study the attitude of the average buyer. Study your own feelings as a purchaser. Then draw your own conclusions.

"ASK 'EM TO BUY FOR CHRISTMAS"

A BETTER standard of trade conditions as affecting the gasoline and oil dealer is the goal for which the New Jersey trade is striving through the establishment of a body known as the Gasoline and Oil Dealers' Association of New Jersey.

Active steps which are now under way to secure the cooperation of the oil producers in protecting the dealers and their investments in buildings, and properties are revealed in the first issue of *The Gasoline and Oil Dealer*, the Association's monthly publication.

This indicates that whereas the body is but a few months old it is going strong, and promises to grow stronger as time goes on.

In the meantime this movement of the New Jersey trade bears careful watching. For in it may be found much that trade interests in other states can work out to their ultimate advantage.

"ASK 'EM TO BUY FOR CHRISTMAS"

IT is not only the repairman himself who must be efficient. There must also be considered his tools and shop equipment.

The Oakland Motor Car Co. appreciates the importance of this fact and what is more has taken steps to see that its dealers are provided with adequate repair facilities.

In line with its policy of putting into effect a "flat-rate" system of charges it has issued a catalog of the proper tools and shop equipment recommended for use in Oakland service stations. This embodies the ideal tool and shop equipment for the small dealer, large dealer, and also the distributer.

Surely a seed that given proper care and attention should bear fruit in the form of satisfied customers!

AS "SID" SNYDER SAYS

YOU'VE prob'ly had someone tell you what a fix it would put the comp'ny in if they was to quit. Have you ever stopped to think how they were kiddin' themselves?

* * *

Like the feller that was canvassin' for a hook house. He got sore and stayed away for a week. When they handed him his money same as usual, he told 'em about it. "It's news to me," said the boss, "never noticed you was gone"

"ASK 'EM TO BUY FOR CHRISTMAS"

CHANGES are frequent along the Country's "automobile rows." Additions are being made to some lines. Other lines are being dropped. Removals to new quarters are constantly taking place.

And what is the merchandiser doing to keep the public posted as to his activities? Is he letting the information just gradually leak out of its own accord, or is he cashing in on such changes and reaping the benefits of the effective publicity to be derived therefrom?

An example of what can be done in the way of keeping the public informed is revealed in the story told on the following page of the reception held by the Scouten Motor Co. in honor of taking on the Maxwell.

This goes to prove that there is always one sure way of getting your name before the public eye. Let the press know what you are doing either by written word or photograph, or both.

Goodrich Stages Effective Display



A miniature Marmon coming through a white archway served to attract the crowds along Broadway, to the window of the B. F. Goodrich Rubber Co.

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Be Your Own Press Agent, Scouten Advises

Alabama Distributer Finds That It Pays Well — Makes Introduction of Maxwell Line a Public Event

IT PAYS to keep the public posted as to your activities. Nor is it difficult for the retailer to stir up interest in his removal to new quarters, for example, or making an addition to his line, provided he go about it the right way.



Building of the Scouten Motor Co. has unusually spacious window display space

For many years the name E. L. Scouten has been a familiar one throughout Alabama. As distributer of the Mitchell and Franklin this merchandiser has made many friends in and about Birmingham, where his headquarters are located.

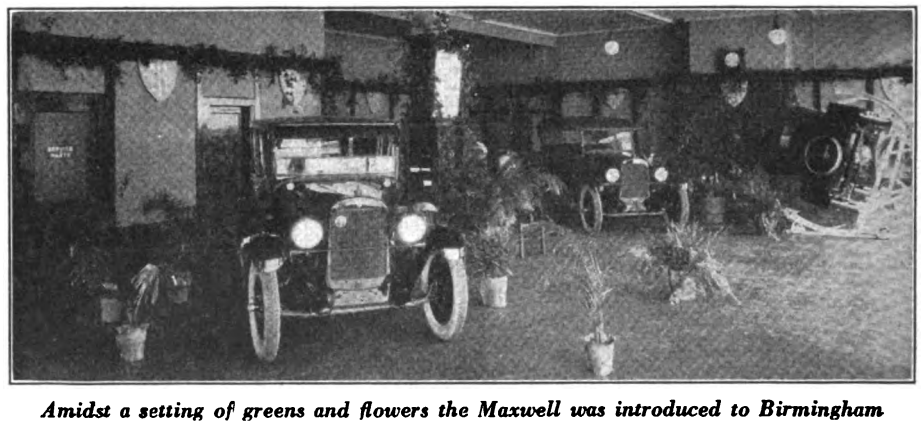
Lately Scouten has widened his list of acquaintances considerably. This has been accomplished through the exceedingly effective manner in which he attracted public attention to the fact that his building would in future be the home of the Maxwell.

Anyone not familiar with events in the business life of Birmingham would have been perplexed, to say the least, had they walked past 408 Twenty-first street on that day last Summer when Scouten invited public attention to the change in his line-up. Strains of music were heard coming from the showroom which was crowded to overflowing. The only clue to the nature of the celebration was offered in a large sign hung over the front door which read "The new home of the good Maxwell."

"ASK 'EM TO BUY FOR CHRISTMAS"

An inspection of the new Maxwell home served to reveal how effectively Scouten had prepared for the event as a means of attracting attention to his establishment. In this he was favored by the attractive layout of his showroom, which, by the way is one of the finest in Birmingham.

The building covers 70 feet frontage with unusually spacious window display space. One large window revealed a car turned over, with the under parts exposed to view. Through the other window could be seen various models attractively displayed amidst a setting of greens and flowers.



Amidst a setting of greens and flowers the Maxwell was introduced to Birmingham

That Scouten's endeavor took the form of a local event is evidenced by the notice given it in the local paper the day following. This appeared in connection with a photograph showing the interior decoration of the building.

"Resplendent in a background of beautiful flowers and trailing smilax," this read, "the good Maxwell was given a rousing reception in its new home at the Scouten Motor Co., 408 21st street South. The showrooms of this concern were beautifully decorated, and a splendid band furnished music for the hundreds of guests who thronged the place throughout the day and until late at night. The Maxwell has only recently been taken on by Scouten and this affair was a formal reception in its honor."

What Scouten accomplished in the way of obtaining publicity for himself and his line offers other automobile merchandisers food for thought. It points to the fact that a change in line-up, a move to a new building, the showing of a new model—all these may be used as the basis for effective advertising.

The first step in such an undertaking is to designate one particular day on which the public will be welcomed to inspect the new car, or the new building, whichever it may be. Invitations to this event should be sent to a carefully selected list of names.

In connection with the issuing of individual invitations, more general announcements of the showing should appear in the local papers.

As for the reception itself, it may be as elaborate or as simple as conditions may warrant. Use of plants and flowers adds a gala touch. Needless to say, too, the

"ASK 'EM TO BUY FOR CHRISTMAS"

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"ASK 'EM TO BUY FOR CHRISTMAS"

presence of music of some sort attracts notice.

There must not be overlooked too, the importance of seeing that a photographer is on hand to take pictures of the crowds, and the decorations. Distribution of such pictures to the press, both trade and newspapers, is of value in securing the greatest amount of publicity possible.

That such a celebration can be carried to an extreme, however, is shown by recounting the recent experience of a popular hat store in New York city. This company wanted to draw attention to its new home.

Large advertisements appeared in the local papers inviting the public to a reception. Punch would be offered every visitor and a celebrated jazz band would provide entertainment.

The invitation attracted more attention than the manager of the store thought possible. With the result that the police had to be called in to handle the mob, in which several were slightly injured.

"ASK 'EM TO BUY FOR CHRISTMAS"

But this is an exaggerated example. The fact remains that the automotive merchandiser who does not take advantage of every opportunity for getting his name before the public is overlooking a big bet. He would do well to follow Scouten's example.

Pitching Camp on the Prospect's Doorstep

Texas Oldsmobile Salesman Makes Good Use of a Motor Bungalow

THE salesman whose prospects are spread over a wide territory is faced with the problem of how to make every call just as productive as possible. Particularly true is this in the case of the truck salesman who finds it necessary to spend considerable time in educating the buyer to the advantages of motor haulage.

It was just such a problem as this that confronted the Chaddick Automobile Co., Oldsmobile distributer in San Antonio, Texas. As Richard Drake, truck sales manager for the organization puts it, "The character of the country is such that it has often been found that a salesman would take an Oldsmobile truck many miles out into the country to interview a prospect. The sale could not always be completed in a single day and it was equally impossible for the rancher or farmer to ask him to have dinner with his family or spend the night there."

Clearly there was but one way out of this difficulty—namely to provide the salesman with the facilities to camp right there on the spot as long as he might think necessary. Thus it happened that the Oldsmobile Motor Bungalow has become a familiar sight throughout that section of the Country.

This is nothing more nor less than an Oldsmobile Economy truck fitted with side curtains, two, three-quarter width beds, mattresses and bedding which fold up when not in use during the day. A duofold is also used as a seat for the daytime and can be utilized as another bed at night. In this way six people in all can be accommodated.

A four burner kerosene cooking range, with an oven, a large icebox, a folding table, several camp chairs with arms are all part of the equipment. In addition to these a two-foot width space in the top of the covering has a six foot clearance so that the occupants can walk from one end to the other without stooping.

On either side of this clearance space are two compartments running the full length of the body. In these compartments is carried a complete line of cooking utensils, dishes and linen.

This bungalow on four wheels enables the salesman to spend just as much time with his prospect as he may deem wise. He can put himself up comfortably for the night without inconveniencing anyone, and be on the job bright and early the following morning.

But it does more. It serves as a very valuable means of demonstrating to the prospect the advantages of the motor truck. This, too, is something the Company intends to make the most of.

Drake purposes to have his salesmen invite the rancher, his wife and children and friends into San Antonio for a visit. The party will use the truck and camp out for several days.

The farmer is not the only one, however, who will be treated to a ride. The city buyer will likewise receive an invitation to take a day's trip out into the open country.

The Chaddick company has solved its problem. It literally camps on the doorstep of every prospective buyer.



Six people can be accommodated in the Oldsmobile Motor Bungalow which is used by the Chaddick Automobile Co., Oldsmobile distributer in San Antonio, Texas

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NEW MODELS OFFERED BY CAR MAKERS

Cleveland Has New Low-Priced Closed Type

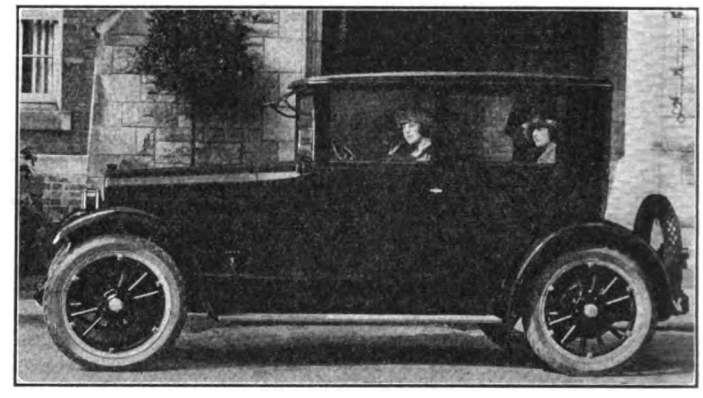
Two-Door Five-Passenger Sedan with Fisher Body Priced at $1,295

OF particular interest in the new models just disclosed by the Cleveland Automobile Co., Cleveland, is the new two-door five-passenger sedan. This model lists at $1,295, or $200 lower than the four-passenger coupe which it displaces in the Cleveland line.

As told in these columns last week, the Cleveland company is introducing three new models. These are the two-door sedan just mentioned; five-passenger touring at $995, $100 under the former price; and five-passenger sedan at $1,495, this being $90 under the former sedan price. The new touring and four-door sedan are similar to the former models only that all nickel trimming has been eliminated. These two types, however, may still be had with special equipment, which includes nickel trimming, at $100 extra.

The roadster at $1,085 and specially equipped sport at $1,260 are continued. The chassis remains unchanged. Included in the $995 touring model are such items as adjustable, ventilating type windshield; speedometer; non-glare lenses; robe rail; barrel-type headlights and cowl lights in miniature; tools and spare rim. Tires are 32 x 4 non-skid cords.

TO meet the demand for lower-priced closed cars, Cleveland now offers a two-door five-passenger sedan at $1,295. The body is an all-metal Fisher product. A trunk rack is mounted at the rear of the body



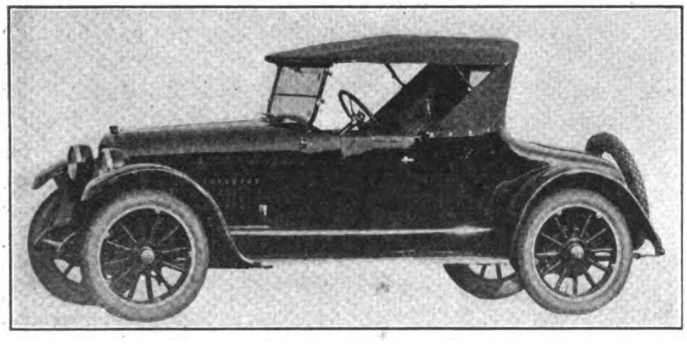
The two-door sedan has a Fisher body and it is offered without "the slightest sacrifice in body work, mechanical make-up or interior finish." Upholstery is in taupe finish. Included in the equipment are Goodyear cord tires, non-glare lenses, barrel-type head and cowl lights, electric horn, robe rail, dash light, trunk platform, cowl ventilator and speedometer.

Adjustable windows, together with the dash-controlled cowl ventilator, assure adequate ventilation. To permit ease of entrance and exit, front seats are individual tilting types.

Nash Roadster Now Companion to New Sport

Latest Roadster Body Has Rich Maroon Finish and Ecru Mohair Top

CLOSELY following the introduction of its new sport model, Nash Motors Co., Kenosha, Wis., is bringing out a new six-cylinder roadster. This latest type is listed at $1,210, the same price as quoted on the former roadster.



DISTINCTIVE finish characterizes the new Nash six roadster. Body is in maroon with bright vermillion wheels, while the top is of an ecru shade

The new roadster, in several ways, is a companion model to the new sport phaeton. The body, for example, is finished in rich maroon with the wood wheels in bright vermilion. For $25 additional, five disc wheels and Nash self-mounting carrier may be had with this as with other Nash six models.

For the top an ecru silk mohair material is used. Upholstery and interior trimming are both in dark gray Spanish leather. A new type cowl ventilator is employed. Posts of the windshield and the radiator shell are nickeled.

Other new details to be found in the roadster include a new steering mechanism, barrel-type head lamps and cowl lights, the former having an exclusive Nash device which permits light adjustment to any angle quickly. Across the front of the chassis side members is a heavy bar that anchors the frame solidly against weaving or road strain. Still another important addition is the Oil-Kipp equipment, which by merely pushing forces oil into the steering knuckles and steering tie rod.

Radio Proves Out on Car

Long-distance use of the radio was tested out last week by the Cleveland Motor Co., of San Francisco, when a car so equipped was driven to the top of Mount Hamilton and there received radio programs from stations in Denver, Mexico City and Atlanta, Ga. The test, satisfactory in every way, was watched with keen interest by Californians, demonstrating, as it did, the invaluable service radio may perform for the motorist who happens to find himself in trouble in some out-of-the-way locality.

Doris Offers Custom-Built Touring Sedan

Four-Passenger Four-Door Body Has Several Interesting Touches

ESPECIALLY designed and fitted for touring, a special four-passenger four-door sedan is now being offered by the Dorris Motor Car Co., St. Louis. The bodies of this model are custom built, being furnished by the Hume Body Corp., Boston.

Upper body panels are finished in black while the lower panels are in a harmonizing color. Two strips of moulding, one of which extends around the body and the other over the hood, are finished in the color of their respective panels. Adding to the appearance of the body

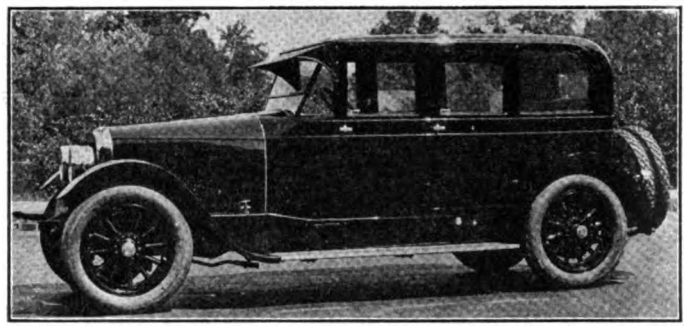
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are nickel-plated radiator shell, nickel barrel-type headlights, and a nickel-plated rear light of the same pattern as the front lights. The two-tire carrier at the rear is mounted on the chassis frame.

In this sedan, the glass in all four doors lowers flush with the window sill. A genuine black walnut panel inside the doors, just below the window opening, adds much to the attractiveness of the interior. Instrument board is solid black walnut. Two lockers of the same wood are conveniently placed on either side of the cowl below the instrument board for the use of the occupants. An easily removable ash tray is provided on each side, placed just above the lockers.

Upholstering is in gray motor cloth, selected because of its wearing qualities and color. The car itself is low-hung yet there is ample head room with low, comfortable seats.

FOR those desiring a closed car for touring purposes Dorris shows a custom-built four-passenger four-door sedan. The body, by Hume, has original lines as will be noted



Host of Interesting Details on New Peerless Appeal

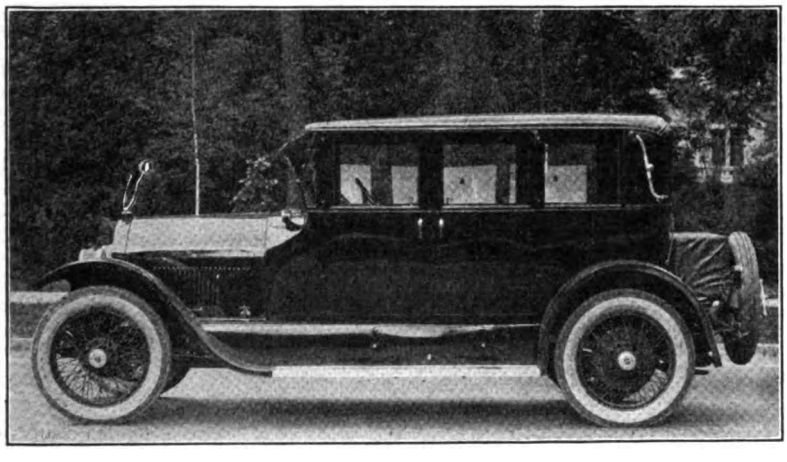
Gasoline Tank Cap, Master Key and Automatic Light Switch Among Them

SEVERAL novel little details of the new Peerless that make for the owner's comfort and convenience are fastly winning new friends for the latest achievement of the Peerless Motor Car Co. Some of these are highly interesting.

For example, the filler spout of the gasoline tank is located on the curbing side and is a short tube of easy contour that takes care of the forceful inrush of gasoline without allowing it to back up or overflow. Furthermore, the filler cap snaps on and off in one single short turn. Should it become lost or not be replaced through carelessness, the polished aluminum dust cap underneath the radiator may be used, since it is interchangeable.

One master key fits the locks on ignition, transmission, tire carrier, tool pocket in left front door and additional compartment under front seat and doors on all closed cars. Another detail is the reel-type trouble lamp with 16-foot extension cord on the dash under the hood.

Light switch has a unique feature which minimizes possibility of driving at night without tail or front lamps being on. On entering car, the driver raises the light switch as far as it will go, this turning on tail light and instrument board light, illuminating transmission and ignition locks. When ignition is unlocked, the light switch automatically snaps up and turns on the cowl lights.

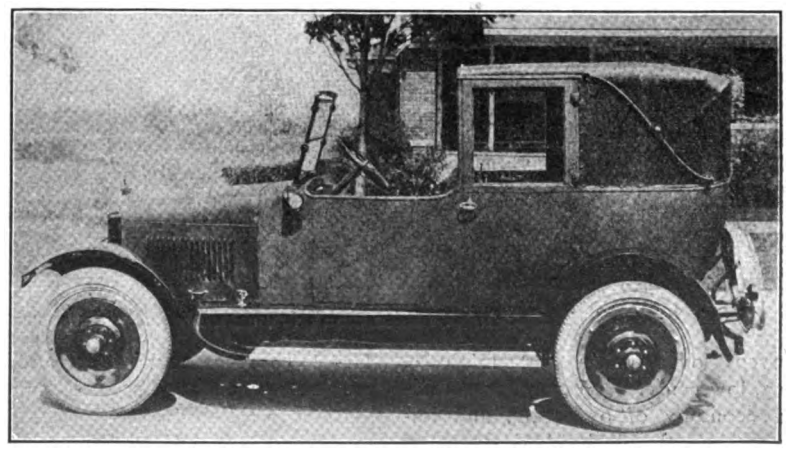


New Stutz Sportsedan Custom-Built Job

ON special order, the Stutz Motor Car Co., Indianapolis, is furnishing a custom-built five-passenger sportsedan, the design of which is of unusual interest. This exclusive model is priced at $4,450. The windshield and fabric-covered rear quarter are distinctive touches. The latter, it will be noted, is set off by a decorative coach arm. The body design permits hanging the trunk rack low at the back, a desirable point

New Elcar Taxicab Is Landaulet Type

TO meet the demand of taxicab service in cities where taxis are used largely for sight-seeing trips, the Elkhart Carriage & Motor Car Co. has designed a landaulet body for its Elcar six-cylinder taxicab chassis. The top is readily lowered, giving the cab a distinctive appearance. For theatre parties the generous interior room and comfort make the cab ideal. The Elkhart company has been building coaches for fifty years



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NEW IN MOTOR BUS AND TRUCK FIELDS

Republic Introduces Its New Interurban Bus

Completely Equipped 19-Passenger Body on Knight-Engined Chassis

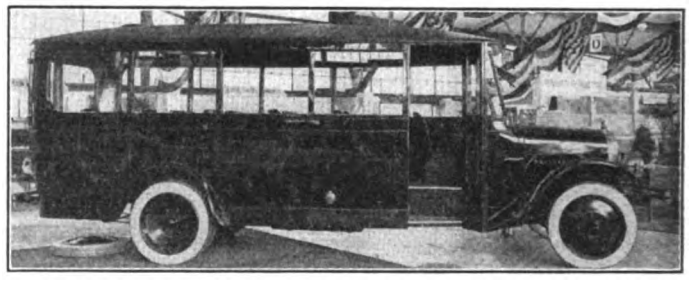
FOR interurban operation, the Republic Truck Sales Corp., Alma, Mich., has developed a new 19-passenger bus on its Knight-engined 175-inch wheelbase chassis. This was introduced in Chicago the early part of the month at the convention of the American Electric Railway Assn.

Nineteen passengers are accommodated in the Bender (Cleveland) body, 10 on double cross seats along left side, 5 on single seats on the right, and 4 on the full-width rear seat. It has a front entrance on the right with 25-inch clearway with two-panel outward-folding door, operated by a nickel push rod which can be locked. Floor level is 26 inches, there being one step covered with corrugated rubber to prevent slipping.

Side posts are spaced on 40-inch centers. Windows are operated at will by passengers by means of crank-type regulators. Interior finish is mahogany below the windowsill; ceiling is finished in brown leather.

Among the many interior details are: eight dome lights, three on a side with two in the center in line with front and rear side posts, each dome light having two four-candlepower lamps with frosted glass cages; leather-upholstered 36-inch seats; aluminum handles on the aisle corner of each seat; maroon silk curtains on spring rollers, cord swung to prevent swaying, at each window; linoleum-covered floor over which is placed carpet, this being in sections and fastened down with clips, permitting removal for cleaning; Faraday buzzers in each post, also coat hooks; step light; and ventilators in the arched roof. Interior headroom is 72 inches.

FOR interurban bus service Republic has had designed this new 19-passenger job. It is mounted on the Knight-engined bus chassis



For convenience of operator all controls for lights and the like are mounted on the dash. There are also a leather curtain which can be pulled down behind his bucket seat, for night driving; adjustable windshield; black sun visor; cowl ventilator operated by handle on dash; Foberth automatic windshield cleaner; and a 24 x 6 mirror.

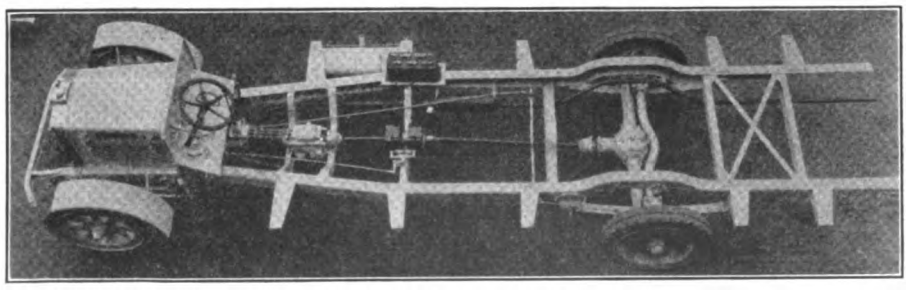
Pneumatic tires, 34 x 5 with duals on the rear, and Budd Michelin disc wheels are used. Spare wheel and tire is carried under the rear of the body, back of the rear axle, in an enclosed compartment. Stewart double-type bumpers are furnished both front and rear. Intake port for gasoline is on the right side on the outside. In the rear of the body is an emergency door, 35 inches wide. There is a stop light at the rear connected to the clutch pedal. All told, the vehicle weighs 8,500 pounds without passengers.

Goodwin-Guilder Is New Motor Bus Chassis

Special Design Has Extra Wide Tread and Low Center of Gravity

NEW in the bus field is the Goodwin-Guilder 25-30 passenger motor coach now being produced by the Goodwin Car & Mfg. Co., Inc., at its Poughkeepsie, N. Y., plant as told in these columns two weeks ago. Featured in this chassis are such details as one-step design with floor only 18 inches from the curb line, long, flexible riding springs, wide rear tread to prevent overturning and minimize skidding, low center of gravity for stability and economy of operation, and improvements on the desirable features of other types, namely, speed, economy and mobility.

Engine used in this chassis is a Buda "EBU" 4¼ x 5½, 1,500 r.p.m., with aluminum crankcase, thermostatic water control and vacuum oil control. Fuller multiple-disc clutch and gearset, mounted amidship for easy removal, are employed, the latter providing four forward speeds with direct in fourth. Leece-Neville compensating starting and lighting, Willard 180 ampere hour battery and Eiseman magneto are the electrical units. Carbureter is a Zenith.



Chassis frame of the Goodwin-Guilder coach is unusually wide at the rear

Rear axle is a Clark internal-gear type with a 71-inch tread. Universal joints are M. & E. Griptite between clutch and transmission and Spicer between gearset and axle. At the latter point a two-joint assembly is used, supported by a SKF bearing in center bearing housing. Springs are Merrill electric silico manganese steel, on the rear springs there being three auxiliary leaves which do not come into action until two-thirds of the load of the truck has been installed. Rear springs are 60 inches long; front, 44 inches. All springs are fitted with rubber shock bumpers.

There are two heavy-duty service brakes on propeller shaft, operating through an equalizer, while the emergency brake is on the rear axle. Frame has a wide track in rear, with a kick-up over rear axle. Two wheel-base lengths are furnished, 184 or 196 inches. Frame is fitted with outriggers flush with top of frame, these allowing body to be placed directly on them, thereby keeping down floor line and supporting body on its extreme width. Frame is 35 inches wide in front and 51 inches at rear. Smith steel wheels are equipped with semi-pneumatic cushion tires 36 x 5 and 36 x 8, or pneumatics if desired.

Chassis lists at $5,000. Included in its equipment are electric head and tail lights, Stewart electric signal, front bumper and Moto-Meter.

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Indiana Speed Truck Uses Laycock Springs

Unique Construction Eliminates All Shackles and Ground Bolts

AMONG the interesting features of the new one-ton $1,425 highway express being produced by the Indiana Truck Corp., Marion, Ind., is the adoption of the Laycock three-quarter elliptic spring construction. This unique design spring was recently described in full in these columns. It eliminates all shackles and ground bolts and makes lubrication, therefore, unnecessary. Drive is through the springs and the driving strains are taken through six main plates instead of one as in the conventional Hotchkiss drive.

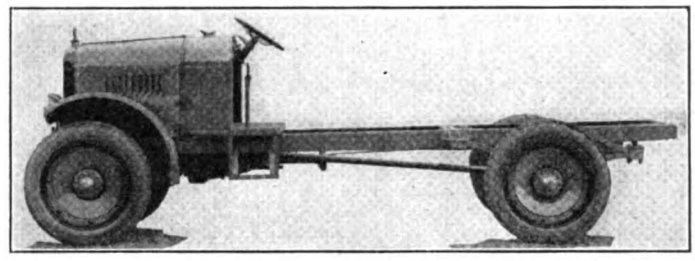
The new Indiana speed truck has a 132-inch wheelbase. It is powered by a four-cylinder Waukesha engine, 3¾ x 5¼. Carbureter is a Stromberg. Electrical units include Bosch generator and distributer with Prest-O-Light battery. Clutch is a dry-plate type and the Brown-Lipe gearset, mounted in unit with the engine, provides three forward speeds and reverse.

Drive is through a single propeller shaft of 2½-inch tubing, with universals at each end, to a spiral bevel drive, semi-floating rear axle. Brakes are on the rear wheels, which are a steel disc type fitted with Firestone steel felloe band and 34 x 5 pneumatic cord tires all around.

Method of trussing and gusseting the chassis frame is set forth as another feature. The frame is of pressed steel. It is 5 7/16 inches deep with a 3¼-inch flange.

Maximum speed is from 30 to 35 miles an hour. Tests are said to have shown an acceleration from 2 to 30 m.p.h. in 25 seconds with a total weight of 7,000 pounds. Gasoline mileage is set at 13.4 miles per gallon. Included in the truck's equipment are electric starting and lighting, Moto-Meter, front fenders, electric horn and one spare rim.

FOR its new speed truck Indiana has adopted the Laycock three-quarter elliptic spring, a new, noteworthy development



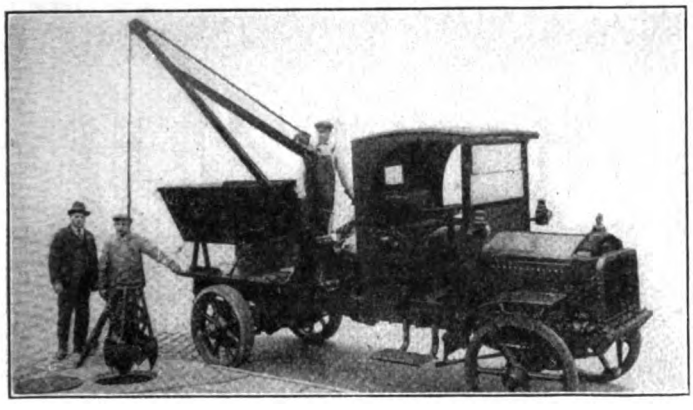
Special Equipment of Interest to Cities

Sewer-Cleaning Machine Cuts Costs in Half for Perth Amboy, N. J.

SAID to reduce municipal sewer cleaning costs by half, a specially-designed arrangement on a Selden truck is proving satisfactory in service at Perth Amboy, N. J. Tests conducted by the street commission of that city demonstrated that catch-basins can be thoroughly cleaned in twenty to thirty minutes with this truck and the aid of two men.

The truck carries a special dumping body which can be removed to allow the truck to be used for other purposes. Upon the truck platform is a mast and boom, the mast resting on ball bearings so that the boom may be swung directly over the catch basin. A grab bucket, operated by power-driven drums using two cables is carried by the boom, one cable being for hoisting and lowering the bucket and the other for opening and closing it. Power is taken from the truck engine.

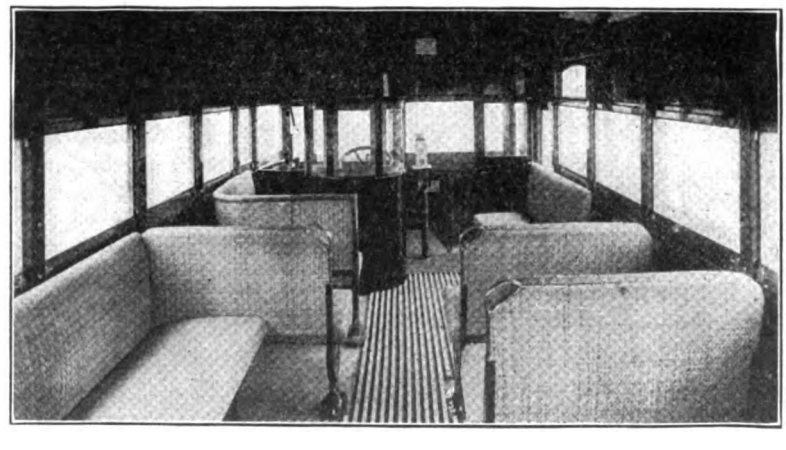
A pole, used to direct the bucket, makes it possible to clean the entire circumference of the catch-basin without sending a man below the surface. The dump body may be used as a container and may be dumped directly into another truck, so that while the second truck is taking its load to the dumping point or scow, the container on the machine can be reloaded, ready to discharge into the empty truck upon its return. P. J. Healey, New York, is the designer of the device.



OF particular interest to those dealing with municipalities is this sewer-cleaning arrangement. It is claimed to reduce costs in half and to save considerable time. This machine is in use at Perth Amboy

Hoover Bus Body with Driver's Housing

AMONG the several interesting new passenger bus bodies built by the Hoover Body Co., York, Pa., is one the interior of which is illustrated. The driver's seat is enclosed by a cylindrical housing, affording the operator full protection. Just behind this partition is a semi-circular seat for passengers. The seats are arranged so as to obtain maximum seating capacity



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IDEAS THAT LEAD TO GREATER SALES

Order in the Store Brings Orders to the Store

THREE years ago Frederick E. Buccino made up his mind he would show the public how a well organized retail accessory establishment should be run. He decided that East Orange, N. J., would be the place, and the Automotive Accessories Co., the name of the organization he would form to serve car owners of the community.

Three years have passed, each of which have seen this company more firmly established in the city's trade circles. It was no false dream that Buccino entertained. His belief that he knew how to serve the public with automotive devices was based on sound truth. He did know how. He has proved it.

It is significant to note, however, that Buccino did not undertake the job he mapped out for himself without having first acquainted himself with many of the problems he would be up against. This experience he had acquired in many years' training with the Economy Auto Supply Co., of Newark, N. J. He became affiliated with that concern as a stenographer, a few months after it had been organized. But he was the kind of stenographer that kept his eyes on things around him as well as on the keys. The result was that in course of time he became general manager, which post he filled for ten years.

In view of this record it is not surprising that the Automotive Accessories Company should be operated on highly scientific lines. Many of the pitfalls that have proved disastrous to other accessory concerns it has been able to avoid by reason of the fact that during those years when he was serving his apprenticeship its owner kept his eyes open.

What first impresses the visitor as he enters the store, which is located on Park avenue, corner of Fifteenth street, is the sense of order. This is a point on which Buccino lays stress.

A store whose shelves reveal goods scattered here and there with little sense of order or arrangement is a poor advertisement for its owner, he believes. That is why the shelves of the Automotive Accessories Co. are neatly partitioned off into bins.

Glass cases line one side of the store. These contain shelves on which the goods are displayed plainly and also attractively. For here again is where Buccino reveals the training he has had in merchandising accessories. He is a firm believer in interesting the public through effective displays.

At the extreme rear, racks are provided for tire stocks. On the opposite side of the main aisle from the glass showcases a long counter has been installed, under which are bins for bulkier merchandise. Through such arrangement the store is in no sense cluttered up, yet the impression of a wide variety of stock is gained.

There is still another feature of the Buccino store which is worthy of mention. That is, the use that is made of display stands of different kinds supplied by the manufacturers.

This is important in that it reflects the attitude of the proprietor toward those makers whose goods he handles.

And just to show that Buccino is always ready to lend a helping hand for the common good, the following instance is cited where he showed his ability to secure results quickly.

He was recently one of a large group invited to attend a meeting for the purpose of organizing a body to be known as the Gasoline & Oil Dealers' Association of New Jersey. His interest was aroused at once, so he enlisted in the service of the new organization and started out to get members. Bright and early the following morning he made a canvass of the city, well supplied with membership cards.

The result is that the organization has 58 more members. Such is the spirit with which the Automotive Accessories Company is run. There, too, lies the reason for its success.





Orderly arrangement of goods on shelves and in display cases is a feature of the Automotive Accessories Co., East Orange, N. J.

"ASK 'EM TO BUY FOR CHRISTMAS"

"ASK 'EM TO BUY FOR CHRISTMAS"

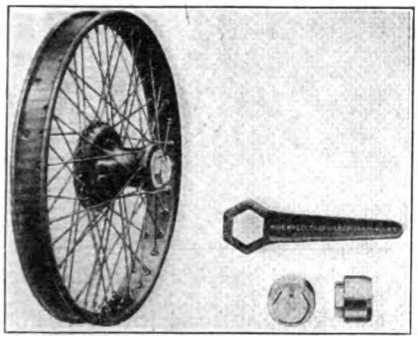
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IN THE FIELD OF ACCESSORIES

NO. 3 HOUSE WIRE WHEEL HAS NEW HUB CAP

Conspicuous by reason of its new and distinctive hexagon hub cap is the new type of House wire wheel which is to form an important part of the exhibit of the Wire Wheel Corp. of America, Buffalo, N. Y., at the Automotive Equipment Assn. exhibit to be held next month in Chicago. This wheel bears the trade designation of No. 3 House wheel.

The new style hub cap is particularly ad-



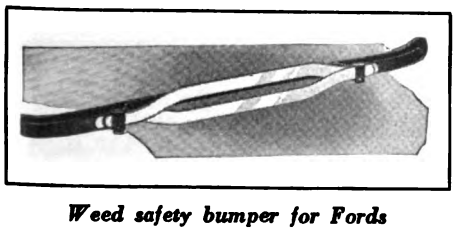
No. 3 House wheel

vantageous in that it is considerably heavier, provides greater bearing surface for the wrench, and permits greater leverage on the wrench when the hub cap is to be removed or tightened. Following the more expensive types these smaller members of the Wire Wheel line have their new hub caps stamped "right" and "left." They also have arrows which show the direction to turn for "off" and "on."

No. 3 House type wheel, triple spoke and detachable at the hub with the new hexagon hub cap incorporated, is supplied in sets of five wheels with carrier for extra wheel, four inner hubs, four hub caps, hub cap wrench and spoke nipple wrench.

WEED SAFETY BUMPER IN NEW FORD TYPE

Much interest has been aroused in the Weed Safety bumper designed for Fords which was brought out a few weeks ago by the American Chain Co., Inc., Bridgeport, Conn. This device, offered in front



Weed safety bumper for Fords

and rear types provides the Ford owner with a wide faced bumper which possesses the qualifications that have established so successfully other of the firm's products.

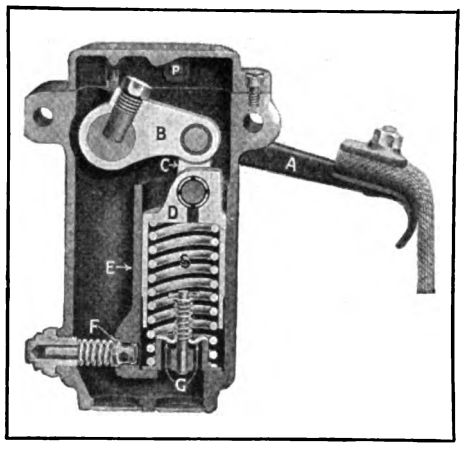
The Ford type Weed bumper is made of 1¾-inch spring steel, hardened in oil and tempered. It is so designed and constructed that it will withstand severe smashes as well as more common bumps and knocks. Attachment is made easily to all models of Fords, front and rear, and it does not interfere with shock absorbers or working parts.

The front bumper finished in black enamel, sells for $13; with nickel-plated front bars, the price is $14. The rear bumper finished in black enamel sells for $14; with nickel-plated front bars it is offered at $15.

LOVEJOY SHOCK ABSORBER HAS CUSHION OF OIL

By controlling the spring action the Lovejoy hydraulic shock absorber eliminates uncomfortable rebound and side sway. In this product which is being manufactured and marketed by the Lovejoy Mfg. Co., 39 Brighton avenue, Boston 34, Mass., all movements of the spring are communicated to a piston working in a cylinder of oil.

Studying the mechanism more closely it will be seen that on the rebound of the automobile spring an arm which is attached to the axle is pulled down and acts on a



Lovejoy hydraulic shock absorber

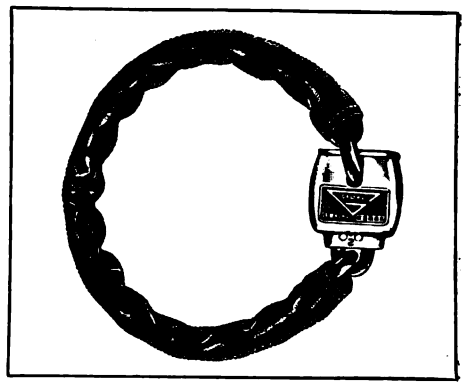
piston. Pressure is then exerted by the piston on the oil in an inner cylinder.

The oil is permitted to escape through a fixed opening and as soon as a definite maximum pressure has been reached the valve opens and allows oil to escape from the cylinder. The valve, therefore, automatically takes care of any changes in the oil due to change of temperature. In cold weather when the oil is more viscous the valve opens earlier and wider, keeping the pressure the same. When the automobile spring is again compressed, the piston is raised at once by a spring and a charge of oil is drawn into the cylinder around a large valve.

A feature of the Lovejoy shock absorber is the fact that it is sealed. Thus the oil cannot leak out, and foreign substances cannot get in. Price per set of four with all attaching parts is $115.

GRAYNIE SPARE TIRE LOCK FITS ALL CARS

A chain of 11/32 inch carbon steel, case hardened, together with a lock, make up the Graynie spare tire lock. This device is a product of the Graynie Corp., 323 West



Graynie spare tire lock

Jackson Boulevard, Chicago, Ill., and has been approved by the Underwriters Laboratories, Inc.

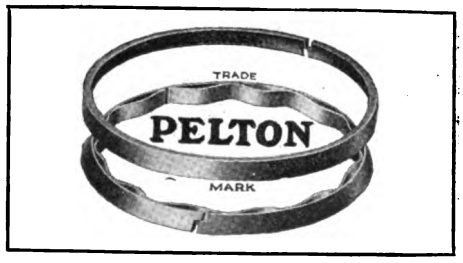
The Graynie lock is simple in construction with all steel parts parkerized and consequently proof against rust. The chain is covered with high grade genuine leather.

Price of the lock depends upon the length chain used. A 20-inch chain with lock sells for $6.75. The 26-, 34-, 40-, and 46-inch lengths are priced at $7.50, $8.25, $8.75, and $9 respectively.

The company has also brought out a Junior model of the Graynie lock. This fits all of the smaller cars and sells for $4.85.

PELTON PISTON RING MADE IN TWO PIECES

By taking up the "up-and-down" wear, the Pelton piston ring which is being produced by the Pelton Piston Ring Co., 5432 West



Pelton piston ring

Grand River avenue, Detroit, Mich., seals the piston ring grooves so that no gas or oil is able to work in the back of the ring.

The Pelton is a two-piece piston ring. The

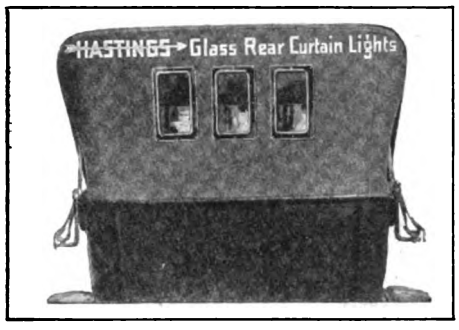
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lower part is beveled and fits into a similar bevel on the inside of the upper part. Inside the lower part of the ring are spring expanders.

The ring takes care of grooves .032 inch overwidth and cylinders .040 inch oversize. But one style is made, this being applicable to automobiles, trucks, or tractors, as well as other machines using piston rings. Diameter sizes range from 2 to 6 15/16 and in 3/16, ¼, and 5/16-inch widths. Prices range from $1.25 to $2.25.

HASTINGS CURTAIN LIGHTS DESIGNED FOR FORDS

Attractive in appearance, yet practical in their application on Ford cars are the Has-



Hastings rear curtain lights

tings glass rear curtain lights. These lights are included in the line of automobile necessities manufactured by the Hastings Mfg. Co., Hastings, Mich.

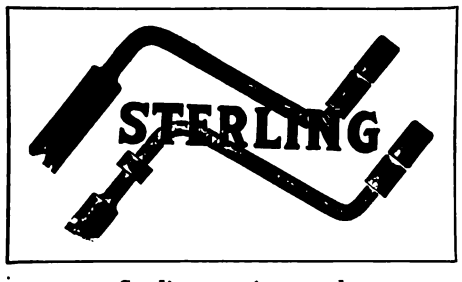
Particular attention has been given to the design with the idea of offering the Ford owner a light that will not sag or tear the curtain and which will add to the appearance of the machine.

Hastings curtain lights for Fords come in sets of three. Price per set is $1.75.

STERLING OFFERS PISTON RING AND STARTING CRANKS

A one-piece piston ring, carefully designed to stand up under constant wear is being produced by the Sterling Products Corp., North Market at Garrison street, St. Louis, Mo. This product together with the complete line of starting cranks the Company is also manufacturing is fast adding to the popularity of the Sterling name.

Light uniform pressure against the



Sterling starting crank

cylinder wall at all points is one of the features of Sterling rings upon which particular emphasis is laid. Moreover they are said to be elastic, flexible, strong and durable. Each ring is a true circle. They are made in sizes to fit any auto-



Sterling piston ring

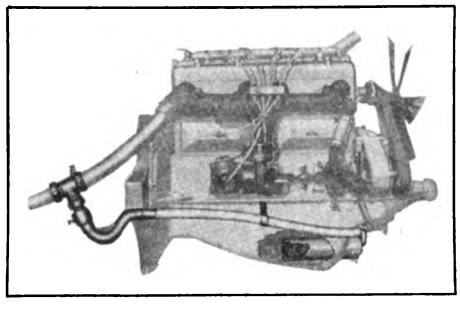
mobile, truck, tractor, motorcycle, motor boat and compressor.

Durability and solid construction are assured those car owners using the Sterling starting crank. Models to fit all popular cars are supplied with additions constantly being made to the list. Prices range from $1.05 to $3.

E-VAP-O HEATER PREVENTS OIL FREEZING

It prevents freezing of oil around the screen. Such is the purpose of the E-vap-O heater which has been placed on the market by the Harvey E. Mack Co., Minneapolis, well known Dodge Brothers distributer.

Danger of freezing is eliminated by raising the temperature inside the crankcase to such a point that moist vapors which get by the piston rings, pass out through the breather pipe instead of condensing into water and mixing with the oil. Unburned fuel which also finds its way into the



E-vap-O heater

crankcase is vaporized by the heat and disposed of in the same manner.

Into the front of the crankcase a sheet-iron drum is introduced, hot exhaust gas being passed through this constantly. The drum is only half submerged in the oil, so any moisture or gasoline in the oil which is returned to the crankcase, is vaporized when splashed on the hot drum.

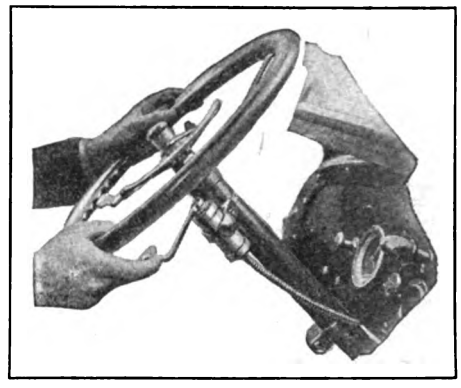
The device has been given careful tests and has no moving parts to get out of order. Price complete ready for installation is $12.

UNIVERSAL CONTROLLER DIMS LIGHTS SLOWLY

A touch of the lever on the steering post gives any degree of light desired. This is the feature of the Universal headlight controller which will prove of primary interest to those car owners quick to see the advantages of a device that will enable them to control their headlights without moving their hands from the wheel. This device, which is being introduced by the Universal Headlight Controller Co., Fisk building, 57th street and Broadway, New York city, dims the headlights gradually to any desired angle.

It is attached to the steering post of any make or model of passenger car or truck by its Universal clamp. To dim the lights the driver simply pushes the lever forward.

Installation is simple. The controller is clamped rigidly to the steering post at the most convenient height. One control wire is attached to the switch; the other to the bright headlight wire which previously has been disconnected. Controller and wire con-



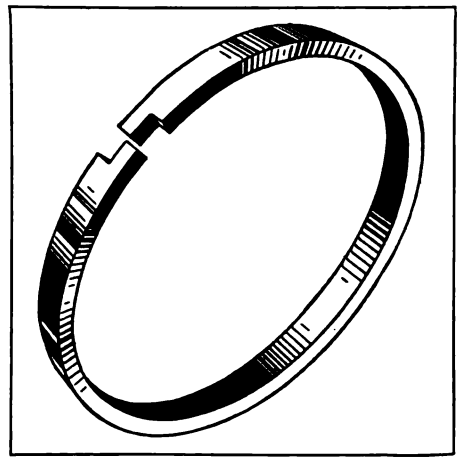
Universal headlight controller

duit are nickel-plated and polished. Price, complete, is $7.50.

HASTINGS 100% PISTON RING DURABLY MADE

Heavy construction, thus assuring resiliency and long life, is a feature of Hastings 100% piston rings which are being produced by the Hastings Mfg. Co., Hastings, Mich. These rings are made in one piece with either step or miter joint.

Each ring is individually cast and machined with micrometer accuracy. Moreover, to assure dependability, tests for perfect concentricity are given every ring in the ring gauge before they are packed for ship-



Hastings 100% piston ring

ping. Emphasis is laid by the maker upon the fact that the Hastings piston ring is not affected by heat from the engine because of being heat treated in manufacture.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

NEW YORK — BROOKLYN. — Samuel Ageloff and Harold E. Wittemann have leased the block front on Bedford avenue, between Fulton and Halsey streets from Percy G. Williams, for a term of several years at an aggregate rental of $750,000. The lessees plan to remodel the property into motor salesrooms.—A one-story garage and service station, now in the process of construction, has been leased by the Buick Motor Car Co. The building occupies a plot 160 x 100 on the north side of Empire boulevard, 500 feet east of Bedford avenue.

ELMHURST. — Gilbert Murtha has purchased the Community Garage at Baxter and Fairbanks avenues from Robert G. Lake. The structure occupies a plot 100 x 150 and contains 13,300 square feet of floor space.

JACKSON HEIGHTS.—Louis Gold & Co. has sold the Jackson Heights Garage on Jackson avenue between 21st and 22nd streets. The property was purchased subject to a twenty-year lease at $12,000 net per annum.

NEW YORK.—A two-story and basement garage building, having a frontage of fifty feet, has been leased for a term of fifteen years by the 94th St. Garage Corp., located at 304-306 East 94th street.—Yellow Taxi Operators, Inc., has purchased a building formerly owned by the Standard Gas Light Co. on East 32nd street, which it plans to convert into a one-story garage.—A 250-space garage is to be erected on a plot 98 x 78, recently sold to the Bainbridge Construction Co., on the east side of Webster avenue, 170 feet south of 202nd street.—Jacob Mattern, of the concern of Jacob Mattern & Sons, automobile company, has purchased three dwelling properties owned by the William Astor estate. They are three stories in height and are located at 313-317 West 46th street, between Eighth and Ninth avenues.

MIDDLEWEST

OHIO—AKRON.—A fire started by an explosion of gasoline in the basement of the Cook Bros. Tire Sales Store at 72 West Bowery street caused a damage estimated at $1,000.

CLEVELAND. — A three-year lease has been negotiated with the David Motor Sales Co., Durant and Star dealer, for the east showroom in the Stuyvesant building at 5005 Euclid avenue, and a large garage space in the rear on the west side of the structure.—R. J. Smunk Co., Hudson and Essex dealer, leased 12,000 feet of space in the Judd building, 4600 Euclid avenue, to be used as a temporary service station.

INDIANA—INDIANAPOLIS.—William H. Diddel, an automobile merchant operating in North Meridian street under the name of the Franklin Motor Car Co., has filed a voluntary petition in bankruptcy. His assets are listed at $56,366.88 and liabilities at $80,401.02.

WISCONSIN — BARRON. — A fire totally destroyed the Poskin Garage, owned by F. Molltor.

CHIPPEWA FALLS. — S. Cardinal has leased the garage at 119 West Spring street from E. M. Lebeck and D. L. Gloutier.

FOND DU LAC.—Offices of the T. W. Meiklejohn Co., formerly located in a tractor plant on North Main street, have been moved to the Ford Service Garage at the corner of First and Portland streets.

FORT ATKINSON.—Lohrey & Bishop have sold the Service Garage on South Water street to Louis Poutsch and Harold Pfafflin.

FREDERIC. — Alex. Winstrom has purchased the Star Garage from W. Y. Fessler.

KILBOURN.—Roy Murray will move his tire and automobile repairing business to the building he recently purchased on Broadway and Elm streets.

MENOMONIE.—A fire totally destroyed the Edgar Johnson garage.—James Evans, Jr., and A. A. Juttner have leased the Wistrand Block and will open a garage in the near future.

MILTON JUNCTION. — Clarence Alter has purchased the Robert T. Buggs garage.

MONTFORT.—Oliver Yerke will erect a garage and service station in the near future.

RHINELANDER.—A 50 x 140 foot garage will soon be erected for J. Segerstrom & Co.

RIPON.—John Boettcher has sold his interest in the City Garage to Denbrook and C. F. Pohlman.

SEYMOUR.—John Kissinger has purchased the interest of George Vandenberg in the latter's garage.

WATERFORD.—W. O. Noble and A. F. Starkey will open the Square Deal Tire Co.

WEST ALLIS.—Arthur Courtois has purchased the Reliance Battery and Repair Shop from J. L. Pettegrew and B.

(Continued on page 1066, first column)

ACTIVITIES OF THE WHOLESALERS

Robbinson Motor Co. has been appointed Peerless distributer for Jacksonville and surrounding Florida territory.

Warren Given Co., located at 2315 Hennepin avenue, distributer of the Milburn and Rauch & Lang electric automobiles, has acquired the complete line of Buick cars for distribution in St. Paul and vicinity.

Perkins Sales Co. has secured the agency for the distribution of the Dort for Utica, N. Y., and adjacent territory.

Jobson Auto Co., Macon, Mo., with C. A. Jobson as manager, has accepted the agency for the Willys-Overland line of cars for Macon and the surrounding section of the country.

Brock Motor Car Co., St. Louis, Mo., has contracted for the sale of the new Mitchell "F-50" cars for St. Louis and adjacent territory.

Harold Johnson, Louisville, Ky., has been named distributer by the Peerless Motor Car Co.

C. R. Miller, Jackson, Mich., has signed for the distributer franchise of the Dort in that territory.

J. Arch Butts, former Buick dealer for Wichita, Ks., has been placed in charge of sales and service for Packard products for Wichita and adjacent counties.

John Nichol Co., located at 2210 Michigan avenue, Chicago, Ill., has added the Liberty car to its Saxon sales agency.

Hebberd Motor Co., located at 817 Mesa avenue, El Paso, Tex., has contracted for the Marmon distributing agency for the territory embracing western Texas, New Mexico and Arizona. The concern will retain its Lexington agency.

Greenville Peerless Co. has been named distributer by the Peerless Motor Car Co. for Greenville, S. C., and neighboring territory.

Dort Sales & Service Co., has contracted for the distribution of the Dort for Lansing and surrounding Michigan territory.

Edgar Wartig has taken the state distributing agency for the sale of Adco dry batteries. He will open his headquarters at Hamilton, Mo.

C. D. Gerf, of Chicago, has been appointed general manager of the Stutz Chicago Co.

M. L. Shue has secured the agency throughout several counties surrounding Peterstown, West Va., for the sale of the Dort motor car.

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IN THE TRADE

(Continued from page 1065, second column)

G. Ulbright.—George Richards has purchased the Mertz Shop. The company will operate under the name of Richards Auto Supply Co.

IOWA—FAYETTE.—Albert Steggall has sold his interest in the Steggall and Carmichael Garage to Carmichael.

MISSOURI — ARCHIE. — Archie Garage, a tile structure in the business section of the city, was totally destroyed by fire, together with two trucks and five cars.

BLACKBURN. — Henry King has opened a Ford garage.

BOLIVAR.—Ford Agency of Bolivar has been purchased by the Penn Motor Co., and in the future will be known as the Penn Motor Co.

BONNE TERRE.—T. C. Moon Tire & Motor Co. has purchased the entire plant and equipment of the Economy Vulcanizing Co., owned and operated by S. K. McSpaden.

BUCKNER.—E. L. Miller and J. W. Graham, of Carrollton, have purchased the garage business of J W. Hostetter.

BUNCETON.—Entire business of the City Garage has been purchased by A. L. Lewis.

CAMERON.—I. J. Garvin has opened the I. J. Garvin Service Station.

CARTHAGE.—A new addition, 40 x 22, is to be built onto the building on West Fourth street, occupied by the Tallman Vulcanizing Co., and owned by O. E. Proctor and A. F. Carmean. It is expected to be completed within thirty days.—An establishment has been opened by the Stephens Associated Tire Stores with M. L. King in charge. The concern has located in the Steadley building at the corner of Sixth and Grant streets.—P. Stemmons has leased the former Webb Garage, located on South Grant street, in which he will conduct a general automobile storage and rental business. Willard Crawford has leased the repair shops in the garage, into which he will move his Overland service business from his present location on Fifth street, west of Grant.

CHILLICOTHE.—W. B. Sparrow and E. F. Pearson have leased the work room of the Pyrtle Motor Co., at 505 Elm street, in which they will conduct their repair business.

HIGBEE.—M. G. Murphy recently opened a garage just west of his store building.

HIGGINSVILLE.—Jackson Price has purchased a half interest in the Wegener Garage. As a result the business will be known as the Price-Wegener Garage.

JEFFERSON CITY.—F. Tanner has purchased an interest in the Arnold Garage and Sales Co. He will become actively associated with the concern as secretary-treasurer after November 1, on which date his resignation as teller of the First National Bank becomes effective.

KIRKSVILLE. — Presto-Lite Battery equipment of the Kirksville Auto Co. has been purchased by William Maize. He has located at 209 North Elson.

MAPLEWOOD.—Kellam Motor Co. is remodeling the building at the northeast corner of Manchester and Bellevue avenues as a sales and service station for the Durant and Star motor cars.

NEW BLOOMFIELD.—John B. Lawson and William Lawson will occupy the garage building now under construction on a lot north of the post office. The basement will be 12 x 30 and the building 30 x 60.

POPLAR BLUFF.—Nixon Tire Co. has been appointed distributer for Lee puncture-proof tires.

ROCK PORT.—Voyles & Son have traded their garage business to Mrs. E. Camp of El Dara for her eighty-acre farm. Raymond Troutwein will conduct the garage business for Mrs. Camp.

ST. LOUIS.—Kohler-Speer Motor Co. has added the Maxwell and Chalmers, and Hupmobile lines to its Studebaker agency.

SALEM.—Consolidation of the Dixon and Service Garages was effected the first of the month. Dixon is transferring his equipment and services to the Service Garage.

WALNUT GROVE. — Daniel Blakemore and Homer D. Looney have purchased the L. & S. Garage from Laufenburger & Simmons. The business will be known as the L. & B. Garage.

KANSAS—ALMA. — Renovations are under way in the garage owned by John Noller. A double door will be made in the south corner of the main room and two show windows built where the old door was located.

AUGUSTA.—W. A. Stone and Hugh C. Harrington have formed a partnership to conduct an automobile electrical supply business. They will operate under the name of the Stone-Harrington Electric and will soon move into the building recently vacated by the W. B. Jones Motor Co.

COLUMBUS.—A filling station will be added to the Ward Garage and Repair Shop on East Maple street.

DODGE CITY.—H. W. Voorhies, of the Dodge City Auto Top & Painting Co., has moved his business to a new location at 101 Second avenue, the front of which he will occupy. The rear of the building is taken over by the Park Garage and Machine Shop, which is owned by Thompson and Jenkins.

ELDORADO.—W. A. Cannon has purchased the Bowman Garage at 118 East Locust avenue.

FREDONIA.—Arthur Shannon, proprietor of the Shannon Motor Co., has moved his line of implements and motor accessories to the building occupied by the Prunty Motor Co., where he will also install a Maxwell agency.—Howard Chestnut, proprietor of the garage located south of the Wilson County bank, has purchased the equipment and business of Frank Amos in the Oil Belt garage. He is moving his stock to the recently acquired location as well as his line of Durant and Star cars.

HANOVER. — Charles Lutsch has moved his battery station and automobile supply shop into the Overland Garage.

HOLTON. — Eugene Graham and Reuben Moore, operating as Graham & Moore Motor Co. have leased the old Simming Garage on the east side of New York avenue and will sell a line of Durant cars.

HOWARD.—Wicker & Leckliter have purchased the Howard Battery Shop from C. E. Hileman, formerly at the Munsinger Garage. The new owners are already installed at their new location, west of the Filling Station in the Cox building.

HUTCHINSON.—Barnes Auto Supply Co. has opened an automobile salvage department.

KIMBAL.—Kimbal Garage and Blacksmith Shop has been opened for business by Gumm.

LAGRANGE. — Henry Huelsebusch, Jr., has taken over the agency for the Chevrolet.

LEAVENWORTH.—Davidson Brothers Motor Co. at 420 Cherokee street has taken the agency for the Maxwell and Chalmers cars for which it will open a service station.

LEBANON. — Lewis Fryendall has taken over the Main Street Garage and will soon take possession of the business.

LINDSBORG.—M. J. Holt, of Des Moines, Ia., has purchased the Ford Garage and building from William Ericson, taking immediate possession.

McCUNE.—A receiver has been appointed for the Fixit Garage, conducted by S. E. Rudisill & Son.

MOUND VALLEY.—Oden & Son have sold their interests in the blacksmith and garage business to A. H. Page.

OTTAWA.—Ottawa Buick Co. has taken on the agency for the Peerless in addition to the Buick line.

SALINA.—Salina Reo Motor Co., located at 120 South Fifth, has been appointed dealer for the Rayfield carbureter for this territory.

STERLING. — F. W. Temple has opened an automobile paint shop in the rear of George Lyon's wagon shop.—Charles Daenzer has taken over the business of the defunct Welch Motor Co., previously conducted by E. V. Welch.

WESTMORELAND. — R. R. Kersey has disposed of his interests in the Kersey Motor Co. garage building and business to Robert Zabel and son, A. L. Zabel, both of Onaga. The Ford Agency for this section was also taken over by the new owners.

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THE tire dealer who handles several brands is likely to be up against it now and then for enough sales arguments to go 'round.

As contrasted with the man who *concentrates* on U. S. Tires.

Who feels safe in leaving things pretty much up to the *performance* of the goods he sells.

Whose money is invested in *new, quick-moving, sure-profit stock.*

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United States Tires

United States Rubber Company

Fifty-three Factories

The Oldest and Largest Rubber Organization in the World

Two hundred and thirty-five Branches

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WICHITA.—Battery and Repair Service Stations will soon be opened in the two new rooms, 12 x 50, recently added to the Clark Brothers' Garage, located at 1018 West Douglas.—A. A. Reiff will soon buy the northeast corner of Topeka and English from L. E. Hullet, agency for Cleveland tractors here. The site has a 50-foot frontage on South Topeka and a five-year lease has been given by Hullet to the United Tire Co. This concern is contemplating the erection of a building for its tire business and filling station.

WINFIELD.—A Ford Garage will soon be constructed on the west side of Main street, between Eleventh and Twelfth, by Stuber Brothers. The concern is at present located at the corner of Ninth and Millington streets. The new garage will be 150 x 140. A large department will be reserved for the storage of cars and another for a repair shop. Another part of the building, distinct from the automobile section, will be used as a storage battery repair room.

YATES CENTER.—Work will soon be started on the construction of a garage and salesroom, 60 x 100, to be built for H. M. Hosey, of the Hosey-Durant Sales Co.

NEBRASKA — BROKEN BOW. — Nightgale Brothers Garage has been exchanged for a 320-acre farm belonging to Marsh & Son.

COLLEGE VIEW.—J. E. Graves, of Merna, has leased a large garage here.

DANBURY.—Ed. Roberts has sold his interest in the Ford Garage to J. D. Beck.

FAIRFIELD.—F. H. Cayot and C. G. Loud have purchased the North Garage from the Fairfield Auto Co.

HOWELL.—W. I. Strohle has opened a garage in the building formerly occupied by the Howell Motor Co. He will carry a line of Ford parts.

MENA.—J. W. Austin and E. York have purchased the building at DeQueen street and Port Arthur avenue and have opened the Tourists' Garage. In addition to conducting a general repair business, the new concern will also paint automobiles and supply new tops and upholstering.

PINE BLUFF.—A new automobile shop has been opened at 910 State street, under the name of Reliable Auto Co., by Arthur Branch and I. Fitzpatrick.—Charles Chatfield, formerly with Thompson's Garage on West Barraque street, will open a tire store on West Second avenue in which he will handle Sterling Worth tires.

NORTHWEST

MINNESOTA — DULUTH.—A tire and accessory business will be opened by W. A. Kirchner at 403 East Superior street.

NORTH DAKOTA—FARGO.—Fargo Motor Sales Co. has taken over the agency for Chevrolet cars. This involves a cancellation of the company's contract with the Ford Motor Co. after having been its agent for fifteen years. The concern will continue to maintain the Ford repair shop and to sell Ford parts.

SOUTH DAKOTA—SIOUX FALLS.—Distribution of the Marmon has been acquired by E. J. Todd and Son. Until permanent headquarters are secured, the concern will locate at 212 Paulton Bldg.

SOUTHWEST

ARKANSAS—BALD KNOB.—A two-story brick garage is being constructed for E. C. Ford and T. W. Leggett. The front will be used as a drive-in filling station, office and showroom. The rest of the ground floor will be utilized as a workroom, and the upper floor for storage. R. T. Edwards will occupy the building under a long-term lease.

DERMOTT.—Fire in the Armstrong Garage and storage building caused a loss of $2,000.

FT. SMITH.—Hugh Garner has sold the Battery Service Station to Nelse Page and Wm. Clabes.

HOPE.—One of a chain of 47 automobile accessory and filling stations to be established on the Bankhead highway, between Texarkana and Memphis, will be located at this city. F. L. Goode will operate the local station in which a complete line of automobile accessories will be handled.

LITTLE ROCK.—A service station has been opened at 2003 Louisiana street by J. H. Carter, Studebaker specialist.

OKLAHOMA—ALVA.—D. R. and E. L. Holloway are remodeling the Maxwell building with the intention of opening a garage and machine shop. They plan to handle automobile parts and accessories and to conduct a general repair business.

BARTLESVILLE.—Imbr Lubricating Co., formerly known as Church and Dunaway, has now located in its new office and warehouse three blocks south of Third and Virginia avenues.

LAWTON.—New quarters have been opened on Fifth and C. by the Acker-Brunskill Motor Co.—Oldsmobile Motor Co. has opened for business at Duff and Shaw's at 515 South Fifth street. The latter plan to purchase the official service.

TULSA.—Quarters have been opened by the Stephens Motor Sales Co. at 215 South Detroit street.

TEXAS — CORPUS CHRISTI. — U. S. L. Battery Station has opened at 511 Shartzel street.

DALLAS.—A reinforced concrete and brick building is being erected for the Safety Tire Repair Co. on a site 50 x 100, at Evergreen and Young streets.

MARLIN.—H. O. Schmalz has opened a repair shop in the east side of the I. N. Conyers barn and will render the same service as when he was connected with the Scheef Bros. Garage.

PALESTINE.—T. G. and H. D. Hamilton have taken over the Dodge automobile agency.

SMITHVILLE.—Work will soon be started on a concrete garage for Hugh Ehlers, of La Grange.

WASHINGTON—DAYTON. — R. L. Rix Repair Shop has acquired the Philadelphia storage battery agency and has moved to the Dantscher building.

LEAVENWORTH. — Chevrolet and Nash distributing franchises have been secured by the Leavenworth Garage, of which L. C. Brender is proprietor.

ORTIG.—A new garage, 36 x 54, has been opened by J. J. Schrock on Corrin avenue.

SPOKANE.—Russell-Weimer Tire Co., located at S110 Post street, of which O. N. Russell is president, has taken over the business of C. S. Heyburn & Co., former Goodyear solid truck tire distributer.—A test route has been erected on East Sprague avenue west of the city limits by L. F. Olney, manager of the Stewart-Warner Products Service Station. New and repaired speedometers will be tested on this course.—A brick building is being erected for the Main Avenue Garage, W44 Main avenue, of which R. A. Kellogg is proprietor. The new structure will double the present floor space of the company to 14,000 square feet, storing 150 cars.

WAITSBURG. — Ford and Fordson agencies have been secured by the Waitsburg Garage.

OREGON — ASTORIA. — Nyquist Motor Co., with C. A. Nyquist as manager, has leased a two-story building with 13,000 square feet floor space, now in the process of construction on Commercial near 15th street. The company will house its Velie and Chevrolet agencies in the new quarters.

CRANE.—Shop equipment and stock of the Crane Garage on Main street has been sold by O. E. Thompson to the Burns Garage Co. The Crane Garage will serve as offices while the Burns Garage will be used as a warehouse.

JACKSONVILLE.—E. S. Wilson has purchased a building and the adjoining lot on Main street in which he has opened the E. S. Wilson Garage.

LEBANON.—C. E. Soule and Oscar Grisham have purchased the Miller-Alton Service Station. They will continue to conduct their battery service station.

MARSHFIELD.—Distribution of the Durant has been secured by the Motor Inn, operated by Clark & Noble.

SPRINGFIELD. — R. G. McMasters has sold the Second Ave. Garage to W. D. Ingleside and J. D. Adams who have added a battery service station.

CALIFORNIA—ADIN. — D. J. Fay has sold his interests in the Fay & Smith Co. to E. W. Smith. The concern will operate as the E. W. Smith Garage.

BALDWIN PARK.—R. F. Bingham has purchased the Baldwin Park Garage.

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"EARL *owners sell* more cars *for us than our own salesmen*"

By C. A. Earl

Why satisfied motor car owners make satisfied distributors and dealers is revealed by Mr. L. W. Kummert, General Manager of the Earl Louisville Company, in his recent summing up of Earl sales possibilities for a prospective distributor in another city. The latter has since joined the Earl fold and has given me real pleasure by sending to Jackson all the replies his inquiries produced.

"In answer to your letter of August 24th," Mr. Kummert writes, "we have handled the Earl car since April 1st. We have never had another car on which we were so thoroughly sold as on the sturdy Earl.

"The reason we are so thoroughly sold on the Earl is due to the fact that our owners actually sell more cars for us than our salesmen. To use an automobile trade term, the Earl is a car that 'stays put.'

"We have less service work on the Earl than on any other automobile we have ever handled. Consequently we are decidedly pleased with it because *we are not giving away our profits after we make them.*

"As to the organization at the factory, the only thing we can tell you about them is that they treat us as though we were the only distributor they have, making every possible effort to co-operate with us at all times."

That pithy line of Mr. Kummert's—*"We are not giving away our profits after we make them"*—will have a world of meaning for a good many motor car merchants. If there is no Earl representative in your town, let me send you the facts about the quality Earl line and the liberal Earl contract. Write or wire today.

C. A. Earl
President and General Manager

EARL MOTORS, INC

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Adper Mfg. Co., Manhattan, N. Y. To manufacture automobile accessories. Capital $10,000. Incorporators: A. D. Perkins, E. and H. G. Joubert.—Corliss Pneumatic Motorcar Wheel, Inc., Manhattan, N. Y. To manufacture wheels for motor vehicles. Capital $10,000. Incorporator: H. C. Anderson.—Lenox Tire Corp., Manhattan, N. Y. Capital $10,000. Incorporators: M. Nugent, A. Meagher, W. Nugent.

Martin Garage, Manhattan, N. Y., has changed its name from Martin Garage to Le Bel Construction Corp.—Prudential Automobile Service Corp., Manhattan, N. Y. Capital $100,000. Incorporators: S. Rabinowitz, H. E. Rampton, L. Billig.—Rose Hill Garage, Manhattan, N. Y. Capital $10,000. Incorporators: R. E. Tinsley, P. and J. A. Rosen.

Steinbeke Taxicab Corp., Manhattan, N. Y. Capital $10,000. Incorporators: J. Steinbeke, E. Vandormael, A. Uytterhaegen.—Transport Motors, Manhattan, N. Y. Capital $10,000. Incorporators: G. Hare, W. B. Boice, R. Skannel, Jr.

East 96th Street Garage, Manhattan, N. Y. Capital $20,000. Incorporators: R. Brown, J. Leef, S. Galperin.

Abbedene Garage, Bronx, N. Y. Capital $20,000. Incorporators: H. Furman, S. Lerner, J. Gottlieb.—Bentley's Garage, Bronx, N. Y., has changed its name to Bentley Auto Sales.

Paddock McNeill Auto Sales Co., Brooklyn, N. Y. Capital $15,000. Incorporators: C. L. Paddock, H. G. McNeill, J. E. Rose.

Ball & Wilcken Motor Service, Richmond, N. Y. Capital $25,000. Incorporators: R. H. Wilcken, V. C. Ball, K. Golat.

Spartan Motor Corp., Albany, N. Y. Capital $100,000. Incorporators: S. H. Keating, R. F. Allen, J. O. Grady.

Automobile Spring Service, Buffalo, N. Y. Capital $10,000. Incorporators: J. J. Frey, F. J. and F. Weigel.—New Air Wheel Corp., Buffalo, N. Y. To deal in automobile wheels. Capital $200,000. Incorporators: W. J. Hoopes, C. J. Allen, J. F. Olejnic-zak.

Beaucaire-Mitchell, Rochester, N. Y. Capital $20,000. Incorporators: F. M. Beaucaire, L. J. Mitchell.—Burch-Buell Chevrolet Corp., Rochester, N. Y. Capital $35,000. Incorporators: R. D. Burch, F. W. Smith, D. M. Buell.—Kern Lenahan, Rochester, N. Y. To deal in motors. Capital $20,000. Incorporators: F. J. Kern, S. V. Lenahan.

Universal Truck Tire Co., Syracuse, N. Y. Capital $25,000. Incorporators: B. G. Ekelund, D. E. Alvord, M. K. Brewster.

NEW JERSEY.—Harwood Corp., Jersey City, N. J. To manufacture magnetos, carbureters, spark plugs, etc. Capital $100,000. Incorporators: George G. Ashwell, Jay C. Fonda, Frederick Kauffman.—Murray Rubber Co., Trenton, N. J. To manufacture rubber goods. Capital $2,000,000.—Schumm's Service, Inc., Trenton, N. J. To deal in automobiles. Capital $25,000. Incorporators: George M. Schumm, Alice J. Myatt, Elsie J. Schumm.

DELAWARE.—Gem Motor Corp., Dover, Delaware. Capital $2,000. Incorporators: Wm. C. Smith, E. P. Stewart, Wm. P. Reith.—Penn-Ohio Motor Corp., Dover, Delaware. To manufacture motors. Capital $300,000. Incorporators: Roman Albartini, Harry C. Haslett, Henry Budzawski.

Arcadia Motors Corp., Wilmington, Delaware. To deal in automobiles. Capital $300,000.

KENTUCKY.—Big Four Motor Co., Pikeville, Ky. Capital $30,000. Incorporators: Rudolph Rutherford, G. E. Syck, W. L. Morris.

OHIO.—The Akron Motor and Manufacturing Co., Akron, Ohio. Incorporators: Edward S. Sheck, Harry E. Hosterman, Angelo Bianchi, S. W. Pinner, W. G. Warner.

The Hallwood Motors Co., Columbus, Ohio. Capital $25,000. Incorporators: Nathan A. Hallwood, L. W. Wright, H. S. Culkins, Edwin Clay Pearce, E. S. Morton.

The Lemmon Auto Supply Co., Wooster, Ohio. Capital $50,000. Incorporators: G. M. Lemmon, E. Paumier, D. H. Cotterman, C. C. Sherick, F. G. Pontius.

The Stearns Motor Sales Co., Youngstown, Ohio. Capital $25,000. Incorporators: John T. Harrington, T. Lamar Jackson, Charles J. Jackson, Charles F. Smith.

INDIANA.—The Bonnel Co., Evansville, Ind. To manufacture and repair blacksmith supplies, automobile accessories, etc. Capital $15,000. Incorporators: J. Ralph Bennel, A. F. Sutheimer, Harold H. Juncker.

ILLINOIS.—Automobile Lock Co., Chicago, Ill. To manufacture and deal in automobile locks, accessories, etc. Incorporators: Frank R. Warren, William A. Jennings, Joseph B. Klein.—Automobile Wash Bowl and Service Co., Chicago, Ill. Capital $50,000. Incorporators: Chris. G. Burkhardtmeier, Martin J. Healy, Paul J. Healy.—Benton's Tire Shop, Inc., Chicago, Ill. To deal in automobile tires and accessories. Capital $1,000. Incorporators: Alexander Duncanson, Emma Benton, Charles F. Schroeder.

Commercial Auto Body Co., Chicago, Ill., has changed its name from Commercial Auto Body Co., to Weaver Body Co.—Ideal Service Station, Inc., Chicago, Ill. To manufacture and deal in crude oils, fuel oils, kerosene, gasoline, etc. Capital $50,000.—Park Manor Service Co., Chicago, Ill. To manufacture and deal in automobiles, motors, etc. Capital $6,000. Incorporators: Andrew J. Kieffer, William J. Shafering, W. H. Randolph.

Vim Oil Co., Chicago, Ill. To manufacture and deal in oils, gasoline, etc. Capital $50,000. Incorporators: N. Wetzel, Oscar A. Stoffels, Albert J. Minster. Godel-Howland Co., Peoria, Ill. To operate automobile garages, etc. Capital $50,000. Incorporators: Walter E. Godel, Cedric Howland, Frank E. Godel, Frank E. Howland.

Peru Motor Co., Peru, Ill. To deal in and repair automobiles, motor vehicles, etc. Capital $5,000. Incorporators: Gustave A. Robinson, Alwyn C. Eaton, Clarence E. Seipp.

WISCONSIN.—St. John Motor Car Co., Appleton, Wis. Capital $25,000. Incorporators: W. H. St. John, Clarence St. John, Genevieve St. John.

Green Bay Oil Co., Green Bay, Wis. Capital $15,000. Incorporators: Jos. Reinhard, Charles H. Reinhard, E. J. Delwiche.

Rahr Nash Co., Manitowoc, Wis. Capital $85,000. Incorporators: Wm. Rahr, Niels Rahr, W. S. Schroeder.

Jack's Garage, Milwaukee, Wis. Capital $5,000. Incorporators: Julius Komassa, Stanley Kotowski, John Kotowski.

MISSOURI. — Towey Garage, St. Charles, Mo. Capital $7,500.

Diamond Garage, Inc., Kansas City, Mo. Capital $6,000.—Kansas City Auto Top & Buggy Co., Kansas City, Mo. Capital $15,000.

TEXAS. — Denman Tire Co., Ft. Worth, Texas. Capital $5,000. Incorporators: R. T. Denman, O. H. Denman, L. Denman.

IDAHO.—Safety-Speed Indicator Co., Burley, Idaho. Capital $500,000. Incorporators: Macey Jackson, T. M. Morris, W. A. Griswold.

WASHINGTON.—Faultless Tire Co., Seattle, Washington. Capital $2,000,000. Incorporators: Roy Hesseltine, A. C. Barclay. — Struthers Shock Absorbers, Seattle, Washington. Capital $8,000. Incorporators: W. G. Struthers, C. A. Smith, D. A. Kelly.

Waterfront Garage Co., Seattle, Washington, has changed its name to Olympic Garage, Inc.

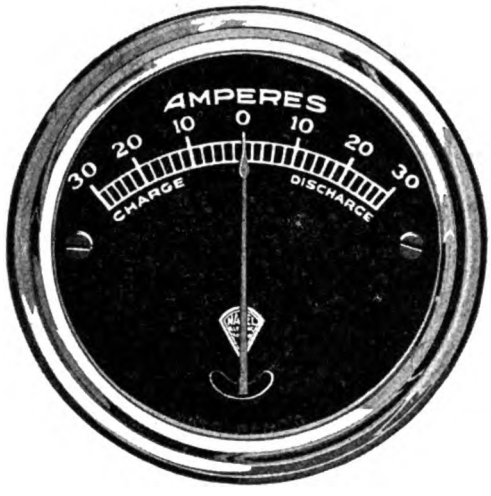
Cascade Battery & Mfg. Co., Wenatchee, Washington. Capital $25,000. Incorporators: D. W. Feeney, W. Y. Cumbo.

CALIFORNIA.—Electric Vehicle Co., Los Angeles, California. Capital $25,000. Incorporators: W. L. Conzelman, Charles B. Hoffer, C. de Blin.—Classic Motor Co., Los Angeles, California. Capital $50,000.

H. C. Auto Parts Corp., Mountain View, California. Capital $500,000. Incorporators: W. F. Hills, W. H. Clard, T. H. Sheldon.

Hillcrest Motor Co., San Francisco, California. Capital $75,000. Incorporators: J. E. Brown, R. S. Elliot.

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THE LEADER

When you think of Ammeters, consider this: More Nagel Ammeters are now used than any other kind. Three million of them have been bought as standard equipment on more than fifty well-known makes of motor cars and trucks.

NAGEL
AMMETER
THE W.G.NAGEL ELECTRIC CO.
TOLEDO OHIO

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CALENDAR

Detroit, Mich., Oct. 30.—Society of Automotive Engineers, meeting of Parts and Fittings Division, Standards Committee.

Dothan, Ala., Oct. 30-Nov. 4.—Automobile Show, to be held in connection with the South East Alabama Fair, auspices of the Dothan Automobile Dealers' Assn., Fair Grounds Automobile building; Fay Waldin, manager.

Detroit, Mich., Oct. 31.—Society of Automotive Engineers, meeting of Transmission Division, Standards Committee.

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

Los Angeles, Cal., November.—Tent Show, auspices of the Motor Car Dealers' Assn. of Los Angeles.

Detroit, Mich., Nov. 1.—Society of Automotive Engineers, meeting of Passenger Car Division, Standards Committee.

Detroit, Mich., Nov. 2.—Society of Automotive Engineers, meeting of Passenger Car Body Division, Standards Committee.

Detroit, Mich., Nov. 3.—Society of Automotive Engineers, meeting of Electric Vehicle Division, Standards Committee.

London, England, Nov. 3-11.—Olympia Automobile Show.

Pittsburgh, Pa., Nov. 4-9.—Electric Show, auspices of the Electric League of Pittsburgh, Motor Square Garden; Paul D. Lockard, manager.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18. — South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Chicago, Ill., Nov. 14-15.—Semi-Annual Convention, Factory Service Managers, auspices of the National Automobile Chamber of Commerce, La Salle Hotel.

Harrisburg, Pa., Nov. 20-21.—Annual Convention of the Pennsylvania Automotive Assn.; L. H. Hagerling, secretary-manager.

Louisville, Ky., Nov. 20-25.—Closed Car Week, auspices of the Louisville Automobile Dealers' Assn.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

St. Louis, Mo., December.—Third Annual Meeting of the American Petroleum Institute, Statler Hotel.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Hotel Commodore.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

New York, N. Y., Dec. 7-13.—National Exposition of Power and Mechanical Engineers, Grand Central Palace.

Paris, France, Dec. 15-Jan. 2.—Aeronautical Salon, Grand Palace, auspices of the Chambre Syndicale des Industries Aeronautiques, 9 Rue Anatole de la Forge.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

NEW YORK, N. Y., JAN. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

CHICAGO, ILL., JAN. 27-FEB. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

New York, N. Y., Jan. 9-12.—Society of Automotive Engineers, Annual Meeting.

Chicago, Ill., Jan. 15-19.—Thirteenth American Good Roads Congress and Fourteenth National Good Roads Show.

Cleveland, O., Jan. 20-27.—Cleveland Automobile Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn., New Public Auditorium; Herbert Buckman, manager.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, auspices of the National Automobile Chamber of Commerce, Drake Hotel.

Chicago, Ill., Jan. 29-31.—Annual Meeting of the Automobile Electric Assn., Congress Hotel.

Ann Arbor, Mich., Jan. 29-Feb. 3.—Automobile Show, auspices of the Washtenaw County Auto Dealers' Assn.; Jos. Thompson, secretary.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; M. L. Garlock, manager.

Cincinnati, O., Feb. 7-14.—Annual Automobile Show, auspices of the Cincinnati Automobile Dealers' Assn.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12. — Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn.; F. R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19.—Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

Louisville, Ky., Feb. 19-24.—Fifteenth Annual Show, auspices of the Louisville Automobile Dealers' Assn.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the 'Saginaw Auto Dealers' Assn.; Guy S. Garber, manager.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Springfield, Mass.—Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Springfield Automotive Dealers' Assn.

Muskegon, Mich., Feb. 28.—Automobile Show, auspices of the Automobile Business Assn.; John C. Fowler, manager.

Bay City, Mich., Mar. 5.—Automobile Show, auspices of the Bay City Auto Dealers' Assn.; George L. Weiler, manager.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Assn.; C. E. Holgate, manager.

Boston, Mass., Mar. 10-17.—Passenger Car, Truck and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

HOUSE ORGAN KEYNOTES

Did you ever hear of a pejorist? A pejorist—we take it that you have not found the word either in your vocabulary or your dictionary—is neither a pessimist nor an optimist.

DeMorgan, of literary fame, conceived the word, one which we believe is necessary to describe the average American. To say that we are all pejorists would be eliminating both pessimists and optimists, and we cannot do that. But most of us are pejorists.

A pejorist differs from the pessimist in that he does not think the world is going to wrack and ruin. On the other hand he does not say with Pollyanna that everything will be lovely if we will only be glad.

The pejorist faces the facts as they present themselves whether they be pleasant or unpleasant. The pejorist works for a better world in the next generation. Pejorists make ideal automobile distributers, dealers and salesmen. Pejorists are the good substantial citizens, but yet with H. G. Wells, they would agree that:

"In the course of a few generations every little town could become an Athens, every human being could be gentle in breeding and healthy in body and mind, the whole solid earth man's mine and its uttermost regions his playground."—Cadillac Clearing House.

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We are steadily increasing our deliveries to leading Car Manufacturers.

AJAX TIRES
With New Features

FOR 1923

There is real profit in an Ajax Franchise.

Our Salesmen are now taking 1923 contracts.

Write the home office or the Ajax Branch in your District.

AJAX RUBBER COMPANY, INC. NEW YORK CITY Distribution in Leading Cities

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PUBLISHER'S OBSERVATIONS

BROADCASTING BY INDUSTRIES

"YOU are all familiar with such names as Sunsweet, Sunkist, Sun Maid, Diamond Brand, Blue Ribbon, Jim Hill—the brands that have been indelibly impressed on a public national consciousness." Louis Honig is addressing the Advertising Men's Post, American Legion, in San Francisco.

". . . . the advertising of California prunes, raisins, oranges, peaches, figs, apricots, beans, walnuts, almonds, could not be possible were it not for the growers' associations. No one grower or group of growers is great enough to support a broad national campaign for his commodity. It takes numbers—many thousands—to aggregate a crop sufficient to carry the burden of national selling and advertising.

". . . . Just to sell the crop is not the big idea in the merchandising plans of the agricultural associations of the Far West. They are out for the development of markets that will continue to absorb the annual crops. And they have come to realize that there is only one way to do it—by advertising plans as methodic and broadcast in their reach as the most carefully worked out program undertaken by any manufacturer.

"One association on the Pacific Coast has appropriated $2,500,000 for advertising to move its 1923 crop. One will spend $1,000,000. Two of them $500,000 each. And others will spend amounts ranging downward from $300,000 to $200,000. . . . . The capital wealth represented in these western associations runs into the thousand millions. And advertising is conserving this wealth."

¶ We'll say it is. The world that partakes of the "bottled sunshine" of California testifies daily in the most practical manner to be imagined that advertising is conserving the wealth of the western fruit growers' associations. The food jobbers and the grocers testify to it. Piles of rusting empty tins littering the backyards of village homes are the most astonishing evidence of what attractive packing and alluring advertisements will do.

Emphasis has often been laid on the several phases of this amazing outgrowth of California enterprise. But has enough been said to convince men in other lines of the tremendous power of group advertising? The power of example is tremendous, but apparently there are a good many lines to which this example ought to apply in which its force remains to be felt.

¶ Of the development and successful growth of business, trade and industrial associations there is seemingly no end. One industry after another comes to the front and rises not only in prominence, but in earning power as its associations become better coordinated and organize definitely for progress.

There is no royal road for them to follow. Some thrive under the inroads of competition from other industries or competitive groups in the same line. Some rise to success after erratic and devious experiments in the doubtful artifice of trade conspiracy. Still others wobble along for a time and then peacefully give up the ghost. In the main, however, the trade association is ever growing more powerful and efficient.

¶ Moreover, trade associations are coming more widely to be recognized as sources of authentic information and the media through which access may be had to the facilities which every trade and every industry should afford to other trades and industries and to the world at large. "Is there a chamber of commerce in this town?" the enlightened stranger asks upon alighting from the train at Brownsburg. Similarly the seeker after information about any line with which he is unfamiliar inquires first of all into the kind and character of its trade associations.

Under the present Federal Administration, inspired as it is by the exemplification of their value during the late war, such associations are not only thriving, so far as their purposes are legitimate and their activities honestly conceived, but they are receiving the utmost encouragement. Their function in gathering, digesting and presenting statistical information is recognized as a valuable service to the Country as a whole.

¶ Their value in legislative affairs, under proper safeguards, has taught lawmakers to look upon these commercial bodies as valuable informants and wise counsellors. As distinguished from the old-time lobbies, the legislative committees of the modern associations have proved themselves deserving of respectful attention, and inclined to helpfulness.

In politics, however, the great day of the trade association is still to come. The "Interests" have been with us in the sometimes regrettable past, but not to so great an extent the permanently organized trade group. If the business men of Oshkosh want a certain thing their desires carry weight, because they represent the substantial interests of the community. But if the prune growers of California are outraged is their association to be denied expression?

If, with the Farm Bureau Federation in the dim background, the "agricultural bloc" became a power in Congress, what is to be said of the unrealized possibilities of an "industrial bloc," reinforced by associations of manufacturers? What, in fact, is the labor vote, but one expression of industrial organization in politics?

There is much in the future of business organization to invite interest and speculation. But even as its greatest strength lies in the interchange of information among its members, so its widest influence arises through the broadcasting of its messages to the four winds of the advertising world.

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KEYSTONE COPPER STEEL

YOUR needs—complete. If you use sheet metal of any type in automobile construction, we can furnish a product specially adapted to your requirements. We combine good materials with the most approved manufacturing methods.

Automobile SHEETS

Automobile Body Stock, Fender and Hood Stock, Automobile Crown Fender Stock, "THURITE" Deep Drawing Sheets, Etc.

Our Long Terne Sheets are specially adapted for the making of gasoline tanks, etc. This Company will be pleased to extend to the industry assistance in the solution of particular problems involving use of sheet steel products.

We manufacture Sheet and Tin Mill products for all purposes. Black Sheets, Galvanized Sheets, Special Sheets for stamping, Formed Roofing Products, Tin and Terne Plates, etc.

American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES:

Chicago Cincinnati Denver Detroit New Orleans New York Philadelphia Pittsburgh St. Louis

Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, San Francisco, Los Angeles, Portland, Seattle

Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, 30 Church Street, New York City; 36-38 New Broad Street, London, E. C.

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OLDSMOBILE

In Indianapolis—

"You might say that we are new Oldsmobile dealers, having had the line since September, 1921, but in all of our eight years' experience in selling automobiles we have never had cars from a factory that came thru in more perfect condition than the Oldsmobile cars we have had since taking on the contract. On the cars we have put out in Indianapolis at retail our service expense has been practically nothing, with an average of less than $5.00 per automobile."

—THE LATHROP-McFARLAND COMPANY
(Indianapolis, Ind.)
J. S. McFARLAND

You know and we know that a successful dealership must be based on a right product.

The Oldsmobile product is right! The above letter from one of the largest and oldest automobile selling organizations in Indiana is typical of hundreds of fine tributes paid Oldsmobile Fours and Eights by dealers everywhere.

In addition to an excellent product consisting of two distinct lines, 15 easy-selling models, and a price range of $955 to $2025, Oldsmobile offers the unequalled advantages of the General Motors financing plan.

Put your efforts on a line offering the cars and the franchise which will assure you real prosperity. We have opportunities now in a few territories for aggressive dealers.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation

Oldsmobile

The Oldest Unit of
GENERAL MOTORS CORPORATION

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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FOUR-CYLINDER PASSENGER CARS

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Ford	$ 393	5	Starter—Dem. Rims	$ 364	2	Starter—Dem. Rims	$ 530	2	$ 595‡	5	Starter—Dem. Rims	3¾x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	C	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760‡	5		3⅝x4	Own	L	H	T		Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		850	4	860	5	C	3¼x4	Own	H	H	P		Z-H	R-AL	A-L	Own	Own	Own	Q	3.63	30x3½	102	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5	N	3⅝x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dodge Brothers	880	5	C, P	850	2	C, P	980§	2	1,195§	5	C, N, P, V	3⅞x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B D, P	1,175	3	1,395	5	B, D, P	3½x4¾	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Dort	885	5	P	885	2	P	1,045§	2	1,095§	5	C, P, V	3½x5	Lyc	L	H	T		Car	Con	Boe	Dlf	Own	Fln	F	4.66	31x4	108	Dort
Maxwell	885	5	C, K, P	885	2	C, K, P	985§	2	1,335	5	C, D, K, P, T	3⅝x4½	Own	L	H	T		Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V, Z	3⅞x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, H, P	895	2	C, H, P	1,095§	2	1,345	5	C, H, N, P, T, V, a	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.8	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5	V	3⅜x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5	C, P	1,075	4	C, K, P, Z	1,375§	5	1,595	5	C, D, N, P, V	3¼x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T		Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T		Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, H, O	1,095	4	D, E, G, H, J, L, O, Q	1,395	3	1,395	5	D, G, H, J, L, N, O, V	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	S	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, H				1,245§	5				3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, L, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3⅛x5¼	Own	L	H	T		Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, Z, b	1,095	2	C, D, H, O, P, Z, b	1,345	3				3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, N, O, P, V	3¼x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5	D, P, Z	1,295	5	C, K, P, W, Z	1,795	4	1,795	5	C, P, U, V, Z	3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B, C, O	1,235	2	B, C, O	1,795	4	1,950	5	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B, C, O						2,195	7	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5					2,385	4	2,475	5	A, B, G, O	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3⅜x5½	Own	H	C	T		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T			Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5	C, H, I	2,250	2	C, H, I	3,150	4	3,450	5	C, H, I, V	3¾x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	B C H 2J K¹ L O Q Zb	2,475	2	B C D H 2J K¹ L O Q Yb	3,250	4	3,475	5	B C H 2J K¹ L O U V Zb	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	H, J, L, O, Q, b	2,790	4	H, J, L, O, Q, b	3,490	4	4,450	5	H, J, L, N, O, U, b	4⅜x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
Handley-Knight	2,650	7	C, D, G, H, J, K, P				3,450	4	3,450	7	C, G, H, J, K, N, O, P, U	4½x4½	Own	S	C	T		Til	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3¾x5½	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, H, J, L, P, Z	3,785	2	A, D, G, H, J, L, P, Z			4,650	4	A G H J L N P U V Z	4¼x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer Four	3,950	6	G, 2I, O, P, Z, c	3,950	4	G, 2I, L, O, P, Z, c	4,850	4	5,250	7	G, 2I, N, O, P, T, U, Z	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer Four

SIX-CYLINDER PASSENGER CARS

Studebaker Light Six	975	5	B, C, D, b	975	2	B, C, D, b	1,225	3	1,550	5	B, C, D, G, N, b	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4½	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S		31x4	115	Columbia Light Six
Cleveland	995	5	D	1,260	5	C D E H J K¹ L T W X Z	1,295§	5	1,495	5	C, D	3½x4½	Own	L	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Hanson Light Six	995	5	H, J, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, C, V	3½x5	Own	L	H	P		Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2⅜x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Premocar "A"	1,095	5		1,095	2		1,750	3	1,825	5		3½x4½	Fal	H	H	T		Str	Bos	Bos	B&B	Mec	Tim	S	4.66	32x4	117	Premocar "A"
Elgin "K-1"	1,125	5	C, D	1,165	4	C, D, H, K, M, Z	1,645	4	1,645	5	C, H, N	3½x4½	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Chalmers	1,185	5	C, K, P	1,185	2	C, K, P	1,595	4				3½x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, D, H, O, P				1,450§	4				3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.62	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B, C, D, G, P, T, V	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Moon "6-40"	1,195	5	B	1,445	5	B, c	1,585	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Nash Six	1,240	5	D, R	1,645	4	D F H 2I 2J K Q R W Y b			2,040	5	C, D, N, R, T, U, V	3½x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, P, T, b	1,250	2	B, C, D, G, P, T, b	1,875	4	2,050	5	B, C, D, G, N, P, T, b	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3⅛x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Own	S	4.67	32x4	115	Velie "58"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	TOURING Seats	TOURING *Added Equipment	SPORT OR ROADSTER Price	SPORT OR ROADSTER Seats	SPORT OR ROADSTER *Added Equipment	TWO-DOOR CLOSED TYPE† Price	TWO-DOOR CLOSED TYPE† Seats	SEDAN† Price	SEDAN† Seats	SEDAN† *Added Equipment	ENGINE Size	ENGINE Make	ENGINE Valves	ENGINE Cam Drive	ENGINE Cooling	ENGINE Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Piedmont "6-40"	$1,285	5					$1,795	4	$1,795	5	E, J, K, N, O, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z, c									3⅛x4¼	Con	L	C	P		Str	Del	B&B	War	Tim	S	S	5.1	31x4	114	Davis "71"
Chalmers	1,345	7										3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3⅛x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7	D, R				1,890	4	2,190	7	C, D, N, R, T, U, V	3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	C, D, H, P, Z, b						1,850	5	C, D, H, P, V, Z, b	3⅛x4½	Con	L	C	P		Str	Del	Del	B&B	Ful	Col	S	4.58	32x4	118	Barley
Courier (Maibohm)	1,395	5	C, P, Z	1,495	4	C, D, H, K, P, T, Z, b	2,065	3	2,165	5	C, N, P, T, V, Z	3⅛x4¼	Own	H	H	T		Str	A-K	Wes	B&B	Mun	Col	S	4.6	32x4	116	Courier (Maibohm)
Elcar	1,395	5	C, D, H, O, P, Z, b	1,395	2	C, D, H, O, P, Z, b	1,975	3	1,995	5	C D H N O P T U V Z b	3⅜x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, K, O, T, Z	1,695§	2	2,095	5	C, D, G, K, T, V	3⅜x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	3..x4	117	Liberty
Buick	1,435	7	B, C, D, P	1,675	4	B C D X Y Z V T G H	1,895	4	2,195	7	B, C, D, P, G, T, V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W X Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3⅜x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3⅜x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B, C, D, P, Z	1,645	5	B C D F G H K P U W Z b	1,835§	4	1,885§	5	B C D K N P S T V Z	3½x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, D, G, H, O, P, Z	1,945	4	A C F G H 2 I 2 J K O P Y	1,995	4	1,995	5	A, C, G, H, O, P, Z	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, H, K¹, O, P, R	1,545	2	D, H, K¹, O, P, R	2,095§	3	2,395	5	D G H K¹ N O P R U V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Paterson	1,550	5	H, Z				2,595	4	2,595	5	H, Z	3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, H	1,525	4	B, H	1,625	5	2,295	7	B, H, T, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,850	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3⅛x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "66"	1,595	5	G, P, Z	1,695	4	G, P, Z	2,475	4	2,585	5	G, H, P, U, Z	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "66"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, N, P, V, Z	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	Own	War	Tim	S	5.11	32x4½	123½	Durant Six
Studebaker Big Six	1,650	7	B, C, D, G, O, P, S, T, b	1,785	4	B C F G H 2 I K O P T Y b	2,275	4	2,650	7	F G 2 I 2 J K N O P T V Yb	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, H, P, Z	1,890	2	B, C, D, G, H, P, W, Z	2,750	4	2,790	5	B C G H N P T U V Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2 I 2 J K¹ O P T X Z c			2,890	5	E 2 I 2 J K¹ N O P T U V X	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Davis "63"	1,695	4	E, J, K, O, S, V, c				2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "63"
Lexington "23"	1,695	5		2,045	5	A C D F 2 I 2 J M W X Y Z	2,145§	5	2,545	5	U, V	3¼x4½	Ans	H	H	P	T	Ray	Con	G& D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G& D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B	1,885	5	B, D, X			2,485	7	B, N, U, V	3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, O, P, Z, b	1,750	3	A, D, H, O, P, Z, b	2,550	4	2,690	5	A, D, H, N, O, P, V, Z, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, C, O, Z	2,150	4	B, C, F, O, X, Y, Z	2,485	5	2,485	5	B, C, G, O, T, U, V, Z	3¼x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, P	1,800	3	C, G, H, P	2,400	4	2,500	5	C, G, H, P, V	3⅜x4¼	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2 I 2 J K P R T V W Y b	1,895	2	F H 2 I 2 J K P R T V W Y b	2,195	3	2,695	5	F H 2 I 2 J K N P R V Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, O, P	1,900	2	A, B, D, G, O, P	2,750	3	2,850	5	A, B, D, G, O, P, T, V	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Westcott "D-48"	1,990	7	H, O, P, Z, c	2,190	7	E H 2 I 2 J K¹ O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5	D, I, Z	2,150	2	D, I, Z	2,800	4	2,950	5	D, G, I, U, V, Z	3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O, P	2,245	4	A, B, C, D, G, O, P	3,100	5	3,155	7	A, B, C, G, O, P, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Case "W"	2,250	7	A, D, H, O, P, Z, b	2,200	4	A, D, H, O, P, Z, b	2,850	4	3,250	7	A, D, H, N, O, P, V, Z, b	3⅝x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Roamer "6-54-E"	2,285	4	A, B, G, H, P, Z	2,750	4	A, B, G, H, J, L, P, Z	3,285	3	3,585	5	A B G H J L N P U V Z	3½x5¼	Con	L	H	P		Str	Spl	Wes	B&B	G-L	Tim	C	4.45	32x4½	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3¼x5	Rut	L	H	P		Str	Bos	G& D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2.385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3⅛x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, P, R, Y	2,395	2	A C D H 2 J K¹ L O P T W	3.095	5	3.395	7	A D G H K¹ N O U V Ya	3⅝x5½	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	33x5	132	Haynes "75"
R & V Knight	2,475	7	A, G, H, O	2,475	4	A, D, G, H, O	3,000	4	3,105	5	A, G, H, O, U	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	C, G, O, V	2,485	2	C, G, O, V	3,175	4	3,275	5	C, G, O, V	3¾x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, O, V						3,525	7	C, G, O, V	3⅞x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5	C, D, H, I, Z	2,700	4	C, D, H, I, Z	3,350	4	3,700	7	C, D, H, I, V, Z	3⅜x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.9	34x4½	130	Stearns-Knight

(SEE FOOTNOTES)

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ace "C"	$2,975	5		$2,975	2				$4,500	5		3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, C, G, P, R, T, c	3,435	4	A, B, G, H, P, R, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5⅛	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, P	3,300	4	A, B, C, D, G, P, Y	4,300	4	5,100	7	A, B, D, G, N, P, T, U	3⅝x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, C, G, P, Z	3,600	4	A, B, C, G, H, 2I, P, X, Z	4,000	4	4,550	7	A, B, C, G, N, P, T, U, V	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.58	33x5	132	Winton "40"
Mercer Six	3,750	6	G, H, O	3,750	4	G, H, J, L, O			5,000	6	G, H, O, T, U	3¾x5	Own	H	H	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.77	32x4½	132	Mercer Six
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3⅝x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	B C D E G I O S V W Y Z	3,800	4	B C D E G I O S V W Y Z	4,600	4	4,800	7	B C D E G I O S V W Y Z	3¾x5¼	Own	S	C	P	...	Ray	Sen	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H I J L O T Z b				4,900	3	4,900	5	A G H I J L N O T U V b	3¾x5	Own	H	H	A	...	Zen	Sen	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, O, Z, b	3,950	4	A, G, O, Z, b	4,985	4	5,750	7	A, D, G, O, U, Z, b	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A E G H 2I 2J K O Q W Y Z	4,500	4	A E G H 2I 2J K O Q W Y			6,500	5	A E G H 2I 2J K N O Q Z	3⅝x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	L	T	H	P	T	Own	Del	Del	Own	Own	Tim	S	4.28	33x5	138	Pierce-Arrow
Leach	5,500	5							5,500	5		3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A C D E G H 2I J M O X Z	6,300	4	A C D E G H 2I J M O X Z	7,500	4	7,500	7	A E G H 2I J M O U V X Z	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, E, G, 2I, Q, T, Z	7,600	4	A, B, E, G, 2I, Q, T, X, Z			11,000	7	A B E G 2I Q T U V Z	4½x5½	Own	T	H	P	...	B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	B, D, G, H, 2I, 2J, L, Z	10,900	2	B, D, G, H, 2I, 2J, L, Z			12,900	7	B D G H 2I 2J L U V Z	4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
												EIGHT-CYLINDER PASSENGER CARS																
Oldsmobile "47"	1,375	5	C D, P, T	1,675	4	F H K P Q T V W Z b	1,875	4	2,025	5	C, D, N, P, T, V, Z	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	C, D, G	1,735	4	C, D, G			2,635	7	C, D, G, N	2⅞x4¾	Own	L	H	T	...	B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	7	A, B, G, H, P, R, b	1,795	2	A B G H I L O P R W b	2,400	4	2,550	7	A B C D G H N O P R V b	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G, O, P	2,395	4	A, D, G, O, P	2,750	4	3,200	7	A, D, G, N, O, P, V, a	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P	2,475	4	B, C, J, K, O, P	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, D, E, G, H, O	2,620	4	A, D, E, G, H, O	3,625	4	3,695	7	A C D E G H N O T V	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A B G H 2I 2J M N O X	2,685	4	A B G H 2I 2J M N O X	3,385	4	3,685	7	A B G H 2I 2J M N O U X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G H O P T V Z b c	2,990	4	A B C G H O P T V X Y b c	3,400	4	3,900	5	A B G H O P T U V Y Z b	3¼x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,925	5	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, P, T, Z, a	3,800	4	A B C D G O P T Y Z a	4,400	5	4,900	7	A B C D G O P T U V Z a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A B C D G H I O T V Z	4,090	4	A B C D G H I O T V Y Z	5,500‖	4	5,500	7	A B C D G H I O T U V Z	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, D, G, I, O, P, R, Z, a	4,350	2	A, D, G, I, O, P, R, Z, a	5,350		6,000		A D G I O P R U V Z a	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A B E G H J M O U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	B F G H I J L O 2Q S Z b	6,500	4	B F G H I J L O 2Q S Z b	7,800‖	4	7,800	7	B F G H I J L N O R V Y b	2⅞x5	Own	H	V	P	T	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
												TWELVE-CYLINDER PASSENGER CARS																
Packard Twin-Six	3,850	7	A, D, G, O, Z	3,850	2	A, D, G, O, Z	5,240	4	5,400	7	A, D, G, O, U, V, Z	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk and rack; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

†CLOSED MODELS: Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §. ‡ Two-Door. ‖ Four-Door.

ENGINE: **Ans**—Ansted; **Con**—Continental; **Dus**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith; **Z-H**—Zenith or Holley.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse; **R—AL**—Remy or Auto-Lite.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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What Car-Owners Told Us about Service

We recently asked car-owners in fourteen states some questions about service.

We obtained some very significant information.

Over 90% were perfectly aware that their cars would some day need replacement of parts. This did not cause them to lose confidence in the car or in its parts—they merely desired to be sure of prompt, reliable service when they needed any repair work.

And 81% of those interviewed said they wanted original parts used and not unknown or inferior parts.

Progressive car-dealers and garages know this desire of the car-owner and are everywhere taking advantage of the nation-wide distributing service on Timken Axle parts.

It gives them an additional source of supply on parts they may not have in stock, saves delay and freight charges and pleases their customers.

One of these stations is doubtless near you. If you don't know where, write us for address. You'll find them anxious to give you real co-operation.

THE TIMKEN-DETROIT AXLE COMPANY, DETROIT, MICH.
Sole Representatives in the British Isles:
AUTOMOTIVE PRODUCTS COMPANY, 3 Berners Street, London, W. 1.



Each man who has any part in the building of a motor car should make his part so good as to assure the whole-hearted approval of the car-owner.

Digitized by Google

The Aristocrat of Wheels

They have been called the Aristocrat of Wheels because of their distinguished appearance, and the very special favor in which they are held by leading motor car manufacturers both in Europe and in America.

Owners will tell you that they bring to motoring a new sense of security because of their sturdiness, and the exceptional speed and ease with which the extra wheel can be substituted on the road.



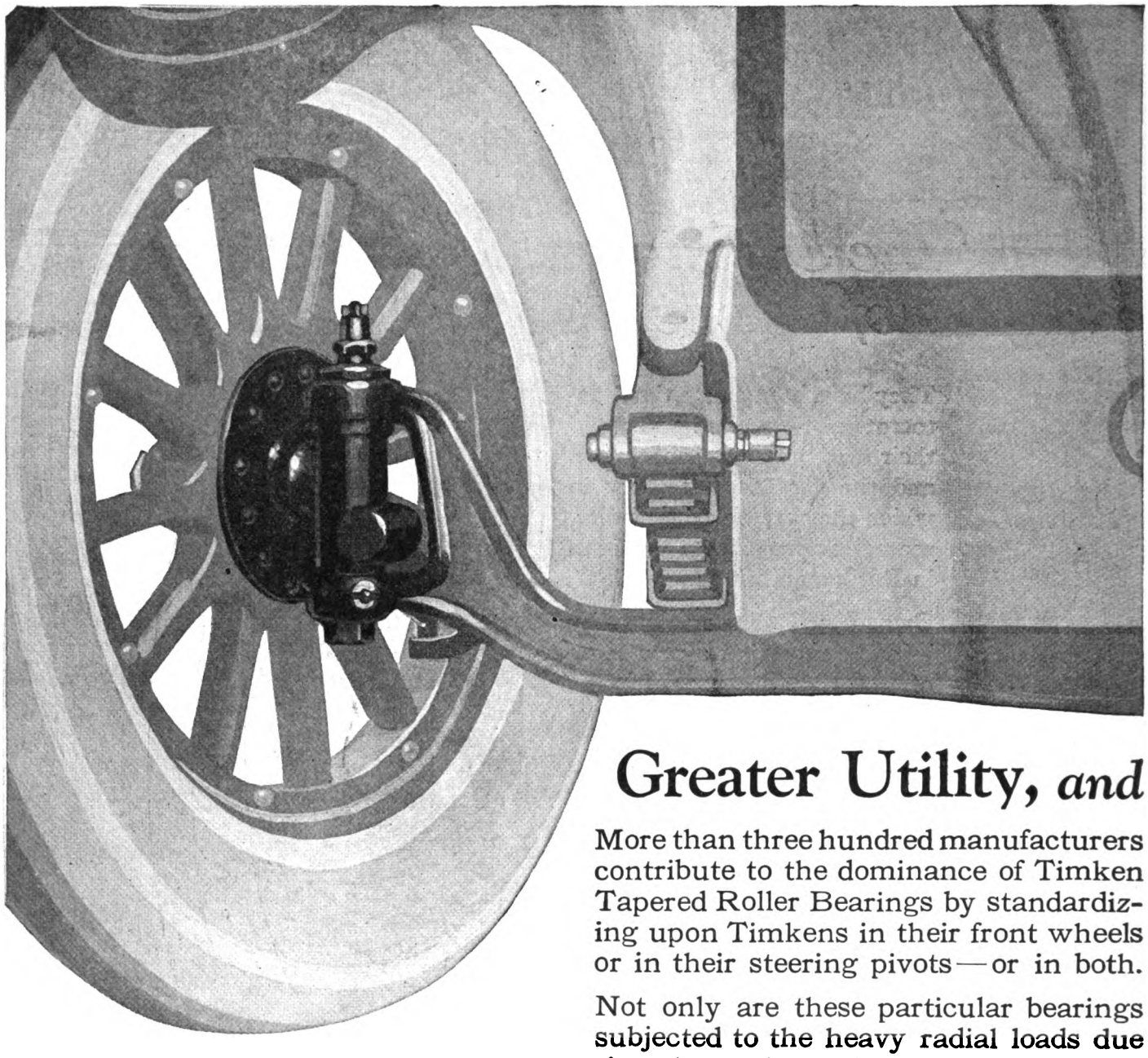
Dodge Brothers, Studebaker, Willys-Knight, Chalmers, Winton, Nash, H. C. S., and Yellow Cab are among those American Manufacturers who have adopted Michelin Steel Wheels as standard or optional equipment.

Five Convex wheels In Each Set

BUDD WHEEL COMPANY
Philadelphia

BUDD Michelin STEEL WHEELS

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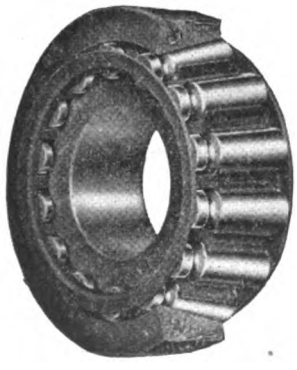


Greater Utility, *and*

More than three hundred manufacturers contribute to the dominance of Timken Tapered Roller Bearings by standardizing upon Timkens in their front wheels or in their steering pivots—or in both.

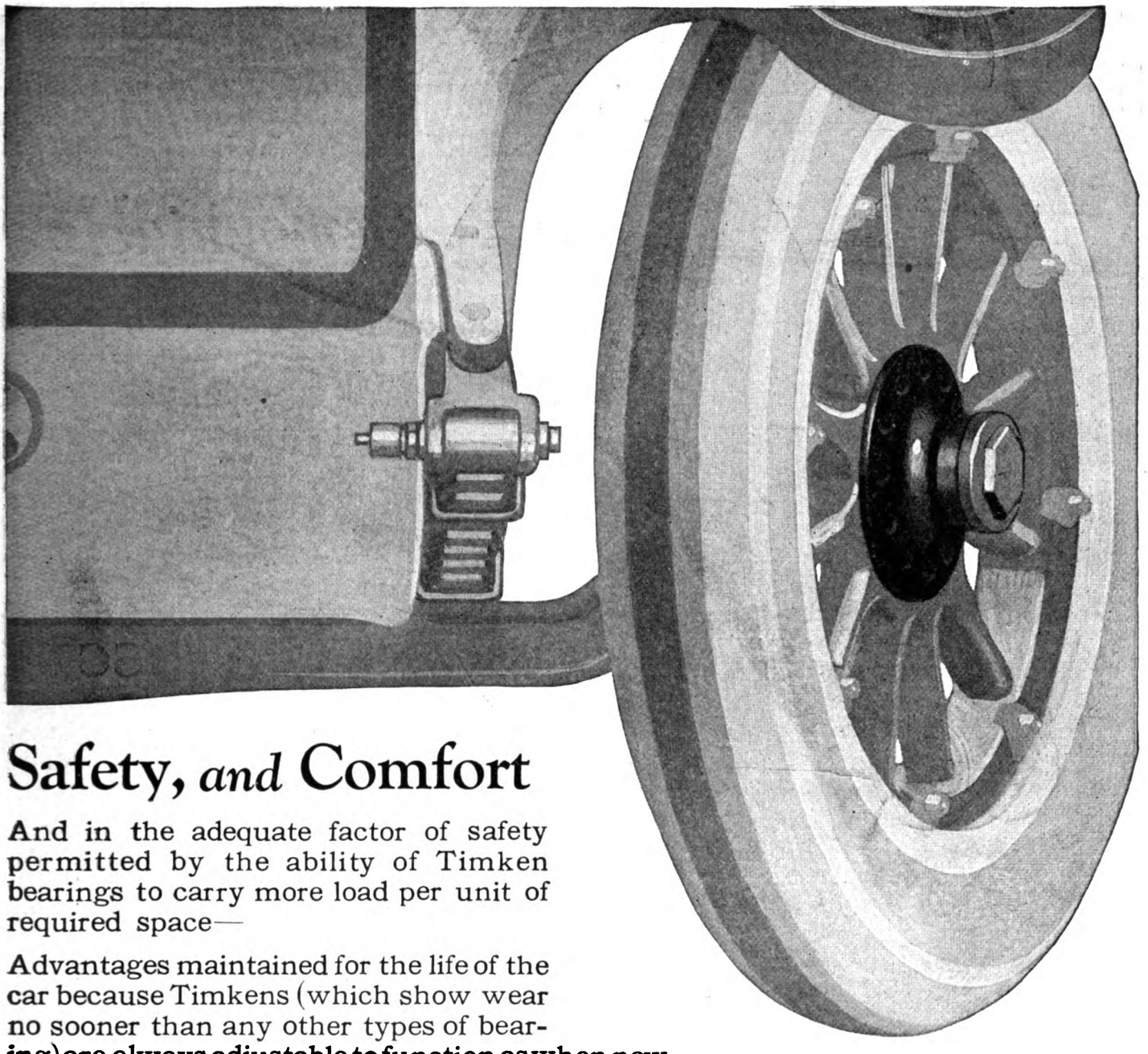
Not only are these particular bearings subjected to the heavy radial loads due to supporting the engine weight; not only are the extreme thrust loads and shock loads of the entire steering effort borne by the front wheel and pivot bearings—

But together with these purely utilitarian phases goes the human element involved in far more comfortable steering.



TIMKEN
Tapered
ROLLER BEARINGS

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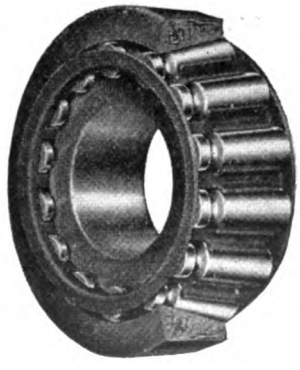
Safety, *and* Comfort

And in the adequate factor of safety permitted by the ability of Timken bearings to carry more load per unit of required space—

Advantages maintained for the life of the car because Timkens (which show wear no sooner than any other types of bearing) are always adjustable to function as when new.

Reasons enough for the adoption of Timken Tapered Roller bearings for the front wheels or steering pivots of 303 American and European cars, trucks, and tractors—a decisive majority.

The Timken Roller Bearing Co
CANTON, OHIO

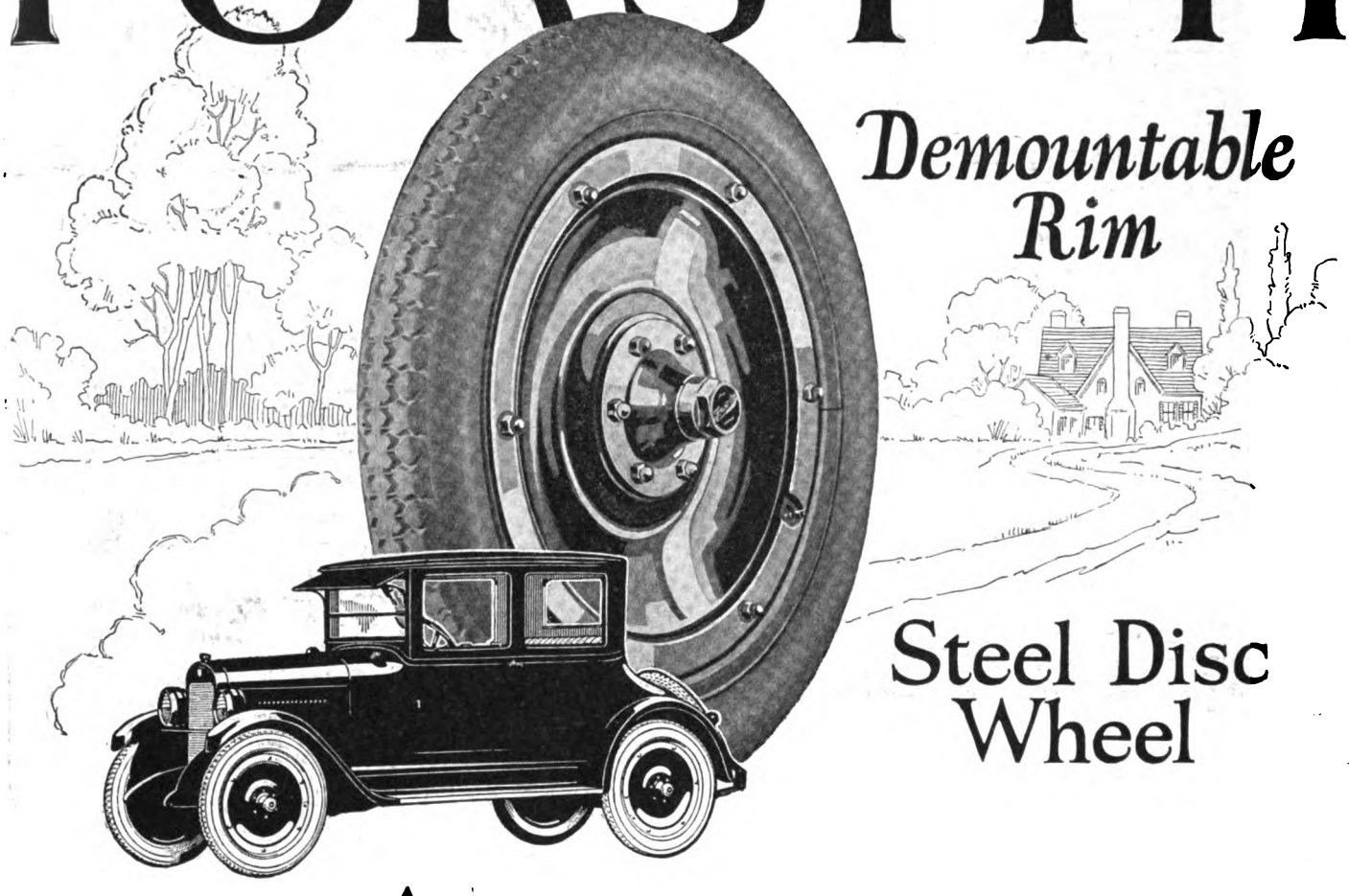


TIMKEN
Tapered
ROLLER BEARINGS

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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FORSYTH



A REVIEW of the progress of FORSYTH for the past twenty-five years, and its relation to automotive history, recalls a number of achievements that are indeed outstanding in the industry.

FORSYTH is better known for the type or kind of Pressed Metal Products it has produced and standardized, rather than for quantity or numerical accomplishments in manufacturing.

It was, therefore, logical that the FORSYTH Demountable Rim Steel Disc Wheel should command the approval of Automotive Engineers. It is not surprising that many manufacturers have made their tests and standarized on this new FORSYTH Equipment.

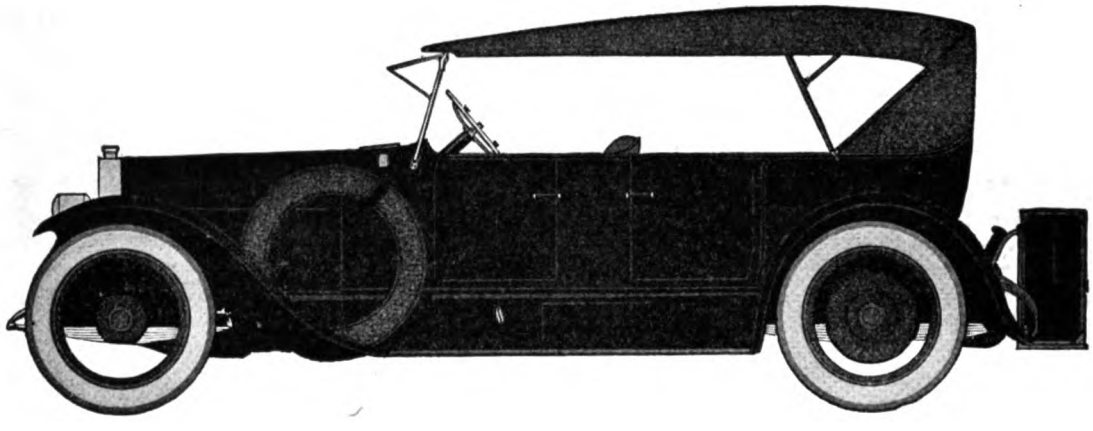
Reputable Organizations capable of handling the distribution of FORSYTH Steel Wheels are invited to make application for territory assignments not already granted.

FORSYTH Steel Disc Wheels are unflawed metal, shaped after a beautiful and practical design. With parts making them demountable at the rim and interchangeable with present wood wheel hubs, FORSYTH has brought to a grateful realization the Steel Wheel on which you will eventually ride.

Thus the authentic manufacturing skill for which FORSYTH is world-famous again becomes the open secret of the wonderful and ever-growing popularity of FORSYTH Steel Disc Wheels.

Made at Harvey, [Chicago suburb] Illinois, by
FORSYTH BROTHERS COMPANY
Established 1895

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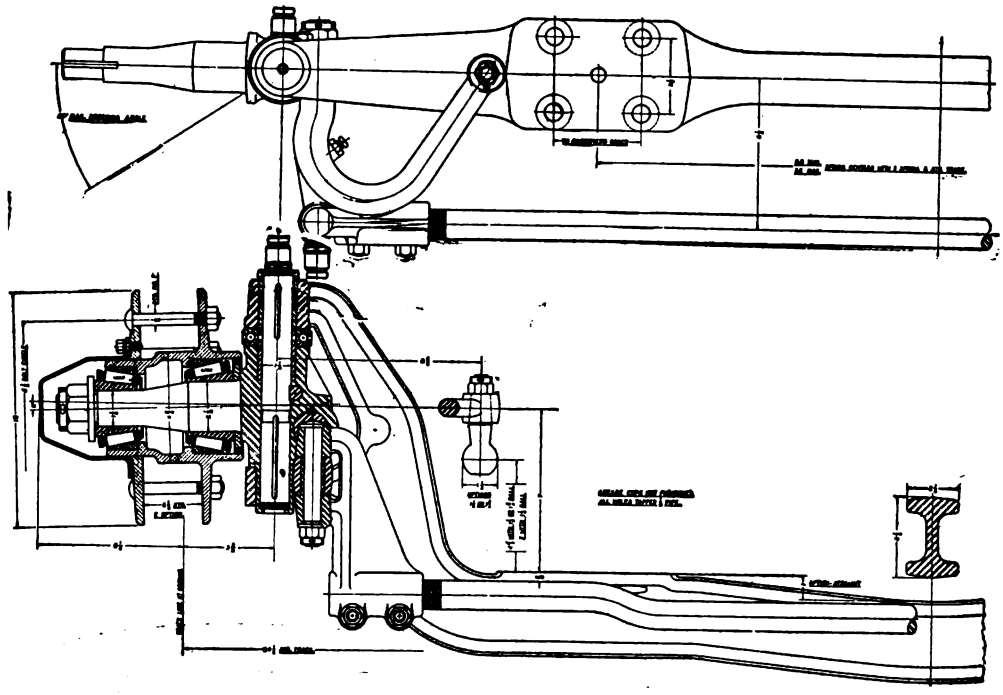
Seven-Passenger Custom-Body Touring $7,150

There is no better motor car
than Stevens-Duryea

Stevens-Duryea

CHICOPEE FALLS, MASSACHUSETTS

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Model 610 B

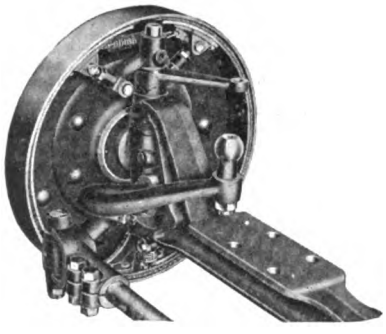
SHULER FRONT AXLES

For Motorbuses of 25 to 35 Passenger Capacity

Model 610B SHULER FRONT AXLE is a highly specialized unit. It is not an adaptation, but an entirely new axle, designed especially for the motorbus of 25-35 passenger capacity.

Note particularly the **seven-inch drop of the spring pad.** This one feature permits the building of a bus with **low steps, low wide body floor** and an **extremely low center of gravity**—factors that are **vitally important** in meeting the demand for highest efficiency in motorbus transportation.

From a physical standpoint, also, Model 610B, like every other SHULER FRONT AXLE, is **absolutely right.** SAE Spec. 1035 30-40 carbon steel is used for the axle center, which is drop-forged in one piece and thoroughly heat-treated. Steering knuckles and arms are SAE Spec. 3135 chrome nickel steel, drop-forged and specially heat-treated. Ball thrust bearings in knuckle heads insure easy steering. Timken tapered roller bearings are standard wheel-bearing equipment.



Shuler Front Wheel Brake

permits simultaneous braking on all four wheels, brings tremendous factor of added safety and practically eliminates danger of skidding. The SHULER FRONT WHEEL BRAKE is designed into the standard line of SHULER FRONT AXLES for Motorbuses and Motor Trucks. Manufacturers are invited to write us for more detailed information.

Complete specifications for Model 610B furnished on request. For motorbuses of 12-25 passenger capacity, Model 5550B is specially designed and recommended. We will be glad to have the opportunity of proving to manufacturers the advisability of using SHULER FRONT AXLES not only in buses, but in motor trucks, tractors and trailers. We build front axles exclusively. Prompt deliveries assured.

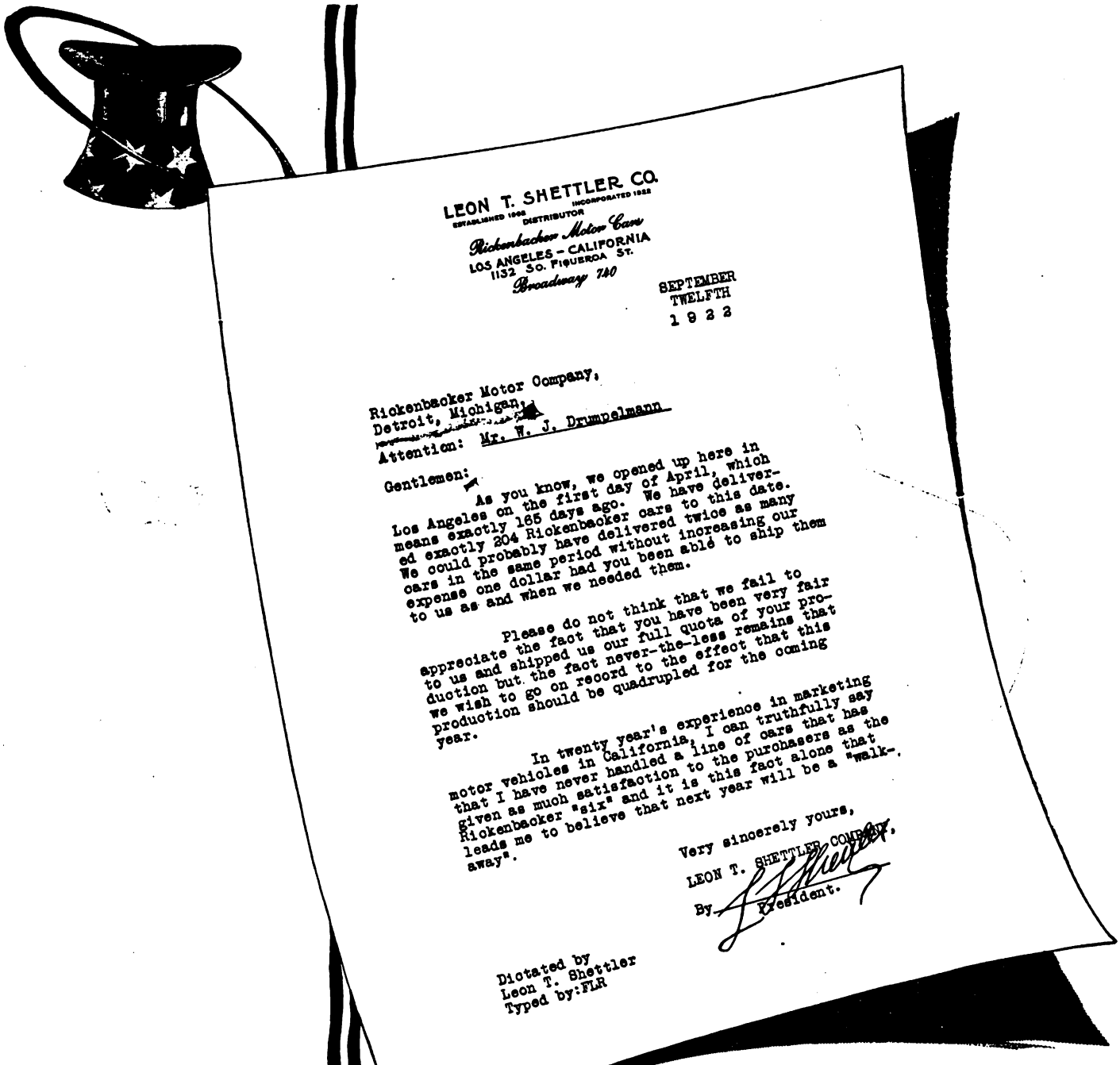
SHULER AXLE COMPANY

INCORPORATED

Front Axles for Trucks, Tractors and Trailers

3008 Jones Street **Louisville, Kentucky**

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LEON T. SHETTLER CO.
ESTABLISHED 1908 INCORPORATED 1922
DISTRIBUTOR
Rickenbacker Motor Cars
LOS ANGELES - CALIFORNIA
1132 So. FIGUEROA St.
Broadway 740

SEPTEMBER
TWELFTH
1922

Rickenbacker Motor Company,
Detroit, Michigan.
Attention: Mr. W. J. Drumpelmann

Gentlemen:

As you know, we opened up here in Los Angeles on the first day of April, which means exactly 165 days ago. We have delivered exactly 204 Rickenbacker cars to this date. We could probably have delivered twice as many cars in the same period without increasing our expense one dollar had you been able to ship them to us as and when we needed them.

Please do not think that we fail to appreciate the fact that you have been very fair to us and shipped us our full quota of your production but the fact never-the-less remains that we wish to go on record to the effect that this production should be quadrupled for the coming year.

In twenty year's experience in marketing motor vehicles in California, I can truthfully say that I have never handled a line of cars that has given as much satisfaction to the purchasers as the Rickenbacker "six" and it is this fact alone that leads me to believe that next year will be a "walk-away".

Very sincerely yours,
LEON T. SHETTLER COMPANY,
By [signature]
President.

Dictated by
Leon T. Shettler
Typed by:FLR

Sold 204 Cars In 165 Days

Just one of the many great records taking place throughout the country. Let us show you how you can make more money.

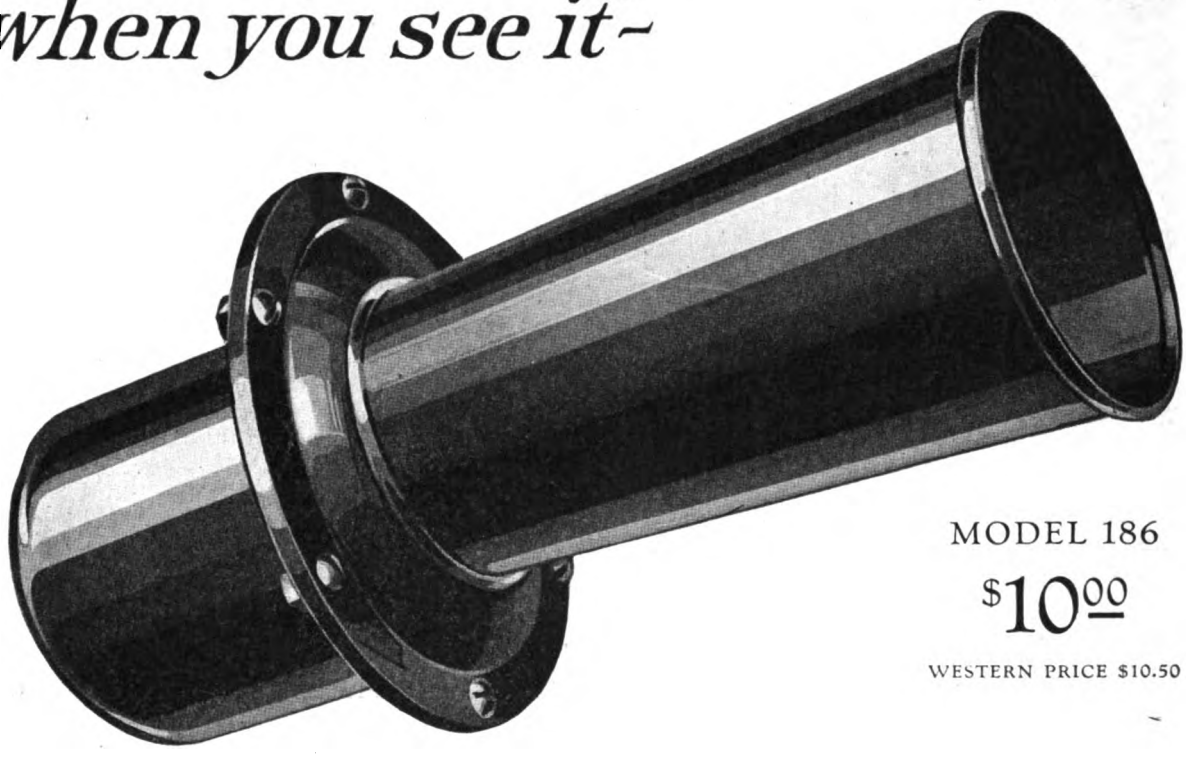
Rickenbacker Motor Company
Detroit Michigan

Rickenbacker

A · CAR · WORTHY · OF · ITS · NAME

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You know a good Horn
when you see it-

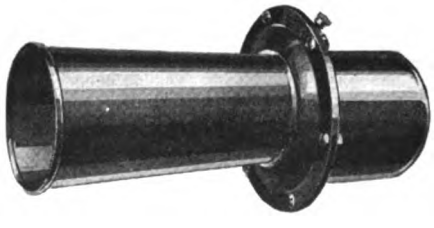


MODEL 186
$10.00
WESTERN PRICE $10.50

but your customers must depend upon your judgment for their selection.

You can be sure of their approval and continued patronage when you show them the Stewart. It can't be beat for volume of sound and quality of workmanship.

There are two models, each with a real motor. One of the two is sure to meet your customer's requirements and pocket-book.



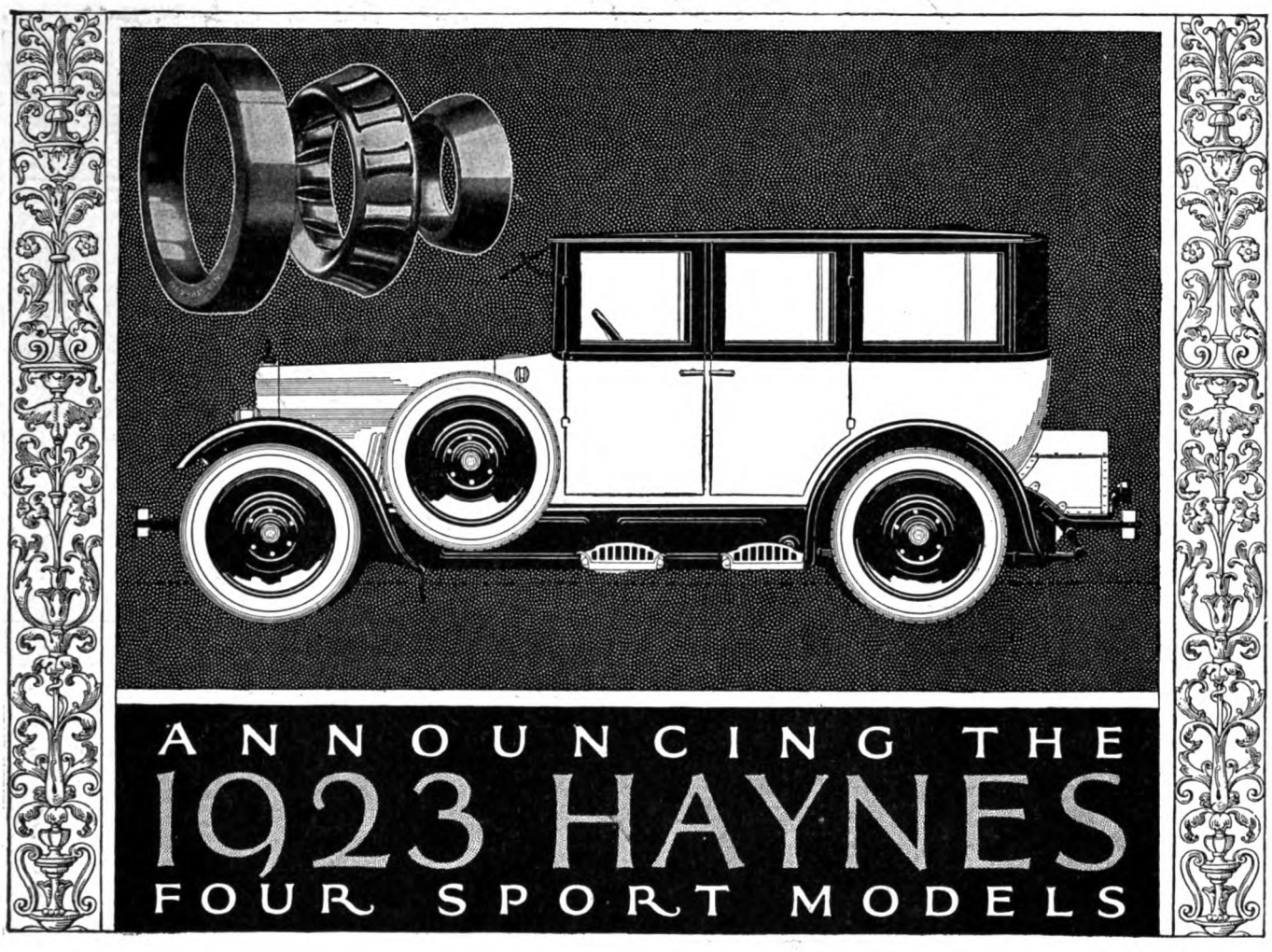
MODEL 163
$6.50

Stewart-Warner Speedometer Corporation
CHICAGO, U. S. A.

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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"AMERICA'S FIRST CAR" *and* SHAFER BEARINGS



EACH new refinement that appears on the Haynes 55 sedan is carefully chosen. With unprejudiced eyes Haynes engineers make their selection. No higher tribute to the sturdy efficiency of Shafer Roller Bearings is needed than their adoption on this car.

Breakage, pinching and binding is impossible with Shafer bearings. The concave rollers traveling on the convex cup and cone make it self-aligning and give it 100% ability to carry loads coming from any direction. Write for literature.

SHAFER BEARING CORPORATION
6501-99 West Grand Ave., Chicago, Illinois

SHAFER
***Self-Aligning* ROLLER BEARING**

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The Perfect Window Channel



Supreme

The exclusive features of PERFECT CHANNEL will interest every manufacturer endeavoring to reduce production cost and at the same time to retain or increase the efficiency of their product.

One of the most important features of this new felt lined channel is that it permits the body engineer to reduce the thickness of the pillar construction to a minimum, which is an important factor in the cost of the closed body construction.

We will be glad to send a copy of our booklet upon request.

PERFECT WINDOW REGULATOR COMPANY
20 Exchange Place, New York City

Branch Offices—Detroit, No. 528 Detroit Savings Bank Bldg.; Indianapolis, No. 310 Kahn Bldg.
Representatives—E. F. Rogers, Philadelphia; Scovel Iron Store Co., San Francisco, Los Angeles, Seattle; Hanyei Trading Co., Ltd., Tokio, Japan.
Foreign Branch—H. M. Hobson, Ltd., London, England.

Channels *Window Regulators* *Handles*

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A Car that Makes Money

Mr. Theo. W. Reed, President of the Reed Motor Car Co., Boston, New England distributors for Stephens, tells how he became convinced that the big money was to be made in the medium-priced automobile field and why he picked the Stephens as the car to make it.

"WE have been handling the Stephens line for almost two years and our volume is increasing steadily. We believe that there is no other car in the Stephens price group which has so many important selling features and so much inherent quality as the Stephens.

"We know that in order to be successful in selling any automobile, we must have four essential things to satisfy customers:

"First, the car must fill the buyer's eye. It must be good looking. In size, lines and contours, the Stephens satisfies our critical New England public.

"Second, the car must perform. The Stephens does. Even a few minutes behind the wheel will demonstrate to the prospect Stephens quickness in getaway, smoothness at low speed, power on hills, adequate brake control and ease of handling. As for economy, the reports of our owners are amazing.

"Third, the customer must be satisfied of our business integrity and stability.

"Fourth, he must be satisfied that the factory is strong financially and will be in business when he wants to turn his car for another.

"The first, second and fourth points, the Stephens proposition covers absolutely. The third is up to the individual dealer or distributor.

"We have found the Stephens factory organization quite out of the ordinary among manufacturers. They are extremely fair and the kind of men with whom you like to deal. They do more for distributors and dealers than any other manufacturer we know of in the industry.

"All this gives the idea that we believe the Stephens is a money-making line to handle. That is exactly what we mean to convey."

..... No need to add a word to Mr. Reed's analysis of what is necessary in a money-making car and why the Stephens meets every point. If the Stephens proposition interests you, write for a catalogue and our contract terms.

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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Intensive Methods a Necessity

The use of broadside or shot-gun methods of advertising —skimming the surface—is wasteful and inefficient when contrasted with the intensive methods of Outdoor Advertising, in the development of a market.

We speak with assurance for the reason that we have seen with our own eyes, time after time, what can happen when excellent manufacturing and good selling is backed up by good advertising on carefully selected Painted Bulletins.

We have educated the masses—we have created a desire among them—we have changed the whole popular idea of a product by the Power of Suggestion.

More than that—we have increased the consumption of a product to quantities greater than the most enthusiastic advertiser had ever expected.

National Advertising through the medium of Painted Bulletins will make big strides forward during 1923.

And we are equipped to serve you from the Atlantic to the Pacific—we are prepared to render a service that a few years ago would have been beyond the bounds of possibilities.

Drop us a line and mention the market that interests you —and we will advise you how to follow the Road to Increased Sales without stepping beyond your appropriation.

OUT DOOR ADVERTISING EVERYWHERE

The O.J.Gude Co.,N.Y.

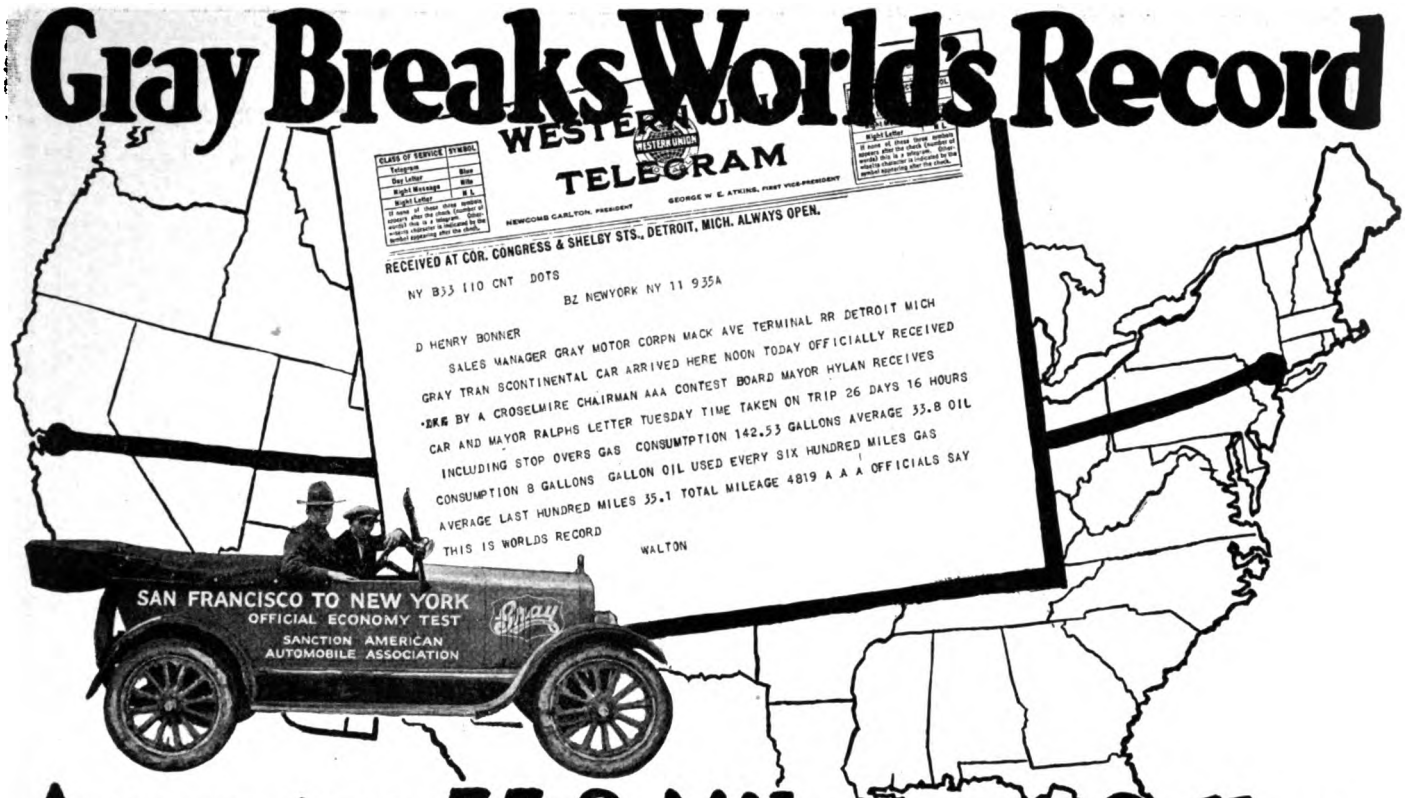
550 WEST 57th STREET

BRANCH OFFICES:—

Chicago
St. Louis
Cincinnati
Cleveland
Pittsburgh
Richmond
Atlanta
Akron
Philadelphia
Providence

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Gray Breaks World's Record



Averages 33.8 Miles per Gallon San Francisco to New York



Leaving San Francisco

The Story of the Trip

Given an official send-off by Mayor Rolph of San Francisco on September 13, the Gray Economy Test Car reeled off the miles eastward to New York to establish a World's record—33.8 miles to a gallon of gasoline for 4819 miles. F. A. Croselmire, of New York, Chairman of the American Automobile Association contest board, greeted the car upon its arrival in New York City, October 10.

Over 105 miles of the hardest going encountered, the Gray achieved 26 miles to a gallon. Never did the mileage fall below this figure, even over the worst mountain and desert trails. Not even an occasional tow, generously given to disabled cars on the plains, could hold back the finely-built, economy Gray, from its merited record.

"The greatest car in the industry," insist the men who brought the car across the continent. "It can set records on every road."



Checking in at New York

Total Mileage 4819 Miles
Gas Consumed 142.55 Gals
Average Mileage 33.8 Gals
On the Road 26 Days
Weight Carried Equivalent of Five Passengers
Stock Car Used

Gray
Motor Corporation Detroit

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GEARS

form the all-important link between the power unit and the wheels of every automobile.

They are called upon to absorb shocks and impacts by suddenly applied thrusts by the careless chauffeur.

They must retain their pitch, developed with geometrical precision, under the most severe service.

Therefore, the steel from which they are made must excel in strength, hardness, toughness, wear resisting and anti-fatigue qualities.

VANADIUM STEEL

combines all these properties in the highest degree, and advantage should be taken thereof where "perpetual service" gears are the goal.

VANADIUM CORPORATION of AMERICA

120 BROADWAY

NEW YORK CITY

Detroit, Michigan—849 Book Bldg.

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BUNTING BUSHINGS



The Quest for Standard Bushings Like a Search for Hidden Jewels

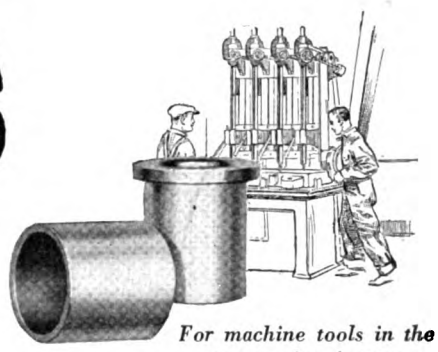
Generations of designers studied over countless blue prints—chemists and metallurgists toiled amid the flames and gases in their laboratories—machinery builders experimented and re-experimented, until out of patient effort and the slow processes of time came Bunting Standard bushings and the combination of metals which makes Bunting Phosphor Bronze the standard alloy.

Bunting went back over records reaching into the dawn of the mechanical age to get the specialized knowledge reflected today in Bunting's big list of "Ready Made" bushings. The sizes and kinds that recur most often in machine and motor manufacture were selected from the sales records of the Bunting Brass & Bronze Company which for years has served the machine builders of America.

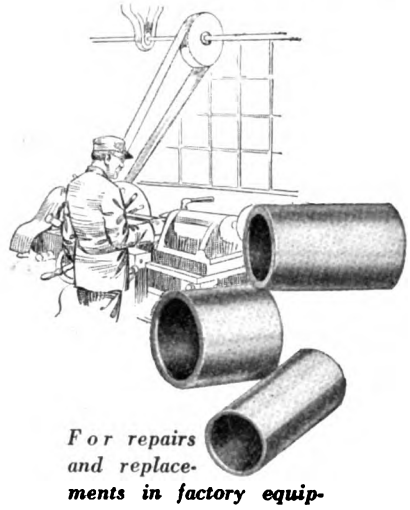
Then the great Bunting factory was put into volume production on these bushings. Today the manufacturer, jobber and repairman can find a Bunting bushing completely finished, ready for assembly, waiting in stock for his requisition.

Designers and manufacturers are cutting production cost and facilitating future service by specifying Bunting "Ready Made" bushings. Auto parts jobbers and repairmen are selling Bunting Standard bushings for replacement. Accurately made, ready for assembly, of known dependable quality, always ready to ship, Bunting Standard bushings save time and money for everybody, and conserve the productive efficiency of men and machinery.

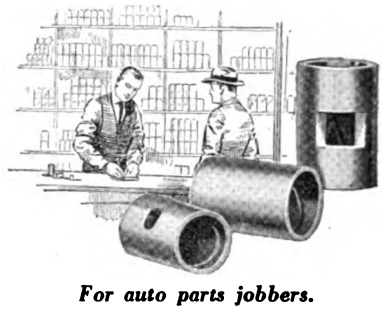
Automobile and motor manufacturers, auto parts jobbers, garage and service shopmen should be familiar with Bunting's list of "Ready Made" Piston Pin bushings—write for it. Ask for Stock List 19.



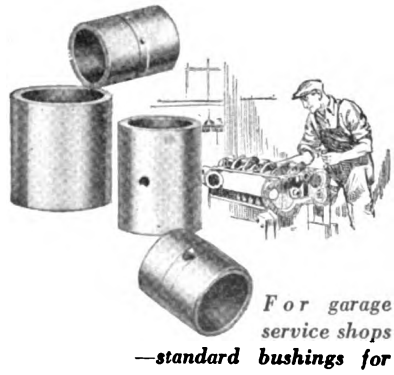
For machine tools in the automotive factory



For repairs and replacements in factory equipment



For auto parts jobbers. Replacement bushings for all cars



For garage service shops —standard bushings for every repair job

The BUNTING BRASS & BRONZE CO.

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CHICAGO
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Wabash 9153

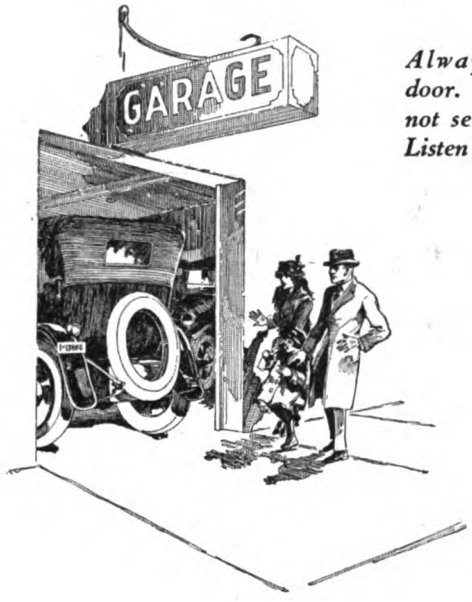
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SAN FRANCISCO
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Douglas 6245

BOSTON
36 Oliver St.
Main 8488

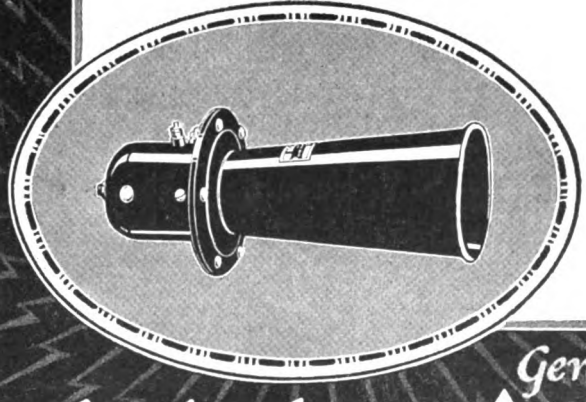
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ALWAYS BE CAREFUL



Always stop at a garage door. A car that you cannot see may be backing out. Listen for the Klaxon warning

THE view of the motorist who is backing his car out of a garage is more or less obscured. That very fact should make for caution and impel him to give warning to pedestrians on the sidewalk. The surest warning is a Klaxon warning. It is an unmistakable command—Pedestrians stop! The voice of the Klaxon is known throughout the land. Be sure, for safety sake, your car is Klaxon equipped.



Genuine Klaxon Horns made only by

KLAXON

Company :: Newark, N.J.

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Stabilizing the Tire Industry

Murray

"Ne'er A Worry" TIRES

FULL OVERSIZE

Will steady your profits

MURRAY RUBBER COMPANY, TRENTON, N

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Do You Agree *with* Mr. Babson?

"NOTWITHSTANDING the comparatively low prices now obtaining on most lines of tires, competition for sales will prevent any general rise in prices this year. Car owners are aware of this situation and will be shopping for bargains, and due to the efforts of manufacturers to regain customers, good values in tires will be obtainable."

This is the prediction of Roger Babson, the noted analyzer of market conditions.

Murray

"Ne'er A Worry" TIRES

FULL OVERSIZE

are being built and distributed in strict accordance with these timely principles.

All waste has been eliminated—No burdensome overhead—No expensive branches—No middleman's profits—No tax or freight charges to reduce the dealers' profits.

MURRAY TIRES are just the best tires a long-experienced organization can build—super-size—super-wearing—sold to the dealer at a price enabling him to meet any competition and earn a generous profit.

If you agree with this policy—if you think it a fair way to do business,

ADDRESS

for full information

Every Murray Tire A Sou'-Easter

Made and tested for the southeast wheel, where the traffic is roughest. The reinforcement on the side wall gives "truck-tire" strength where the strain is hardest.

The MURRAY RUBBER COMPANY TRENTON, N.J.

Write for our Exclusive Dealers' Proposition

Be the sole distributor in your community for this quality profit-bearing tire. We will be glad to discuss our distribution plan with dealers and show how we can build such a good tire at such a low price.

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U-LOY STEELS

From the Electric Furnace

A heavy switch is thrown—electricity of enormous power is released. An arc forms between the electrodes and the charge. Soon melting takes place.

So intense is this arc that it refines steel to a higher degree of purity than any other method. The injurious effects of sulphur and phosphorus are reduced to a minimum. Impurities are removed. Greatest freedom from surface and sub-surface defects is insured. In purity, uniformity and homogeneity, U-LOY Electric Furnace Steels are far superior to even the best open hearth steels.

Perhaps U-LOY Electric Furnace Steels would improve *your* product—no matter what it may be.

UNITED ALLOY STEEL CORPORATION
CANTON, OHIO

New York
Syracuse
Cleveland
Chicago
Detroit
Buffalo
San Francisco
Indianapolis
Portland

Open Hearth and Electric Furnace U-LOY Steels are furnished in:—

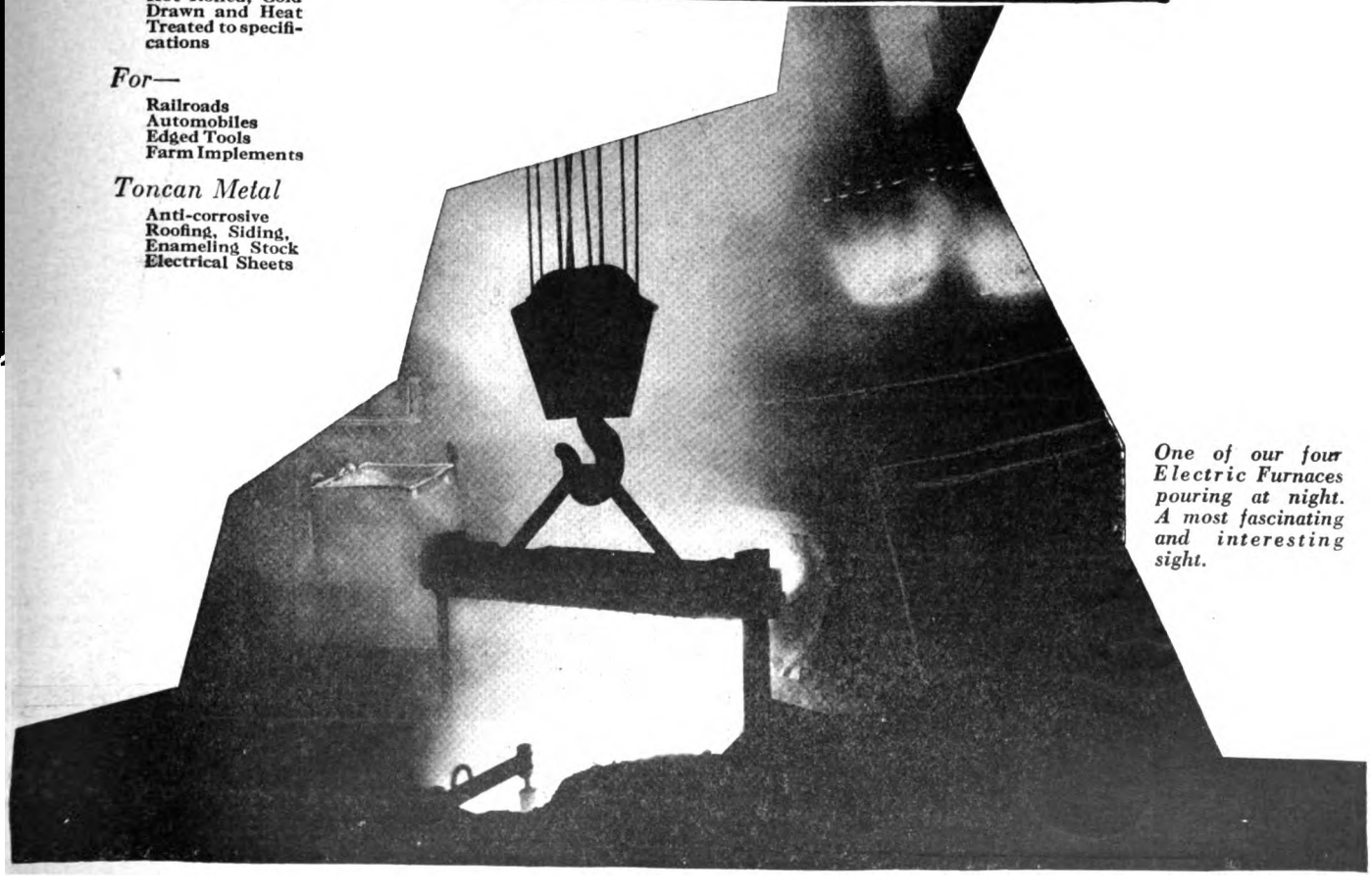
Blooms, Slabs, Billets, Plates, Bars, Rods. Bars Hot Rolled, Cold Drawn and Heat Treated to specifications

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Railroads
Automobiles
Edged Tools
Farm Implements

Toncan Metal

Anti-corrosive Roofing, Siding, Enameling Stock Electrical Sheets



One of our four Electric Furnaces pouring at night. A most fascinating and interesting sight.

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WIRE WHEELS

—and the advantages they provide for the car owner

When a car manufacturer designs a particularly smart model—something of a DeLuxe nature—he invariably equips it with Wire Wheels. Not only because Wire Wheels enhance the attractiveness and distinctiveness of the car, but because:

—they provide the utmost in easy-riding qualities and comfort for the passengers;

—they provide the motorist with a tire-changing convenience that makes motoring more enjoyable;

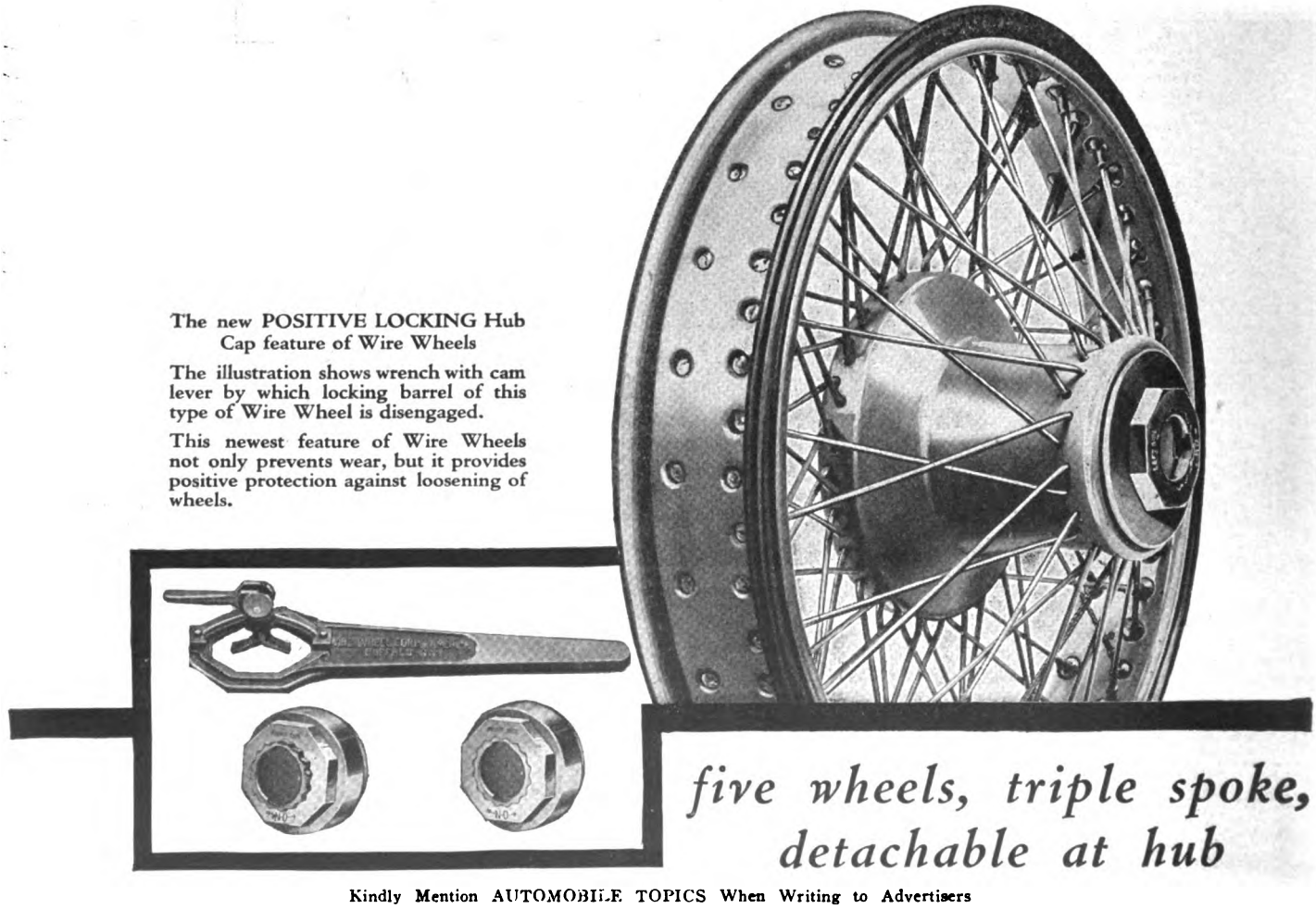
—they provide advantages that insure greater mileage from tires and, therein, save money for the car owner;

—they provide greater safety for the passengers by reason of the extreme strength of the triple rows of spokes.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:

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The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

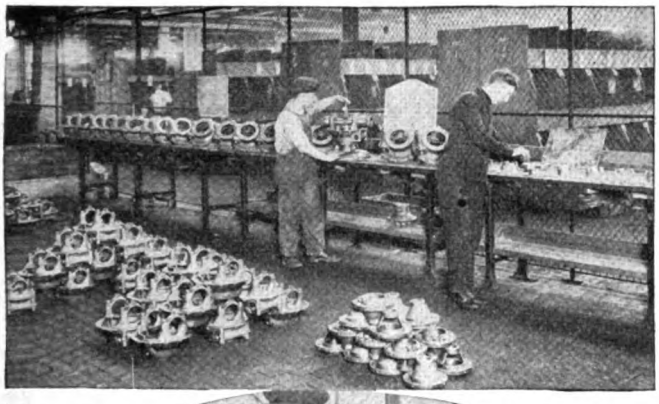
The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.

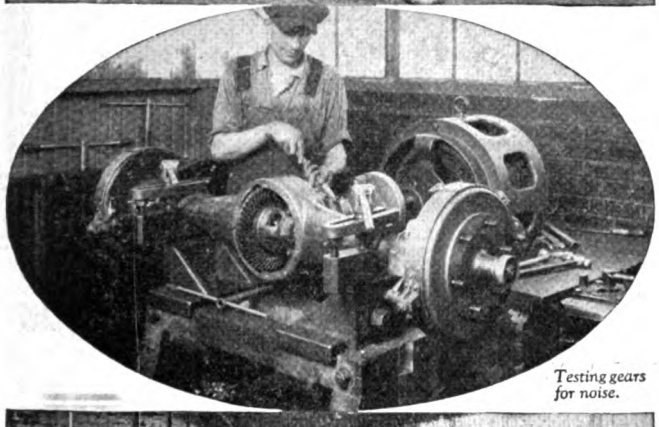
five wheels, triple spoke, detachable at hub

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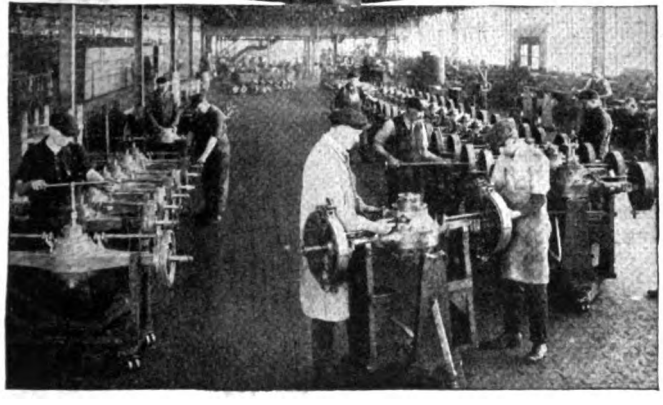
EATON



Close and frequent inspection maintains high standard of accuracy.



Testing gears for noise.



One end of assembly floor

Your Reputation

is your most valuable business asset. People will buy cars from you if they have confidence in you and in your judgment.

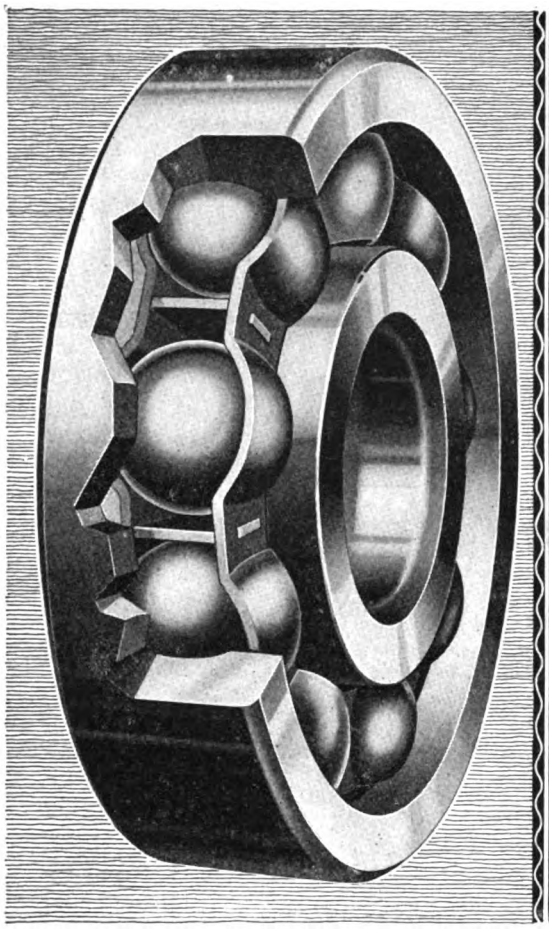
Did it ever occur to you that your reputation rests on the *axles* of the car you sell? Have you been as particular about the axles as you have about the motor—or the price?

Every Eaton Axle is built to carry safely the priceless load of a man's reputation.

THE EATON AXLE COMPANY
CLEVELAND, OHIO

AXLES

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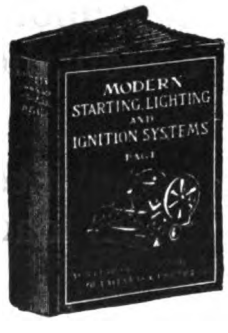


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THE Single Row Type New Departure is made to internationally standardized dimension and is, therefore, interchangeable with other ball bearings. It is a quality product of highly specialized engineering ability, skilled workmanship and strict adherence to exacting standards of manufacture from raw material to final assembly and inspection.

New Departure ball bearings may be secured for replacement at any service station of the United Motors Service, Inc., located in the leading cities throughout the United States.

THE NEW DEPARTURE MANUFACTURING CO.
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Modern Starting, Lighting and Ignition Systems

BY VICTOR W. PAGE, M. E.

500 (5½x8) Pages—297 Specially Made Engravings—3 Folding Plates

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A Self-Educator on Electrical Systems Without an Equal

THIS practical volume has been written with special reference to the requirements of the non-technical reader desiring easily understood explanatory matter relating to all types of automobile ignition, starting and lighting systems. It can be understood by any one, even without electrical knowledge because elementary electrical principles are considered before any attempt is made to discuss features of the various systems. These basic principles are clearly stated and illustrated with simple diagrams. ALL THE LEADING SYSTEMS OF STARTING, LIGHTING AND IGNITION HAVE BEEN DESCRIBED AND ILLUSTRATED WITH THE CO-OPERATION OF THE EXPERTS EMPLOYED BY THE MANUFACTURERS. WIRING DIAGRAMS ARE SHOWN IN BOTH TECHNICAL AND NON-TECHNICAL FORMS. ALL SYMBOLS ARE FULLY EXPLAINED. This is a book of REAL MERIT.

A COMPREHENSIVE REVIEW OF MODERN STARTING AND IGNITION SYSTEM PRACTICE. INCLUDES A COMPLETE EXPOSITION OF STORAGE BATTERY CONSTRUCTION, CARE AND REPAIR. Explains all types of starting motors—Generators—Magnetos and all ignition or lighting system units.—Considers the systems of cars in use.—A book everyone needs.

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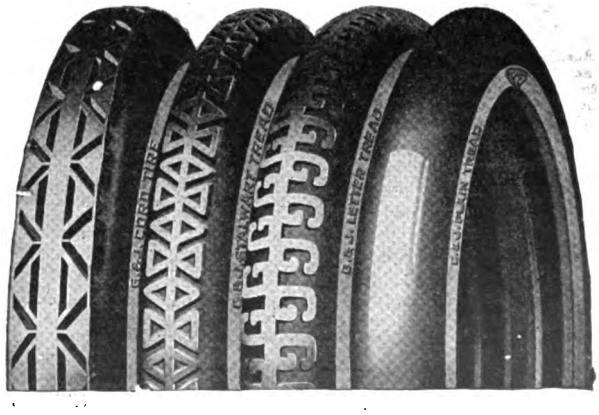
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The stronger convictions a tire user has the more he can be counted on as a *regular G & J customer.*

TIRES & TUBES



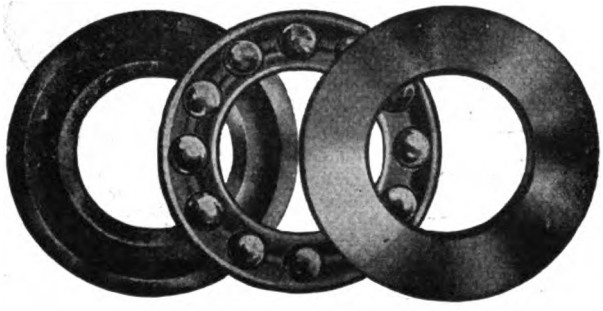
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WE offer the services of our Engineers in assisting Designers on layouts involving the use of Thrust Ball Bearings in any type of machine where Thrust Ball Bearings can be used.

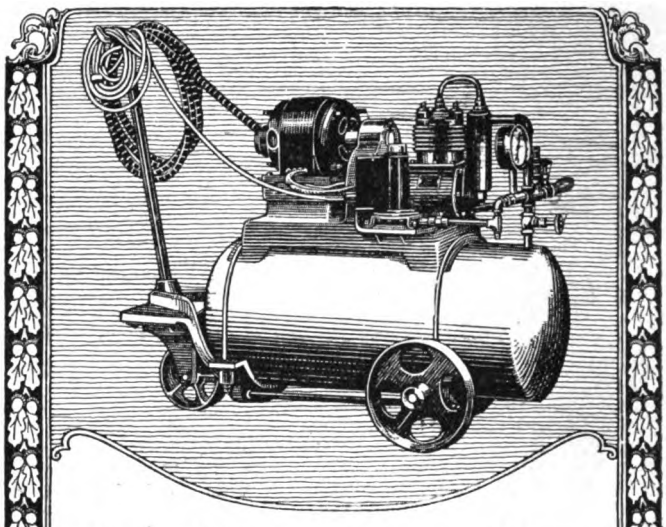
Our broad experience covers many years. We are ready to serve you at any time.



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I



The Air Is Always There

The New Model H Tank Outfit—either stationary or portable—with either regular alternating current motor or direct current motor, is the most economical and serviceable garage pump designed. Tank guaranteed for 150 lbs.—constant working pressure. Delivers 2 1-2 cubic feet of free air per minute—a quick and steady worker—fully guaranteed. Send for complete description of three other models.

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The
TWITCHELL AIR GAUGE

There is not one serious argument to be advanced in favor of not buying a tire-pressure gauge.

Every man, woman or child who runs an automobile not only should have one, but MUST have one if he, she, or it, cares anything about the mileage to be gotten out of tires and gasoline.

Running on under-inflated tires not only wears out the tires long before their time, but uses up a lot of gasoline for nothing.

PRICE
$1.25

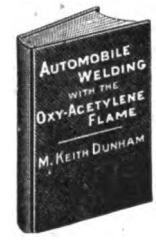


Do not hesitate to press upon your customers the purchase of a TWITCHELL gauge.

It shows that you are interested in their getting maximum service out of their tires and maximum efficiency out of their fuel consumption.

We are increasing our advertising in Consumer publications, and registration records show a million more car owners this year than last. This means a greater demand for Twitchells. Be ready to meet this demand.

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Automobile Welding

With the Oxy-Acetylene Flame

By M. KEITH DUNHAM

167 Pages **Price $1.25** Fully Illustrated

This is the only complete book on the "Why" and "How" of Welding

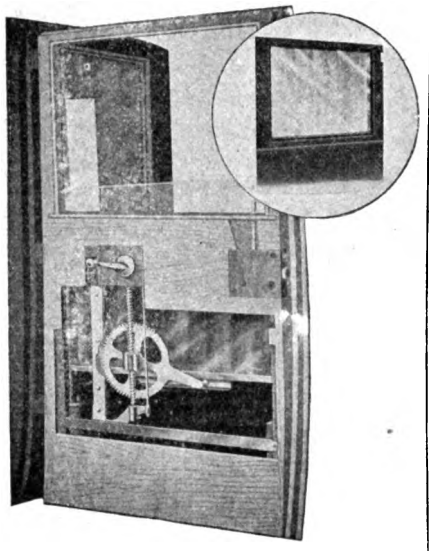
EXPLAINS in a simple manner apparatus to be used, its care, and how to construct necessary shop equipment. Proceeds then to the actual welding of all automobile parts, in a manner understandable by everyone.

Gives principles never to be forgotten. Aluminum, cast iron, steel, copper, brass, bronze and malleable iron are fully treated, as well as a clear explanation of the proper manner to burn the carbon out of the combustion head.

Garage and Service Stations, and Machine Shops, as well as industries using the oxy-acetylene flame, will find this book of the utmost value, since the perplexing problems arising when metal is heated to a melting point are fully explained and the proper methods to overcome them shown.

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1790 Broadway NEW YORK

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Fits Any Door

During the long period of years through which we have served American body builders and motor car manufacturers as source of supply, we have never produced an article that has met with a more spontaneous welcome than that accorded the Smith Worm-Driven Window Regulator.

Body builders prefer it because it fits perfectly into the design of any door, and anchors firmly by only six wood screws, thus permitting them to standardize on both equipment and mounting methods for their entire closed body production.

Motor Car Manufacturers specify it because it locks automatically at any point and is absolutely noiseless, thus helping the sale of their product.

The Smith Worm-Drive Window Regulator is already standard equipment on the cars of many representative manufacturers. Our plant is established in quantity production of these Regulators. Our prices compete with any equipment of similar quality.

Order your sample, test it thoroughly, and see for yourself the advantages this modern equipment enables you to offer your customers.

JOSEPH N. SMITH & COMPANY
DETROIT

JOSEPH N. SMITH & COMPANY
EAST GRAND BLVD. & DUBOIS ST.
DETROIT, MICHIGAN

68,000 metal parts cleaned with 25 pounds of Oakite



Cleaning costs are the sum of time and materials. Time is very important.

TWENTY times more work is cleaned by a pound of Oakite than by a pound of the cleaner that this plant had formerly used. It means that they use 1/20 as much cleaning material as formerly, at a considerable saving in cost.

And further, each batch of work is cleaned *in one minute instead of 5*, which results in their using only ½ as much labor as formerly—another decrease in their cleaning costs.

An interesting part of this story is that they had thought that their previous method was economical, because they were using a material that cost less per pound than Oakite. But their experience has shown that the cost of cleaning any sort of work does not depend upon how much a cleaner costs by the pound, but upon how much work a pound of cleaning material will do.

Isn't this a good time to check up on your own cleaning costs and make sure they are down to bedrock?

It incurs no obligation to have a friendly talk with one of our Service Men. Find out what he can do to help you. Out of his broad cleaning knowledge and ability you are sure to get some helpful ideas that will be worth while.

Drop us a postal card—it is a little thing to do but a big step in the right direction.

OAKITE
MANUFACTURED BY
OAKLEY CHEMICAL CO.
32 THAMES STREET · NEW YORK

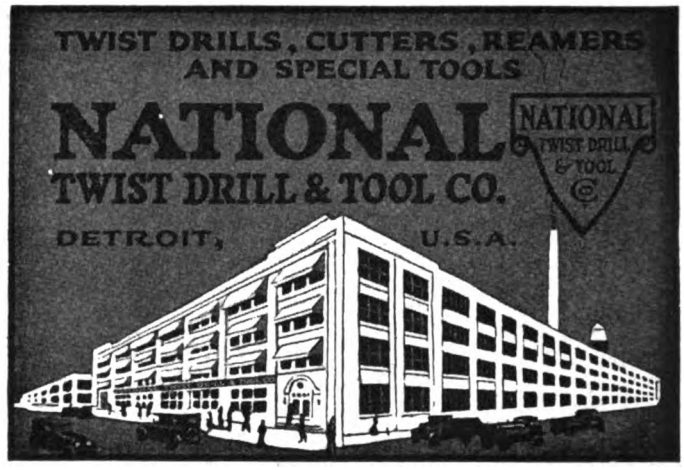
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Refer your cam and accessory drive problems to Morse Engineers

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Union Drawn Steel Co
Beaver Falls, Pa.

Manufacturers of
BRIGHT FINISHED STEEL SHAFTING, SCREW STEEL CHROME NICKEL and CHROME VANADIUM STEELS in FLATS, SQUARES, ROUNDS HEXAGONS and SHAPES; also ELEVATOR GUIDES

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PRESSED STEEL

MOTOR CAR and TRUCK FRAMES AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.

SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
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The Park Drop Forge Co.
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WYMAN-GORDON

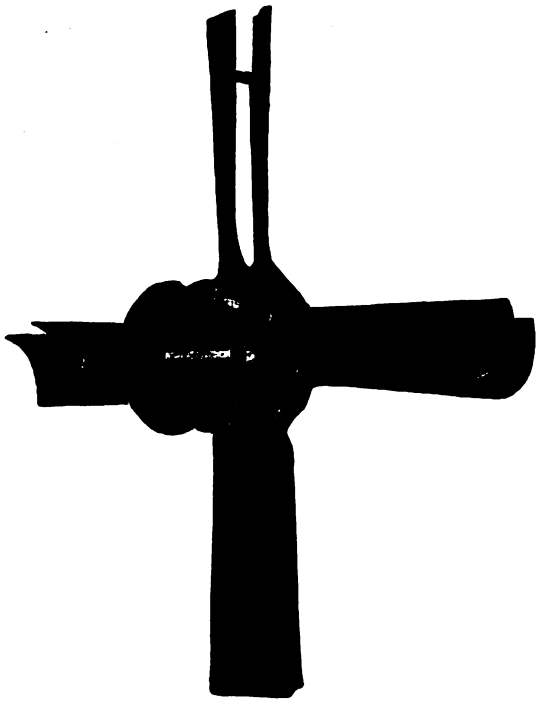
The Crankshaft Makers

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HARVEY, ILL.

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MULTIBLADE FAN



DETROIT CARRIER & MFG. CO.
DETROIT, U. S. A.

Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

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Buchanan & Lawton Avenues
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GAS, GASOLINE AND OIL ENGINES

By GARDNER D. HISCOX, M. E.

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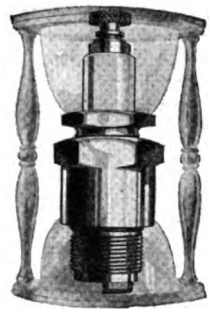
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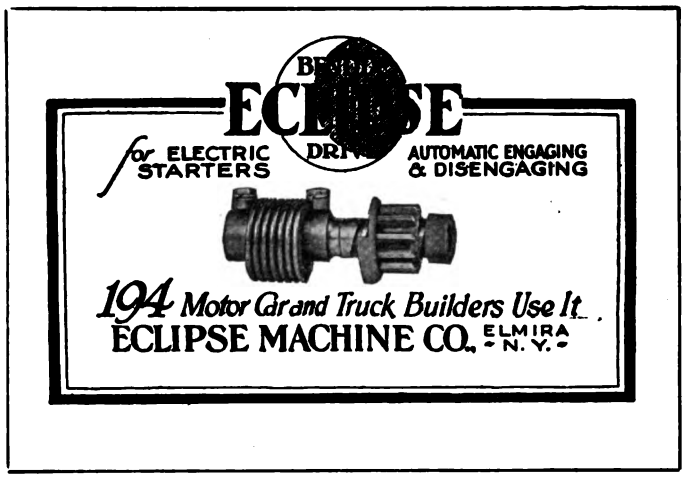
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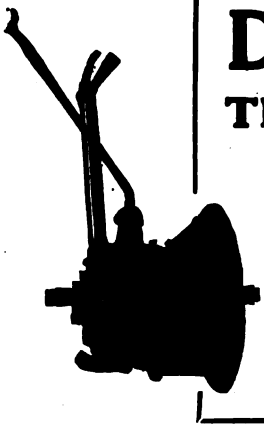
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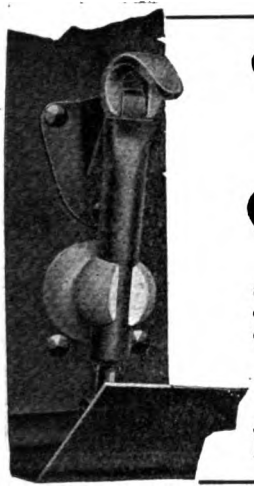
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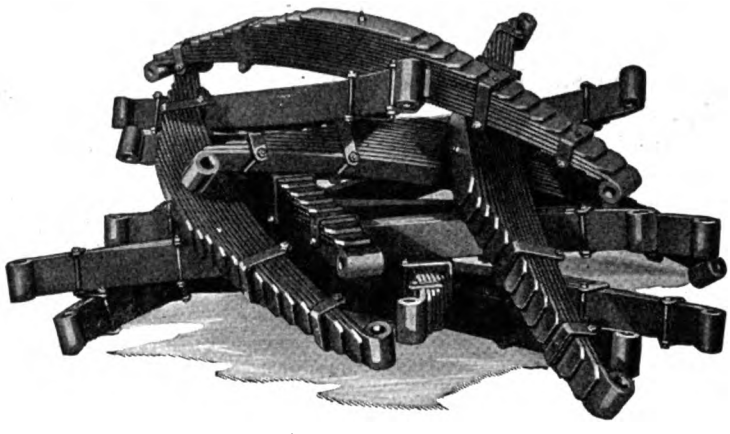
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Our business is to help business men invest conservatively.

Particulars on request

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc. ... 1073
American Sheet & Tin Plate Co. 1075
Anderson Spring Lubricator Co., Inc. 1017

B

Bearings Co. of America . 1102
Bowen Products Corp. ... 1106
Bower Roller Bearing Co. 1107
Brown-Lipe Chapin Co. .. 1106
Brown-Lipe Gear Co. 1106
Budd Wheel Co. 1081
Buick Motor Co. 1029
Bunting Brass & Bronze Co. 1095

C

Cadillac Motor Car Co. .. 1048
Central Steel Co. 1108
Chalmers Motor Car Co. . 1024
Champion Machine & Forging Co. 1108
Cleveland Automobile Co . 1112
Courier Motors Co. 1107
Crosby Co. 1108

D

Detroit Carrier & Manufacturing Co. 1105
Detroit Pressed Steel Co. 1018
Dodge Brothers 1030
Doehler Die-Casting Co. .. 1108
Durant Motors, Inc., Back Cover
Durston Gear Corp. 1107

E

Earl Motors, Inc. 1069
Eaton Axle Co. 1099
Eclipse Machine Co. 1107
Edmunds & Jones Corp. .. 1105
Electric Auto-Lite Co., 1026, 1027

F

Fedders Manufacturng Co. 1106
Fisk Tire Co., Inc. 1025
Flint Varnish & Color Works 1023
Forsyth Brothers Co. 1084
Frenchtown Porcelain Co. 1105

G

G & J Tire Co. 1101
Gabriel Manufacturing Co. 1106
Goodrich Rubber Co., B. F. 1031
Gray Motor Corp. 1093
Gude Co., O. J. 1092

H

Hartford Machine Screw Co. 1102
Hayes Wheel Co. 1028
Hupp Motor Car Corp., Inside Back Cover

J

Jordan Motor Car Co., Front Cover
Jorgensen Hood Silencer Co. 1107

K

Klaxon Co. 1096

Digitized by Google

INDEX TO ADVERTISEMENTS

M

Mather Spring Co. 1109
Morse Chain Co. 1104
Motor-Kleen Corp. 1106
Motor Wheel Corp. 1106
Murray Rubber Co. 1096a

N

Nagel Electric Co., W. G. 1071
Nash Motors Co. 1032
National Twist Drill & Tool Co. 1104
New Departure Manufacturing Co. 1100
Nordyke & Marmon Co. Inside Front Cover
Norma Co. of America .. 1019

O

Oakley Chemical Co. 1103
Olds Motor Works..... 1076

P

Packard Electric Co. 1108
Park Drop Forge Co. 1104
Perfect Window Regulator Co. 1090
Plunkett & Co., Paul 1110

R

Remy Electric Co. 1020
Republic Truck Sales Corp. 1022
Rickenbacker Motor Co. .. 1087

S

Shafer Bearing Corp. 1089
Sharon Pressed Steel Co. 1104
Shuler Axle Co., Inc. 1086
Smith Corp., A. O. 1108
Smith & Co., Joseph N. .. 1103
Stephens Motor Car Co., Inc. 1091
Stevens-Duryea, Inc. 1085
Stewart-Warner Speedometer Corp. 1088
Stromberg Motor Devices Co. 1107
Studebaker Corp. of America 1021

T

Timken-Detroit Axle Co. . 1080
Timken Roller Bearing Co., 1082, 1083
Twitchell Gauge Co. 1102

U

Union Drawn Steel Co. .. 1104
Union Switch & Signal Co. 1108
United Alloy Steel Corp. . 1097
United States Rubber Co. 1067

V

Vanadium Corp. of America 1094

W

Warner Gear Co. 1107
Westinghouse Union Battery Co. 1106
Whitney Manufacturing Co. 1106
Wire Wheel Corp. of America 1098
Wyman-Gordon 1104

Y

Yale Storage Battery Co. 1107
Young Industries, Inc., L. A. 1111



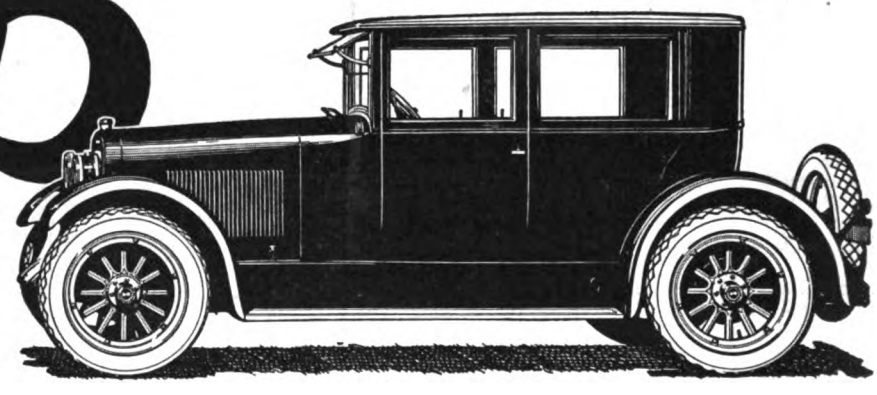
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Announces Models for 1923

$1295

All-Metal, Two Door
Five-Passenger Sedan



New Touring Car
$995

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$1495

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The lowest priced, all-metal, five-passenger sedan ever built on a six-cylinder chassis—

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With the exclusive Cleveland Six overhead valve motor, famous for power, flexibility and economy—

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Larger Sales in 1923

Hupmobile Dealers Expect Next Year to Surpass 1922—the Greatest Hupmobile Year,— by Substantial Margin

Hupmobile dealers in 1922, are making more money, on the average, than in any previous year in the 14 years of Hupmobile history.

They will have greatly exceeded 1921,—a year of depression which, nevertheless, witnessed a tremendous increase in the demand for the Hupmobile.

They will have realized more profit than in the "boom" period immediately preceding that depression.

Hupmobile Still "Coming"

That is part of the story that Hupmobile dealers will tell you—but it is by no means the most important part.

The impressive feature about these Hupmobile sales records of 1922 is the fact that Hupmobile dealers regard them as preliminary to still bigger business in 1923.

In other words, the Hupmobile, despite its remarkable sales records, is still "coming".

Hupmobile sales have still to reach maximum volume. It is probable that that maximum will never be reached.

A Sound, Permanent Business

For the Hupmobile policy of building a car so good that everyone remarks how enduring, and consistent, and economical, it is, is bound to go on winning more friends, and holding old friends, year after year.

It is simply another proof that the whole world is constantly on the lookout for the better product.

Write Direct to Factory

For the dealer who wishes to make larger profits next year, but who, even more, wishes to establish a sound, permanent business of ever-increasing prosperity, the Hupmobile is the solution.

Dealers interested should write direct to the factory. Address the sales manager.

Hupp Motor Car Corporation
Detroit, Michigan

Hupmobile

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Immediate delivery of samples of both the Durant and Star.

Your inquiry will receive prompt attention.

General Sales Department

DURANT MOTORS, INC.
Long Island City, N. Y.

Durant Motors, Inc.,
560 Jackson Ave., Long Island City, N. Y.

Gentlemen:
We are interested in territory for Durant and Star cars and would like to have your representative call.

Signed .....

Firm Name .....

Address .....



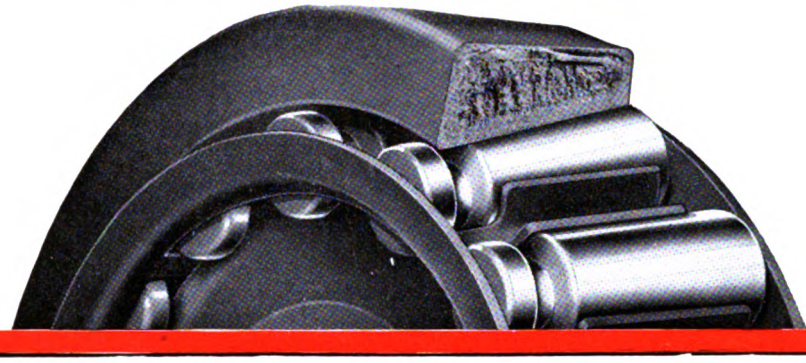
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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 12 | PUBLISHED WEEKLY NEW YORK, NOVEMBER 4, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



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TIMKEN

Tapered

ROLLER BEARINGS

Canton, Ohio

WEEKLY-REVISED TABLE PAGE 1175

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Care in manufacture, the best of raw materials and the assurance of the correctness of their style, will enable you to ride during the life of your car, secure in the knowledge that these worthy cloths will serve you continuously and well.

THE LAIDLAW COMPANY, INC.
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A Selling Point on the Dash Board



Warner De Luxe Model 72



Stewart Model 131



Van Sicklen Standard Model

TODAY, car buyers are equipment-wise. They know the superiority of certain makes of car units—that with them they are assured of greater satisfaction from the car's performance.

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A Stewart Speedometer adds a definite value to the car. A marvel of engineering skill, it represents the highest standards of precision and accuracy. Built on the famous magnetic principle which makes it impervious to weather conditions and guarantees an accurate registration of speed from the first turn of the wheels.

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The name Stewart on a speedometer dial is all that you need to know about speedometer accuracy.

Stewart-Warner Speedometer Corporation
CHICAGO, ILL., U.S.A.

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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Quality-Price-Service

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REPUBLIC TRUCK SALES CORPORATION
ALMA, MICH.

REPUBLIC

Republic has more trucks in use than any other exclusive truck manufacturer

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, NOV. 4, 1922 No. 12

TABLE OF CONTENTS

Driveaways Increase with Car Shortage 1129
October Production Exceeds September's 1129
Accessory Assn. Reaches High Membership Mark 1129
Wilson Made Director of Chalmers Sales 1130
Anklam President and Manager of Hall Lamp.. 1130
Ott Made Fisher Cleveland Manager 1130
Rubber Assn. Studies British Restrictions 1131
1922 Largest Year for General Motors 1131
Hudson-Essex Forms Own English Outlet 1132
90,252 Studebakers Sold in Nine Months 1133
Apperson Will Add Six-Cylinder Model 1133
Electric Alloy and Atlas Steel Merged 1135
Shuler Axle Again in Active Operation 1135
Pierce-Arrow Cuts Down Loss in Third Quarter 1135
Huge Sums Involved in Research Today 1136
Pacific Ports Rate Cuts Aid Shipping 1136
Teach the Boy About Motors! 1136
Education of Public Needed for Highways 1137
S. A. E. Praised for Aiding Production 1137
McNaughton Believes Tariff Aids Motors 1138
Foreign Dealers on Moon Factory Visit 1138
Trade Opportunities in South Africa Improving 1138
G. M. C. Creates Four Divisions of Sales 1139
Olds Convention on Service Successful 1139
Moon Organizes Dealers in Western Territory .. 1139
Europe Battles with U. S. in Latin Lands 1140
Noted Foreign Cars to Show at Salons 1140
Aids to Sales Abroad 1140
Rising Rubber Costs Causing No Alarm 1141
Seiberling Patent Decision Reviewed 1141
Fageol Safety Bus Seen in the East 1142
Driggs to Produce its Own Taxicabs 1142
Sales Reports from West Show Contrast 1143
Quaker City Trade Aid Safety Plans 1143

FEATURES IN THIS ISSUE

Highways—The Pressing Problem 1147
The Production Man Has Mis Problems 1149
By A. B. C. Hardy
Dort Branches Out Into Light Six Field 1151
Selling Goods at Retail 1155
One Way to Boost Tire Sales and Shop Work .. 1156
Passenger Cars New in the Field 1159
Accessories for Christmas Trade 1161
With the Wholesalers and Retailers 1163
Calendar 1170
Table of Passenger Car Selling Points (copyrighted) 1175
Alphabetical Index to Advertisers 1214

WYMAN-GORDON
GUARANTEED FORGINGS
STANDARD OF THE INDUSTRY

Crankshaft Makers for Quality Cars

WYMAN-GORDON
The CRANKSHAFT MAKERS
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Profits for Dealers in This Notable Leadership

These are the automotive manufacturers that use Zenith carburetors as standard equipment.

In Europe, far more makes use the Zenith than all other carburetors combined. And in America the Zenith has had and continues a phenomenal growth.

The Zenith fixed adjustment carburetor gives greater economy, better acceleration, easier starting, more uniform operation and added power to any motor vehicle.

Motor car and truck owners realize this superiority as well as manufacturers. That is why Zenith dealers do such a profitable replacement business. Write for our proposition.

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Three deposits	*or*	Only *one* deposit.
Three stocks of parts	*or*	Only *one* parts stock.
Three conflicting sales appeals	*or*	Only *one* sales appeal—a consistent one, too.
Three advertising campaigns	or	Only *one* advertising campaign.
Three concerns with which to deal	*or*	Only *one* concern with which to deal—one that has a 70-year reputation for fair and square dealing and honest value.

Think this over. The first requisite of good merchandising is a variety of the right goods. The three Studebaker models open up to the Studebaker dealer *the best market of all*—everything above $500. Can you afford not to look into it?

MODELS AND PRICES—*f. o. b. factories*

LIGHT-SIX *5-Passenger, 112" W. B., 40 H. P.*		SPECIAL-SIX *5-Passenger, 119" W. B., 50 H. P.*		BIG-SIX *7-Passenger, 126" W. B., 60 H. P.*	
Touring	$ 975	Touring	$1275	Touring	$1785
Roadster (3-Pass.)	975	Roadster (2-Pass.)	1250	Speedster (4-Pass.)	1835
Coupe-Roadster (2-Pass.)	1225	Roadster (4-Pass.)	1275	Coupe (4-Pass.)	2400
Sedan	1550	Coupe (4-Pass.)	1875	Coupe (5-Pass.)	2550
		Sedan	2050	Sedan (Special)	2750

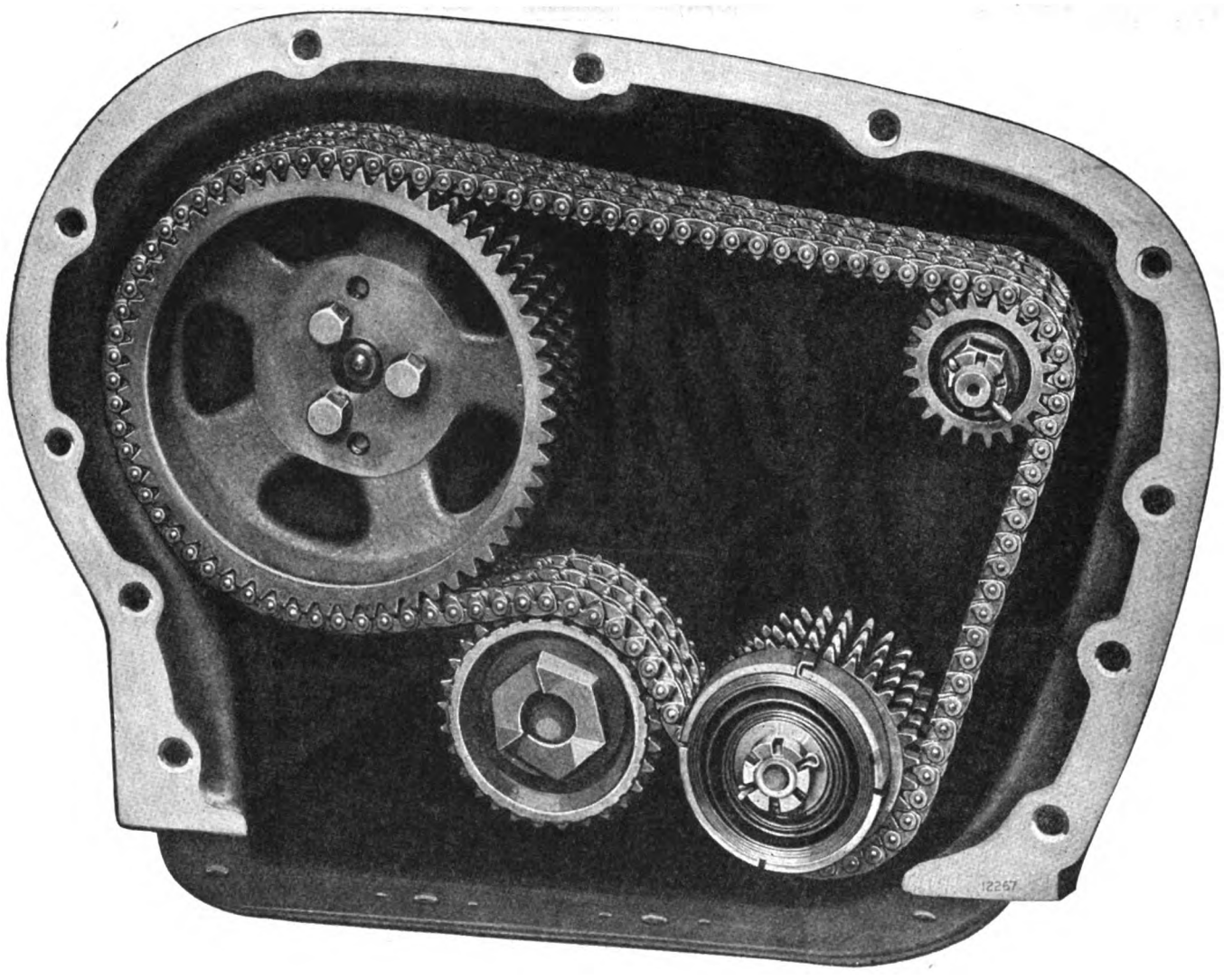
Non-Skid Cord Tires, Front and Rear, Standard Equipment

THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

Studebaker

THIS IS A STUDEBAKER YEAR

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STILL ANOTHER SUCCESSFUL LAYOUT

HERE is another effective arrangement of the Link-Belt Silent Chain "back-type" Drive and the Link-Belt Automatic Tightener. It is one of a new series which we will show in this paper in the near future.

The universal popular demand for quiet-running engines is being successfully met by the Link-Belt Silent Chain "front-end" Drive.

By replacing the noisy timing gears with the quiet-running silent chain and automatic, fool-proof chain tightener (vibration dampener) engineers are making the long-sought quiet-running motor possible.

We are accomplishing today what was thought impossible yesterday.

Our engineers are at your service. We invite correspondence.

LINK-BELT COMPANY, INDIANAPOLIS

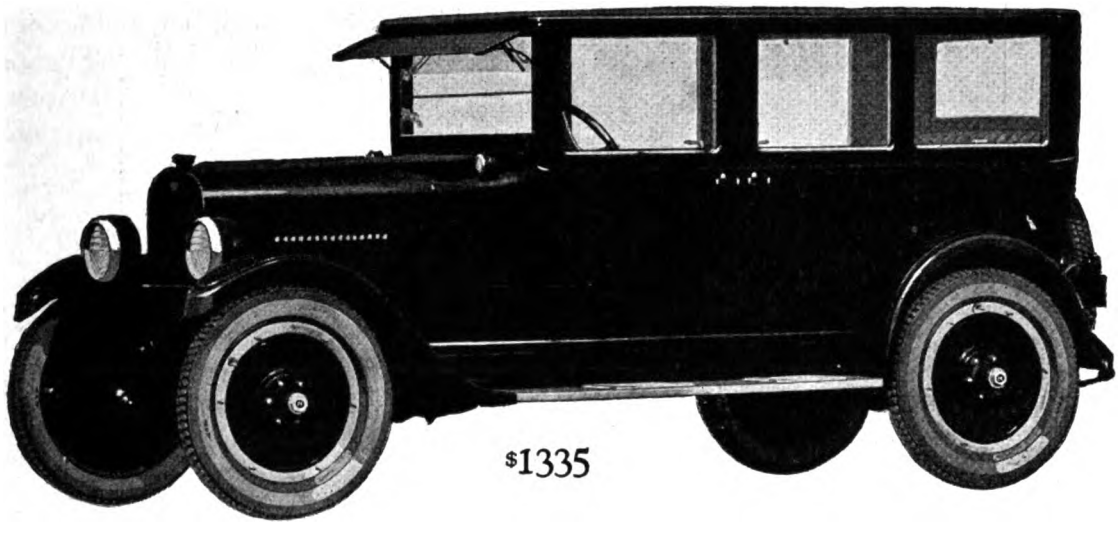
1066

LINK-BELT

SILENT CHAIN FRONT END DRIVES

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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The good Maxwell is making tremendous inroads in public favor because it is a better car. Matching its wonderful record of reliable, economical performance is a beauty that can be found in no other car in its price class.

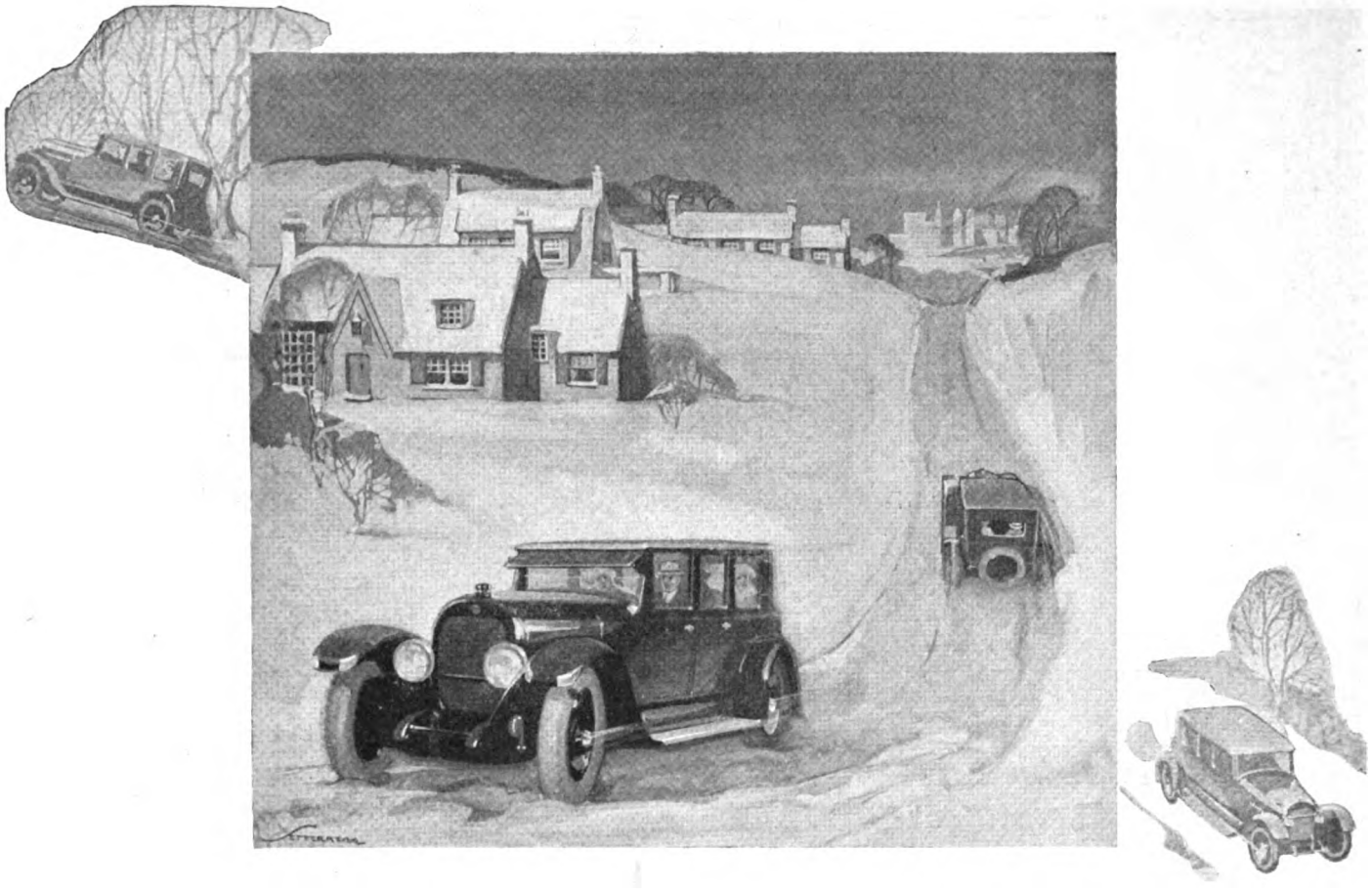
Cord tires, non-skid front and rear; disc steel wheels, demountable at rim and at hub; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; new type water-tight windshield. Prices F. O. B. Detroit, revenue tax to be added: Touring Car, $885; Roadster, $885; Club Coupe, $985; Four-Passenger Coupe, $1235; Sedan, $1335

MAXWELL MOTOR CORPORATION, DETROIT, MICH
MAXWELL MOTOR CO., OF CANADA LTD., WINDSOR, ONT.

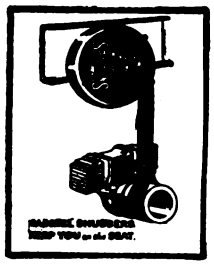
The Good

MAXWELL

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Do The Bumps Stop You?



EQUIP your car with Gabriel Snubbers and you'll seldom slow down and never stop for bumps. Snubbers eliminate the jolts and keep you on the seat—save your brakes and let you take the necessary start for the hills.

Best for Results—Regardless of Price.

GABRIEL MANUFACTURING COMPANY
1421 EAST 40th STREET CLEVELAND, OHIO

Sixty-Five Leading Cars Equipped With or Drilled for Snubbers at Factory.

GABRIEL SNUBBERS



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Red-Tops Run Record Mileage on Jitneys

The Union Garage has sold Red-Tops successfully for six years—always with an annual increase. Now, Red-Tops set up record mileage on jitneys in Woonsocket, and as a result Mr. Mailloux expects a hundred per cent increase. His letter follows:

UNION GARAGE
G. A. Mailloux, Prop.

Fisk Tire Company, Inc.,
Providence,
Rhode Island.

Woonsocket, R. I., October 16, 1922.

Gentlemen:

I have been selling your Red-Top Tires for the last six years and we have yet to find a dissatisfied customer and we have sold many Red-Tops.

I can also show records of Red-Tops on Jitneys in this city with records of most wonderful satisfaction and from inquiries I expect to double my sales in 1923.

Yours truly,
UNION GARAGE.
(Signed) G. A. Mailloux.

Such mileages on a jitney bus—hard driven to get every nickel, overloaded more than half the time, traveling all sorts of city and outlying roads—are the best evidence of the downright extra value of the extra ply of fabric and the extra heavy tread of the Red-Top.

And they give the real reason why you should sell Red-Tops.

There's a Fisk Tire of extra value for every car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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Genuine Stutz cars bear this emblem, and are built exclusively by Stutz Motor Car Company of America, Inc.

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The Sign of the Genuine

The trade-mark of the Stutz is more than a mere sign of identification. It is an insignia of craftsmanship and an earnest of quality unduplicated throughout the automobile field.

It stamps as genuine, a product which, since its inception some eleven years ago, has established its undeniable leadership in every branch of automotive endeavor.

It is the hallmark of an institution—the crest of an organization of master craftsmen—whose vast financial and industrial resources have made possible the consistent progress of the Stutz.

It is the authorized emblem under which the name Stutz was borne to supremacy on track, road and thoroughfare, and proclaimed a "world's champion" among modern motor cars, after a meteoric career, the glory of which has never waned.

Just as you look for the mark on any product known for its rare merit and proven ability, so should you always seek the trade-mark of the genuine Stutz.

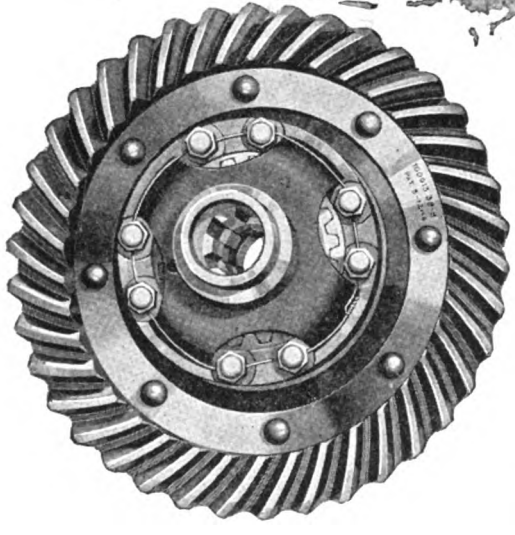
It is a guarantee of worth and dependability—and carries with it distinction and prestige which only the genuine Stutz imparts.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

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When the Going is Bad Only the *Best* Survive

THESE trucks have a long-standing and well-deserved reputation for all-'round serviceability.

Their construction includes Brown-Lipe-Chapin Differentials, the result of expert design and workmanship, careful selection of materials, scientific and intelligent heat treatment, all proven by years of experience.

Genuine Brown-Lipe-Chapin Differential Gears are identified by our trade name on each gear.

BROWN-LIPE-CHAPIN
DIFFERENTIALS

BROWN-LIPE-GEAR
TRANSMISSIONS

Both at Syracuse N.Y.

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Buick Dealers are Busy as Ever

Buick dealers report no decline in sales with the coming of fall. The remarkable value and prices of Buick cars, together with the completeness of the Buick line (fourteen models) makes the public more eager to purchase them today than when they were announced in August. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of
Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

*Branches in All
Principal Cities*

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DODGE BROTHERS
BUSINESS COUPE

To know how the car is built is to recognize its exceptional fitness for years of hard work.

The body is rugged in a new and special sense. Every pillar and rib and panel is steel. All parts and sections are welded together into one sturdy unit.

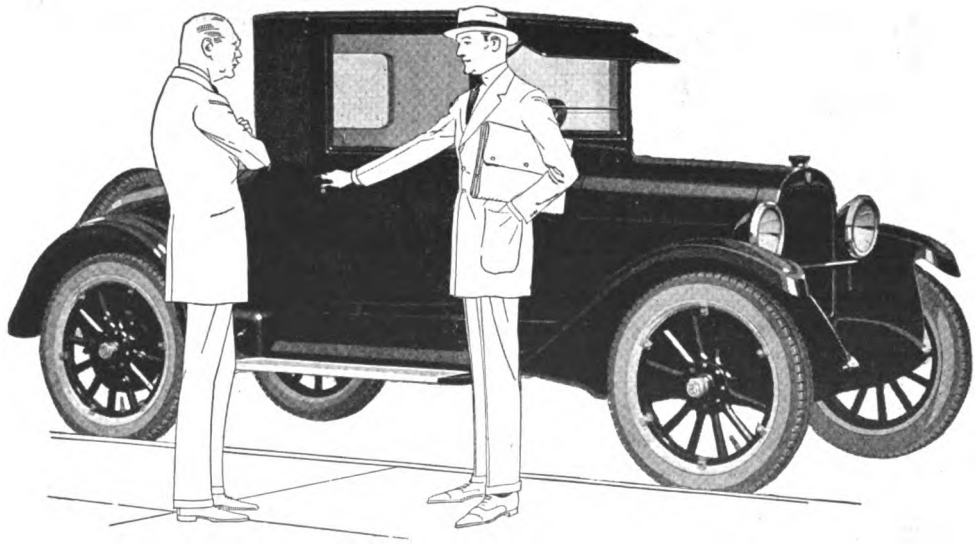
There are no bolts or screws to get loose—nothing to shrink or warp or rattle. The windows fit snugly in their steel frames. The doors snap neatly shut. Unvarying accuracy and precision are attained throughout.

Because there is no wood to char, the body is enameled in an oven under intense heat, resulting in a hard, durable finish that retains its lustre for years.

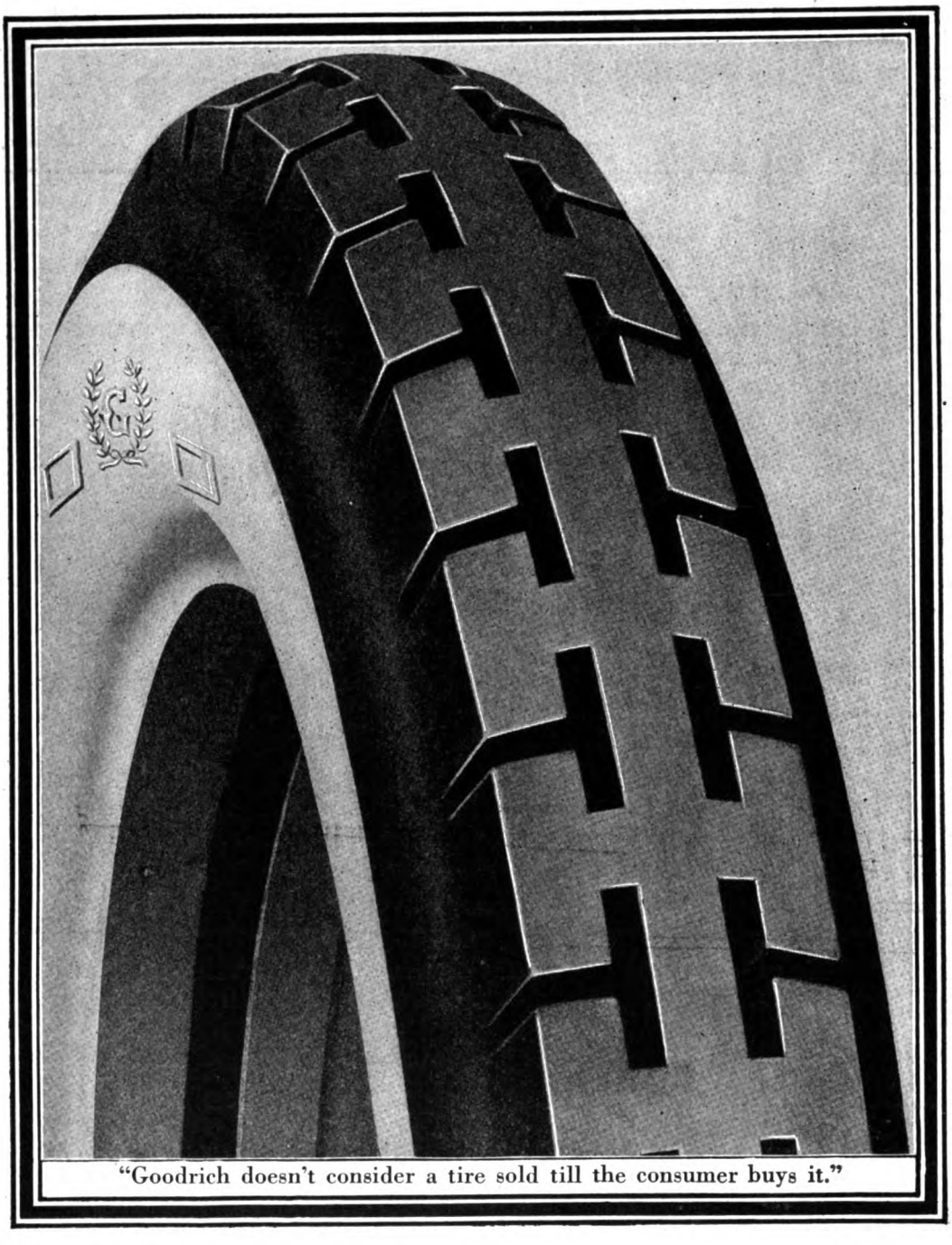
The non-rumble top and rear quarters are done in fabric after the current fashion, and heighten noticeably the smartness and grace of the body lines.

Cord tires were selected as standard equipment for the same reason that the seat is upholstered in genuine leather. Every detail has been determined on a basis of comfort and service.

The price is $980 f. o. b. Detroit



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"Goodrich doesn't consider a tire sold till the consumer buys it."

Goodrich SILVERTOWN CORD TIRE

"Best in the Long Run"

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Nash Leads the World in Motor Car Value

Nash Sales Gain 8% While Industry Decreases 24%

The following facts provide food for thought for every automobile dealer:

During the month of September the total shipments for all automobile manufacturers excepting Ford dropped 24% below the figure for the month of August.

On the other hand the shipment of Nash cars during September rose 8% beyond August totals.

And this serves again to emphasize the powerful influence Nash value is exerting upon the preference of buyers in every section of the country.

Equally clearly does it indicate the intense desirability of the Nash franchise for the dealer who can measure up to Nash requirements.

With a line of both four and six cylinder models embracing a wide variety of open and closed body types, and with a price range of from $915 to $2190, the Nash dealer enjoys a tremendously broad market.

And he is backed to the limit in aggressive sales efforts by the powerful Nash Motors Company with its far-reaching and soundly bulwarked financial resources.

There are now a limited number of very fine dealer territories that can be had.

Write at once and write fully to the sales department if you want to assure your business future with a Nash franchise.

FOURS *and* SIXES

Reduced Prices Range from $915 to $2190

f. o. b. factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

Nash Leads the World in Motor Car Value (751)

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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII NEW YORK, NOVEMBER 4, 1922 No. 12

DRIVEAWAYS INCREASE WITH CAR SHORTAGE

Railroads Strive to Give More Service But Are Hampered — Loadings at Highest Point in Years—N. A. C. C. Urges Getting Cooperation of Dealers.

Railroads were reminded again this week by the Car Service Division of the American Railway Assn. of the need for the sending, loaded or empty, of all automobile cars in the direction of the industry's loading territory. And that the need is very present is evidenced by the figures of shipments by the makers of motor cars.

Thus, on comparing the National Automobile Chamber of Commerce's figures on carloadings, driveaways and boatloads for the year it is at once seen that the percentage of cars driven away from the factories has steadily crept up on the number sent by railroad until, in August, it passed nearly all former records. In April carloads numbered 31,334, driveaways, 22,381. In May carloadings totaled 33,416 and driveaways 28,827. In June the figures were 34,230 and 33,857; in July 29,116 and 28,100, and in August 32,563 and 36,603. "Carloads," on the average, may be taken as representing between 3.4 and 4 automobiles.

Of course, the natural tendency of driveaways to increase as the Summer grows older must be taken into consideration, but the entire industry now admits that the parlous state of railroad transportation has a great deal to do with the comparisons. Evidence of this lies in the statement emanating from Detroit that continued absence of snow on the highways will be a great boon to the automobile manufacturer and driveaways will be continued throughout the Winter if road conditions permit.

That the car shortage is bad but that the Federal administration officials still hope for adequate service is freely admitted by Herbert Hoover, Secretary of Commerce. Hoover states that he believes the railway managers are doing their best; available cars are practically all in use but the present motive power is still below normal. Fundamentally, he is credited with asserting, the transportation system itself is at fault, as it has not kept pace with the development of American production. The strike of workers added the final blow, while the coal strike materially aggravated the congestion.

Meanwhile the Railway Association points to 1,003,759 cars loaded with revenue freight in the week ended October 21—the largest number loaded in any week in two years past—as showing the efforts of the lines to give service. In fact the loadings were within 14,780 cars of the record in the history of the railroads, the week of October 15, 1920. The current figures is 20,289 cars above the preceding week, 38,948 over the same week of 1921 and but 5,059 less than the same week of 1920.

(*Continued on page* 1132, *third column*)

ACCESSORY ASS'N REACHES HIGH MEMBERSHIP MARK

New Acquisitions Bring M. A. M. A. Roster Up to Total of 416

Recent additions to membership ranks of the Motor and Accessory Manufacturers' Association have brought the roster up to 416 members. This is the high mark for the Association's 18 years record of service for the automobile and allied industries. New concerns are being admitted every week, although the eligibility requirements are unchanged.

Among recent additions may be mentioned such concerns as the Glidden Co., Ternstedt Mfg. Co., Wyman-Gordon Co., Aluminum Co. of America, American Taximeter Co., Westinghouse Lamp Co., Empire Tire & Rubber Co., Holley Carbureter Co., Baush Machine Tool Co., Standard Parts Co., Hoover Steel Ball Co., Scintilla Magneto Co., Packard Electric Co., Houdaille Co., Baker R. & L. Co., and Trumbull Steel Co.

OCTOBER PRODUCTION EXCEEDS SEPTEMBER'S

N. A. C. C. Reports Indicate Best Autumn Trade on Record—244,400 Cars and Trucks Made Last Month—Used Car Markets Better in Some Sections.

Production of motor vehicles running 20 per cent above September was reported to the directors' meeting of the National Automobile Chamber of Commerce in New York on November 1. The total output for the entire industry for October, based on statements of shipments, is estimated at 244,400 cars and trucks. The best previous record for the same month was 200,000 produced in October, 1919.

Increased availability of coal, which was relatively scarce in September, largely accounts for the unusual October increase. The production of the latter month met a number of unfilled orders, as well as supplying October sales which were about 25 per cent under September in most sections of the Country. The Fall months, though seasonally less than the Summer are expected to register the best Autumn trade on record.

Six states, Massachusetts, Ohio, Maine, Colorado, New York and South Dakota, report improvements in the movement of used cars. Shortage in freight transportation is maintaining the truck market at the September level with Massachusetts, Texas, Pennsylvania and Ohio, the States showing increases.

Columbia to Teach 'Em About Motors

Columbia university, New York city, has started a course in instruction in the internal combustion engine, designed to give the average motorist a working knowledge of the machine he drives. The work will be under the direction of the School of Engineering.

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WILSON MADE DIRECTOR OF CHALMERS SALES FORCE

Sales Manager of Willys Corp. Joins in Plans of Company Development

Earl B. Wilson, for some time sales manager of the Willys Corp., has been appointed director of sales for the Chalmers Motor Co., assuming his duties at once. Wilson is a well-known figure in the trade, having begun his wholesale selling career almost 18 years ago. For a number of years he was connected with farm implement manufacturers and joined the automotive field with the Buick Motor Car Co.

In 1915, Wilson was sales manager of the Buick Chicago branch and also organized and managed a similar Buick organization in Memphis. Later he was placed in charge of the Philadelphia branch, subsequently being made director of sales of the Company with headquarters at Flint. After leaving the Buick company and until his present appointment he has been with the Willys Corporation in the managerial capacity. In joining Chalmers, he exemplifies the policy of that concern in a recent rapid development of its operations.

Nash Goes Fishing

Charles W. Nash, gone fishing off the coast of Maine last week, is reputed to have caught the first halibut ever gaffed along that bit of seaboard. According to the press reports, he was fishing for cod when the halibut appeared and was promptly taken in. The length is attested to have been six feet, nine inches.

Blackwell Sails for Europe

Wilson H. Blackwell, treasurer of the United States Rubber Co., sailed last Saturday on the *Majestic*. His trip is a routine one in connection with the Company's interests abroad.

Kibbe Seriously Ill

Harry W. Kibbe, of the Cadillac Motor Car Co., returning from a trip to Rio de Janeiro, was stricken with an attack of heart disease as the *Vandyck*, on which he was a passenger, arrived in New York harbor on October 30. He was taken to the Flower hospital in that city. Late in the week his condition was declared critical but an improvement is being noted from day to day.

Dilworth Organizes Own Company

Ernest J. Dilworth, well known to the Detroit automobile trade, has organized the Dilworth Motor Sales Corp. and obtained a dealer franchise for the Columbia line. His new offices are at 8862-8866 Grand River avenue, Detroit.

Woolverton Heads Haynes Texas Sales

Oscar G. Woolverton, connected with General Motors Truck Co. for 11 years, has been made district sales manager for the State of Texas by the Haynes Automobile Co., Kokomo, Ind. In organizing the State as a separate sales unit to take full advantage of its market, Texas has been definitely removed from the franchise of the Charles W. Tway Co., Haynes distributer at Atlanta, Ga. Woolverton will establish distributers and dealers with direct contracts with the Haynes factory.

Ott Made Fisher Cleveland Manager

Bruce W. Ott, recognized as one of the foremost American authorities on production body work, has been made factory manager of all Fisher Body Corp. interests in Cleveland. Ott joined the Fisher organization last July, coming from Dayton, O., where he had been identified with the designing and making of the bodies for the Maxwell Motor Corp. Prior to that, Ott had been with the Stoddard Dayton Co., having designed its first bodies.

Underwood Promoted by Goodrich

A. G. Underwood, has been promoted to manager of sales for bicycle and motorcycle tires and automobile rubber sundries, by the B. F. Goodrich Rubber Co. Underwood has been with the Goodrich company for many years, having been in the past district manager at Minneapolis. His new office will be at Akron.

Birdman Joins Rickenbacker Forces

Robert Fowler, one of the pioneers of aviation and the first to make a coast to coast flight in the United States, has been appointed local distributer of Rickenbacker cars at San Jose, Cal. Fowler thus marks another birdman joining Capt. Eddie Rickenbacker's forces, the latter having attracted a number of men of that profession to his dealers' and distributers' ranks.

Rawlings Heads Underwriters

Ralph Rawlings, western manager for the Boston and Old Colony Life Insurance Co., has been elected president of the Western Automobile Underwriters Conference. He succeeds Ralph B. Ives, of the Aetna company.

Fifer Now Reo Representative

C. E. Fifer has been appointed factory representative for the Reo Motor Car Co., with headquarters at Greensboro, N. C., his territory embracing North and South Carolina, Virginia and Maryland. He was formerly with the American Southern Motors Co. of Greensboro.

Colwell Heads Cincinnati Bureau

F. C. Colwell was elected president, and Edgar Menderson, vice-president, of the Bureau of Retail Sales Managers, affiliated with the Cincinnati Automobile Dealers' Assn., at a meeting held October 25. The Winter season promising much activity, the bureau will meet twice monthly hereafter.

ANKLAM PRESIDENT AND MANAGER OF HALL LAMP

Selected to Succeed J. F. Hartz Who Is Made Chairman of the Board

W. F. Anklam, secretary and treasurer of the C. M. Hall Lamp Co., Detroit and Kenosha, for the past twelve years, has been elected president and general manager in recognition of the able manner in which he served the Company in the past. He succeeds J. F. Hartz who has been president during the same years. Hartz tendered his resignation at the meeting of the directors on October 20, and was subsequently elected chairman of the board.

The new president submitted a report showing the Hall company to be in a most prosperous condition with a future outlook that is all that could be desired. Anklam's promotion was a just one, he having grown up from the ranks. He began as a bookkeeper back in the days when Richard (Dick) Wells ran the old Badger Lamp Works at Kenosha.

William H. Little

William H. Little, widely active in the industry up to two years ago, when ill health overtook him, died at his home in Detroit October 26, at the age of 46. One time general manager for the Edison Storage Battery Co., he went to Michigan as an executive of the Buick Motor Co. Later, he organized the Little Motor Car Co., producing the "Little Car, made by Big Bill Little," as it was known to the trade. With the absorption of this enterprise by the Chevrolet, Little became president of the Chevrolet Motor Car Co. of Detroit. Later, he was general manager of the Sterling Engine plant, building Chevrolet motors. He was still later, vice-president and managing director of the Scripps-Booth. Physically big, genial and a member of many organizations, his passing caused a pang to many old friends. Little, who was not married, is survived by his mother and one sister.

Charles H. Woodruff

Charles H. Woodruff, formerly sales manager of the O. Armleder Co., Cincinnati, died suddenly at Dayton, O., on October 20. An acute attack of indigestion caused his demise. He was held in very high esteem by the Company he formerly served as well as its employes and his many other warm friends.

Col. William D. Uhler

Col. William D. Uhler, chief engineer of the Pennsylvania State Highway Department, died on October 27, after a short illness. He was widely known as a good roads advocate and during the war was an assistant to Maj.-Gen. George Goethals on highway matters. He was a former president of the American Assn. of Highway Officials and a member of the International Assn. of Road Engineers.

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RUBBER ASSN. STUDIES BRITISH RESTRICTION

Sees Danger in England's Curtailment by Taxation—Sends Invitation to London Growers to Come Here for Conference—Closer Contact Essential.

Readily agreeing that the British plan to restrict rubber output by graduated taxation had, in its sanctioning by the government, a satisfactory effect on market prices, but at the same time recognizing the "dynamite" nature of such taxation, the Rubber Association of America has decided to look into the matter further before coming to a definite conclusion regarding the project. With this in view, a cablegram was sent the British Rubber Growers' Association on October 27, voicing the Americans' sensing of "danger to the entire industry" in the proposed restriction by governmental taxation and extending an invitation for closer contact between the two associations.

First steps in the matter were taken at a meeting of the directors of the American body, held on October 26. The Board discussed at some length the proposition. It was the consensus of opinion that it is difficult at this time to determine the result of the application of the taxation plan and it is believed that restrictive measures of this nature contain elements of danger. Therefore, it was decided that the measures proposed should receive full consideration by producer and consumer in order to protect their mutual interests.

The plan involves an arbitrary assumption based on comparative statistics of past performance. As pointed out in AUTOMOBILE TOPICS under date of October 21, assuming a total world consumption of 350,000 tons, upon quantities up to 210,000 tons, or 60 per cent of the total amount, an export duty of a penny a pound would be levied. On each additional five per cent another penny would be added to the duty, up to the full amount, which would take a duty of one shilling a pound.

It was concluded by the Rubber association that contact with the Rubber Growers' Assn. of London should be established for the purpose of bringing about a joint conference to consider the restrictive plan from the standpoint of the entire industry and facilitate the investigation of necessary activity respecting the situation. The "contact committee" appointed was as follows: H. Stuart Hotchkiss, chairman, and A. H. Brown, both of the Rubber association directorate; Horace DeLisser, Ajax; B. G. Work, Goodrich; and S. G. Carkhuff, Firestone.

The committee sent the following cablegram to the Rubber Growers:

"At a meeting of the Board of Directors of the Rubber Association of America held on October 26, a special committee was appointed to study the effects upon the industry of pending crude rubber restriction and make recommendations for safeguarding consumers' interests. The Rubber Association of America recognizes the desirability of stable rubber prices and the necessity for plantations to earn a return upon the investment which will assure the future of the plantation industry.

"It is thought the proposed restriction carries with it great danger to the entire industry, planters and manufacturers alike, and that closer contact between the growers and consumers will be beneficial to the industry as a whole.

"As a preliminary step to a broader understanding, the special committee on behalf of the Rubber Association of America extends a cordial invitation to the Rubber Growers' Association to send a committee here to discuss plans which will protect mutual interests of consumers and producers."

THAT'S WHY IT'S OFFICIAL

A well-known car manufacturer writes: "We will carefully check the proofs and advise you of any discrepancies or any changes we desire to make. Obviously, we want to cooperate with you as it is to our mutual interest and benefit that the figures and symbols be accurate in every particular."

The proofs referred to are those of AUTOMOBILE TOPICS' Table of Passenger Car Selling Points (copyrighted). They are sent to car makers at regular intervals for checking and revision.

It is just such cooperation and willingness to cooperate, as that quoted above, that gives the Table its official character. All data listed is authorized by the manufacturers themselves.

The Table will be found on pages 1175-7 of this issue. It is revised to October 31.

BUICK ENDS RECORD MONTH WITH 1,029 ON LAST DAY

October Shipments Reach 17,666 After Successive Record-Smashing Days

All its single-day shipping records were shattered by the Buick Motor Co., Flint, Mich., on October 30 when 1,029 cars were sent from the factory. October shipments reached the new high level of 17,666 cars, this comparing with 16,842 shipped in September.

October saw daily records smashed repeatedly. On October 12, Buick shipped 775 cars, then the highest one day's delivery. This figure was bettered on October 25 with a shipment of 910 cars, only to be surpassed the next day with a total of 973.

Star Production Growing

Production of Star cars, W. C. Durant's bid in the lowest priced field, reached 130 a day during the last week of October. In that month, 1,500 of the little automobiles were built and marketed, making a total to November 1 of 2,100. Meanwhile output of Durant cars ran approximately 4,000 in October making a total to date of 44,000.

1922 LARGEST YEAR FOR GENERAL MOTORS

Will Round Out Year with Total Sales of 468,000 Units—Increase Over Last Year 118 Per Cent—Building One Car Out of Six—Has 1,500,000 Running.

General Motors car and truck sales for 1922 will total 468,355 units, an increase of 118 per cent over last year's total of 214,799. Of this great volume, 454,000 are passenger cars, 10,000 trucks, and 4,355 miscellaneous products, including tractors and also cars and trucks not now manufactured. The figures were issued officially this week, in the ninth of a series of educational booklets periodically mailed to stockholders of the General Motors Corp.

While the automobile industry as a whole has had an amazingly good year it is now apparent that the fortunes of its largest consolidated property have been mending at an extraordinarily rapid rate. Combined sales by the car and truck divisions during the first quarter of 1922 totalled 71,039. The second quarter's sales totalled 135,751, making an aggregate for the half year of 206,790, which was within 8,000 of equaling the entire total sales of 1921.

For the third quarter General Motors sales accounted for 109,346 cars and trucks. The last three months of the year, including projected estimates for November and December, accounts for 152,219. This reflects the tremendous pace of the three principal manufacturing divisions, which are today producing and selling more cars than ever before in their history.

The figures show Chevrolet approaching 250,000 cars a year. Buick, which, on October 30 shipped 1,029 cars—far beyond any previous performance—it is estimated will round out the year with a total of 134,000. Cadillac, which is one of the Corporation's most productive

(Continued on page 1132, second column)

GENERAL MOTORS SALES

By Calendar Years

	*1922	1921	1920	1919
Passenger Cars:				
Buick	134,000	83,888	116,213	119,853
Cadillac	22,000	11,130	19,790	19,851
Chevrolet	249,000	75,667	144,502	132,710
Oakland	26,000	12,661	37,244	54,451
Oldsmobile	23,000	20,245	26,241	33,345
Commercial Cars:				
Chevrolet	2,900	1,489	4,938	2,682
GMC trucks	5,600	2,760	5,137	7,730
Oldsmobile	1,500	466	8,383	7,782
Totals:				
Passenger cars	454,000	203,591	343,990	360,210
Commercial cars	10,000	4,715	18,458	18,194
Miscellaneous†	4,355	6,493	30,627	13,334
Grand total	*468,355	214,799	393,075	391,738

*Based upon the actual sales for the first nine months of 1922, together with estimates for the last three months.

†Includes tractors; and also cars and trucks not now manufactured.

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HUDSON-ESSEX FORMS OWN ENGLISH OUTLET

Move Places Company in Position of Distributer in Great Britain—Increase in Dealerships Foreseen—O. H. Williams Remains in London in Charge.

Launching of the new Hudson-Essex Motors, Ltd., of Great Britain was one of the events of the week in the automotive world. The concern, which had been rumored in the trade for some time, marks the entrance of the parent companies as distributers in the British field. That it will greatly increase the number of dealers in the British Isles is a foregone conclusion.

The work of the new corporation will not conflict, however, with the activities of the general export business carried on by the American industry. Business will not be decreased at Detroit, it is pointed out.

The move brought with it a number of important changes in personnel. H. P. Phipps, who has acted in capacity of sales manager of the American plants, and on whose shoulders rested a good bit of the work of anticipatory measures in England, is now become export manager. O. H. Williams, who had been export manager and who accompanied Phipps abroad, remained in London to operate the new company.

In addition, O. H. McCornack, vice-president of the Hudson Motor Car Co., announces the promotion of Harry G. Moock to sales manager, succeeding Phipps. Moock, formerly general manager of the National Automobile Dealers' Assn., needs no introduction to the trade. He was assistant sales manager prior to his present advancement. Jesse S. Draper, connected with the sales department as district manager for a number of years, has been made assistant sales manager succeeding Moock. Phipps, whose work as sales manager has been highly satisfactory to the Company, sailed for England on October 28.

Locomobile Officially Changes Hands

W. C. Durant's offer for the Locomobile Company of America as a business has been officially accepted. Directly following the announcement, the sum involved not being divulged, the directors met and declared a dividend to creditors consisting of 14½ per cent of their claims in stock in the new Corporation and 18 per cent in cash. Further dividends will be paid as business warrants.

Six-Cylinder Stutz Coming

Stutz substantial character and reputation are to be carried out in an expansion of the line, according to reports which are becoming current. Since the entrance into the affairs of the Stutz Motor Car Co. of Charles M. Schwab and his associates the business has shown rapid gains and the broadening out of its activities has been forecast. It is now said this will be evidenced by a new six-cylinder model, to be introduced at substantially lower levels than the present four around the first of the year.

1922 LARGEST YEAR FOR GENERAL MOTORS

(*Continued from page* 1131, *third column*)

units, will turn out 22,000 or more of its high-priced cars, while Oakland and Oldsmobile, with totals of 26,000 and 23,000 respectively, both show substantial gains over last year.

General Motors' competitive position in the industry constitutes one of the most important phases of its progress. This is revealed by comparison with figures previously published through other channels.

Thus it is shown that for nine months ending September 30, the Corporation built and sold 316,136 cars out of a total reported for the industry as a whole amounting to 1,872,807, or approximately one car out of six. The relation by quarters was as follows:

	All Makes	General Motors	Per Cent
First quarter.....	386,195	71,039	18.4
Second quarter.....	764,788	135,751	17.7
Third quarter.....	721,824	109,346	15.1

Since 1905, General Motors has produced over 2,000,000 passenger cars. Of this number approximately 75 per cent or more than 1,500,000 were in use in this Country on January 1, 1922, registration figures show. According to the National Automobile Chamber of Commerce there are 9,300,000 passenger automobiles in use in the United States. To be conservative, at least one out of every seven passenger cars is a General Motors product. The Chamber further estimates that passenger cars carry approximately seven billion passengers annually. Since one out of every seven is a General Motors car it follows that this group carries approximately one billion passengers annually—approximately the number of passengers carried by all the steam railroads in this Country.

The Bell Telephone estimates that an average of three calls daily are made upon every telephone instrument. The average motor car travels 21 miles daily. Every time a telephone rings, therefore, 7 automobiles have traveled one mile and one of them is a General Motors car.

DRIVEAWAYS INCREASE WITH CAR SHORTAGE

(*Continued from page* 1129, *second column*)

Private advices from Detroit are to the effect that about 40,000 cars a month are going via boat or highway compared with 60,000 monthly in the early part of 1920 and 75,000 at the peak of that year's congestion. Thus while the industry has a problem in the freight tie-up, conditions are not so black as painted by some.

The Michigan Central claims to be turning back around 125 cars a day gathered from New York Central connection and 15 to 25 daily brought from the Chicago district. Against this supply of 150 cars a day, the industry at Detroit is calling for 300 to care for its products. As one result the boat shipments grow, too. Twelve privately chartered boats, loaded to the limit, are plying between Detroit and Duluth, Milwaukee, Chicago, Buffalo and Cleveland.

The railroads are making every effort to obtain more rolling stock. Up to October 15 they had ordered 1,792 locomotives and 122,953 freight cars, many of the latter suitable for automobile shipments. This exceeds the annual average for both the last five and the last ten years. Only three times in the last decade have figures been greater.

The Traffic Department of the N. A. C. C., under the direction of J. S. Marvin, has again taken up the matter with its members, as follows:

"We suggest that you urge your dealers to take a direct interest in automobile car handling by the railroads. The important point is the disposition made (by railroad agents and employes) of automobile cars after a dealer unloads a shipment.

"The general instructions in effect on all railroads require that these cars be sent loaded or empty to the home lines or the manufacturing territory. The Car Service Division at Washington on October 3 sent another bulletin to all railroads on this. We have been dealing direct with the principal traffic officials throughout the Country urging attention to this bulletin and we are receiving favorable responses.

"If each dealer will talk to the local railroad people who enjoy his patronage, indicating his interest in the automobile cars going back to the manufacturing territory, it will have a powerful, countrywide, cooperative effect and tend to prevent the use of these cars in a manner that would keep them out of automobile service."

GENERAL MOTORS' POSITION

	1921	1920	1919	1918
Passenger Cars:				
Total production*	1,514,000	1,883,158	1,657,652	926,388
General Motors†	203,591	343,990	360,210	215,510
Proportion	13.5%	18.2%	21.8%	23.3%
Commercial Cars:				
Total production*	154,550	322,039	316,364	227,250
General Motors†	4,715	18,458	18,194	9,411
Proportion	3.1%	5.7%	5.8%	4.1%
Grand Total:				
Total production*	1,668,550	2,205,197	1,974,016	1,153,637
General Motors†	208,306	362,448	378,404	224,921
Proportion	12.5%	16.3%	19.2%	19.5%

*Reported by National Automobile Chamber of Commerce. †General Motors manufacturing divisions, exclusive of tractors and cars and trucks not concurrently manufactured.

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90,252 STUDEBAKERS SOLD IN NINE MONTHS

Production During Same Period 87,951 Cars—Erskine Predicts Continuance of Big Business into 1923—Says Profits Satisfy Despite Price Cut.

Predictions of those close to the Studebaker Corp. that that concern would turn out more than 100,000 cars in 1922, are partly borne out by the profit and loss account for the nine months ended September 30, issued this week. Therein it is shown that 87,951 automobiles were made in the nine months, with orders—consisting in this case of "cars sold"—of 90,252, thus leaving a surplus over output of 2,301. This is slightly less than one week's production at the present rate.

Output during the third quarter of the year was 29,924 which corresponds substantially with the figure set forth in these columns under date of October 28. Orders were 30,199. Thus, as President A. R. Erskine points out in a letter accompanying the statement, capacity operations of the second quarter were continued uninterruptedly into the third with a large number of unfilled orders on hand.

How these figures compare with last year's output is set forth fully in the accompanying table. It will be seen that while net profits for the third quarter are but little above those of the same period in 1921, due to the cut in price early in September, the total for the year to September 30, was substantially heavier, nearly $7,000,000, than in the first nine months of 1921.

The consolidated balance sheet of the corporation and its subsidiaries shows decidedly gratifying changes when compared with the statement of December 31, 1921. Thus inventories were cut $7,108,144 during the nine months of this year. Housing development, naturally, fell off, in this instance by $549,710. Reductions during the period in preferred stock totaled $350,000 while $13,804 was cut from dealers' discount and deposits. Total assets and liabilities were $110,143,411, an increase of $11,815,272 over the figure on December 31 last.

STUDEBAKER CORP. AND SUBSIDIARIES

Consolidated Balance Sheet, Sept. 30

	Sept. 30, '22	Dec. 31, '21
Assets		
Cash	$20,123,734	$8,334,799
Sight drafts outstanding	4,137,804	1,822,393
Investments	3,563,590	2,178,170
Net receivables	6,176,590	4,035,221
Inventories	15,101,740	22,209,885
Deferred charges	623,219	394,262
Plants and properties	38,903,832	37,290,413
Housing developments	1,706,005	2,255,715
Trade name and good will	19,807,276	19,807,276
Total assets	$110,143,411	$98,328,138
Liabilities		
Accounts payable	$4,046,504	$3,492,414
Reserve for taxes	3,642,646	2,904,373
Reserve dealers' discounts and deposits	1,292,641	1,306,446
Other payable reserves	2,799,875	2,545,160
Preferred stock	9,450,000	9,800,000
Common stock	60,000,000	60,000,000
Special surplus	4,455,000	4,050,000
Surplus	24,456,743	14,229,743
Total liabilities	$110,143,411	$98,328,138

Moon Net Profits Reach $326,478

For the three months ended September 30, 1922, the Moon Motor Car Co., after deducting all expenses and reserves for taxes, reported net profits of $326,478. Total income was $2,747,205 and expenses $2,370,676.

Cadillac Makes Film of Factory

In cooperation with the Department of Commerce, the Cadillac Motor Car Co. has completed a moving picture film depicting "The Story of the V-type, Eight-cylinder Motor Car." The film is one of a number showing industrial plants' operations throughout the Country, undertaken at the instance of Herbert Hoover.

Stutz Reports Sales Gains

Stutz Motor Car Co. of America reports sales gains during October that will prove the month surpassed either September or August, the two high spots of the year so far. Sales when compared with September, 1921, increased during this September by 256 per cent.

Studebaker Big-Six Price Raise

Studebaker Big-Six prices have been advanced to $1,785 on the touring car. This is a raise of $135 from the former price of $1,650. New prices on other types for the same chassis follow, old prices being given in parenthesis: Four passenger speedster ($1,785), $1,835; four passenger coupe ($2,275), $2,400; five passenger coupe ($2,375), $2,550; sedan special, ($2,650) $2,750. The new prices are now in effect. Light-Six and Special-Six prices are unchanged.

STUDEBAKER CORP. AND SUBSIDIARIES

Profit and Loss and Surplus Accounts, September 30, 1922

Accounts	1922 Third Quarter	1922 First Nine Months	1921 Third Quarter	1921 First 9 Months
No. cars produced	29,924	87,951	23,338	56,163
No. cars sold	30,199	90,252	21,086	55,552
Net sales	$35,065,894	$108,488,756	$29,058,893	$80,593,998
Net profits before taxes	4,934,370	17,621,133	4,251,867	11,644,326
Net after taxes	4,483,973	15,640,759	3,263,200	9,644,326
Dividends	2,565,375	5,008,375	1,221,500	3,664,500
Surplus	1,918,598	10,631,999	2,041,700	5,979,826
Prior surplus	.....	18,279,743	.....	13,467,047
Total surplus	.....	29,911,743	.....	19,446,874

APPERSON WILL ADD SIX-CYLINDER MODEL

New Car to Sell Between $1,200 and $1,600 Expected for Chicago Show—To Continue Eight-Cylinder—$700,000 Bond Issue Offered to Provide Financing.

Apperson Brothers Automobile Co., Kokomo, Ind., plans to add a six-cylinder car of 120- or 124-inch wheelbase to sell between $1,200 and $1,600 in the open models. The six is expected to be ready for its debut at the Chicago show the end of January, with deliveries following shortly thereafter. To provide for the necessary financing of this expansion of its business, the Company is now publicly offering $700,000 first-mortgage seven-percent ten-year serial gold bonds.

The present eight-cylinder line is to be continued. According to present plans, next year's production will be divided between 4,000 of the new six and 2,500 of the present eight. Because of the wider market which the smaller car will give the Apperson line, the Company expects its dealer organization to increase materially as a result.

Final details of the new car are as yet undetermined. N. H. Van Sicklen, vice-president and general manager, states that the new offering will be a high-powered, well-finished, "snappy" job. Several body types will be included.

The bonds, which constitute the Company's only funded debt, are being offered by A. S. Terrill & Co., New York and Chicago, at 100 including accrued interest from October 1, 1922, to yield about 7.10 per cent. They mature $40,000 annually, commencing October 1, 1924, and the balance October 1, 1932. Bonds are redeemable on or prior to October 1, 1924, at 107½ and interest, and on any interest date thereafter at 105 and interest.

President Edgar L. Apperson, in a letter to the brokers, states that results of operations to September 30, 1922, indicate a profit for the year ending December 31, 1922, exceeding $300,000. He also says that the Company's parts business alone "amounts to over $300,000 a year, on which there is a very satisfactory profit."

From 1916 to 1920 inclusive, the Company's earnings averaged $199,239 annually. For the year ended December 31, 1921, a substantial operating profit helped materially to offset an abnormal shrinkage in inventory, so that the loss after inventory write-off was only $9,311.

After giving effect to the new bond issue, the Apperson balance sheet as of August 1, 1922, shows total current assets of $1,863,157 against bills and accounts payable $606,074. Current assets include cash, $186,568; accounts receivable, $273,922; notes receivable, $52,624; and inventories, $1,350,042.

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PRIVATE QUOTATIONS

Quotations of some of the inactive securities of concerns allied with the automobile industry are printed below. These are shares seldom if ever quoted in the more central stock exchanges. The prices in some instances represent "last known sales," and in others are merely nominal as the amount of trading in them is insufficient to constitute a recognized market. Publication of the figures, therefore, merely constitutes a record of the existence and appraisal of the issues.

	Quotations
Acme Motor Truck Co., pfd.	$10
Acme Motor Truck Co., com.	14
Acme Rubber Mfg.	180
Adams Axle Co.	100
Akron Rubber Mold & Machine Co., com.	160
American Bronze Co., pfd.	100
American Bronze Co., com.	100
American Hardware Corp.	175
Anderson Motor Co., pfd.	10
Anderson Motor, com.	10
Anderson Spring Lubricator	25
Apco Mfg. Co., pfd.	100
O. Armleder Co., com.	10.64
O. Armleder Co., pfd.	100
Atlas Specialty Mfg. Co.	500
Auburn Automobile Co., com.	34-45
Auburn Automobile Co., pfd.	92-95
Automobile Screw Products, com.	115
Automotive Gear Works, com.	50
Avery Co., com.	110
Avery Co., pfd.	100
Baker, R. & L., Co., pfd	100
Baker, R. & L., Co., com.	110
Bessemer Motor Truck Co., pfd.	100
Bessemer Motor Truck Co., com.	15
Best, C. L., Tractor Co., com.	350
Best, C. L., Tractor Co., pfd.	93.50
Becker Brothers, Inc., pfd.	100
Bijur Motor Appliance Co., 1st pfd.	100
Bijur Motor Appliance Co., 2d pfd.	100
Black & Decker Mfg. Co., com.	25
Black & Decker, pfd.	25
Bock Bearing Co., com.	125
Bock Bearing Co., pfd.	100
Bower Roller Bearing Co., com.	13
Bridgeport Brass Co.	150
Brieze Mfg., com.	7.50
Brewster & Co., Inc.	100
Brown, Arthur S., Mfg., pfd.	100
Cellokay Mfg. Corp.	5
Champion Motors Corp., pfd.	10
Champion Motors Corp., com.	5
Clark Equipment, pfd.	100
Clark Equipment, com.	100
Collier Motor Truck, pfd.	10
Collier Motor Truck, com.	10
Continental Guaranty, com.	90-100
Continental Rubber Works	100
Corbitt Motor Truck, pfd.	95
Corbitt Motor Truck, com.	50
Corcoran-Victor Co., com.	15
Corcoran-Victor Co., pfd.	90
Corning Glass Works, pfd.	100
Covert Gear Co., Inc., com.	100
Covert Gear Co., Inc., pfd.	100
Cowles & Co., com.	25
James Cunningham, Son & Co.	125
Cupples Co., 2d pfd.	100
Cupples Co., com.	100
Cupples Co., 1st pfd.	100
Davis, George W., Motor, com.	425
Dayton Steel Foundry, com.	400
Dissinger, C. H. A., & Bro., com.	100
Ditzler Color Co.	15
Double Fabric Tire Co., com.	75
Double Fabric Tire Co., pfd.	100
Duplex Truck Co., com.	11
Dura Co., com.	50
Durston Gear Corp., com.	100
E. A. Laboratories	162
Eclat Rubber Co., pfd.	100
Eclat Rubber Co., com.	15
Electric Machine Co.	120
Electric Storage Battery Co.	100
Elkhart Carriage & Motor Car, "A" pfd.	100
English & Mersick, com.	100
Fageol Motors, pfd.	10
Fageol Motors, com.	10
Falls Rubber Co., com.	200
Federal Bearings & Bushing, com.	140
Federal Bearings & Bushing, pfd.	100
Frick Co., 20,000 com.	76
G. & O. Mfg. Co.	179
Gates Rubber Co., pfd.	100
Grand Rapids Tire & Rubber Corp., com.	50
Guaranteed Liquid Measure Co.	10
Hall, C. M., Lamp Co., com.	23
Hanson Motor Co., com.	100
Hanson Motor Co., pfd.	100
Harris Oil Co., com.	100
Hayes Motor Truck Wheel Co., com.	100
Hayes Shock Absorber, pfd.	100
Haynes Automobile, pfd.	100
Haynes Automobile, com.	100
Hawkeye Tire & Rubber Co., pfd.	24
Hawkeye Tire & Rubber Co., com.	20
H. C. S. Motor Car Co., pfd.	100
H. C. S Motor Car Co., com.	100
Hanes Rubber Co., pfd.	98
Hanes Rubber Co., com.	8
Hicks-Parrett Tractor Co., com.	10
Hicks-Parrett Tractor Co., pfd.	10
Holly Carburetor Co.	138
Hood Rubber Co., pfd.	97-98
Hood Rubber Co., com.	50
Jefferson Forge Products, com.	10
Judd & Leland Mfg., com.	100
Kalamazoo Motors Corp., com.	10
Kline Car Corp.	100
Lexington Motor, 1st pfd.	100
Lexington Motor, 2d pfd.	100
Lexington Motor, com.	5
Liberty Motor Car Co.	10
Lima Sheet Metal Products	10
McFarlan Motors, pfd.	10
McFarlan Motors, com.	10
McLean Tire & Rubber Co., pfd.	100
McLean Tire & Rubber Co., com.	100
Majestic Tire & Rubber Co., com.	35
Marquette Mfg., com.	100
Master Primer Co., com.	150
Master Trucks, pfd.	100
Menominee Motor Truck Co., com.	100-110
Milburn Wagon Co., com.	100
Milburn Wagon Co., pfd.	100
Moreland Motor Truck Co.	104
Muncie Gear Works	161.92
Nebraska Tire & Rubber Co., pfd.	50
Nebraska Tire & Rubber Co., com.	50
New Era Spring	15
New York Transportation Co., com.	19
Norma Co. of America	100
Odell Rubber Co., com., voting	45
Odell Rubber Co., non-voting	45
Parker Axle Products Corp., pfd.	10
Parker Axle Products Corp., com.	12.50
Parker Tire & Rubber Co., com.	10
Parker Tire & Rubber Co., pfd.	10
Paul Rubber Co.	100
Penberthy Injector Co., com.	25
Penberthy Injector Co., pfd.	92-95
Pennsylvania Rubber Co., com.	250
Philbrin Corp., pfd.	175
Philbrin Corp., com.	100
Phineas Jones & Co., com.	100
Pilot Motor Car Co., pfd.	100
Pilot Motor Car Co., com.	305
Piston Ring Co., com.	15
Powertown Tire Corp., pfd.	50
Powertown Tire Corp., com.	50
Pyrene Mfg. Co.	12
R & V Motor, "A," pfd.	95
R & V Motor, "B," pfd.	100
R & V Motor, com.	10
Reynolds Spring "A," pfd.	100
Reynolds Spring, "B," pfd.	100
Salisbury Axle, pfd.	400
Schacht, G. A., Motor Truck Co., pfd.	100
Schacht, G. A., Motor Truck Co., com.	100
Signal Truck Co.	10
Sewell Cushion Wheel Co., pfd.	100
Sewell Cushion Wheel Co., com.	10-20
Shakespeare Products, com.	10
Sioux City Tire & Mfg. Co., pfd.	20
Sioux City Tire & Mfg. Co., com.	5
Surety Tire & Rubber Co., com.	1.50
Stanley Motor Carriage Co., 1st pfd.	100
Stanley Motor Carriage Co., 2d pfd.	100
Staybestos Mfg. Co., pfd.	50
Staybestos Mfg. Co., com.	50
Sterling Tire, pfd.	100
Sterling Tire, com.	5
Stevens Duryea	8
Troy Foundry & Machine Co., pfd.	100
Traveler Rubber Co., com.	27.50
Union Switch & Signal, pfd.	75
Union Switch & Signal, com.	75
U. S. Motor Truck, pfd.	100
U. S. Motor Truck, com.	100
Velie Motors Corp., com.	15
Velie Motors Corp., 1st pfd.	60
Waltham Watch Co., pfd.	43
Waltham Watch Co., com.	9½-10
Watson, John Warren Co.	100
Weaver Mfg. Co., com.	250
Wilson, C. R., Body, com.	10

DIVIDENDS DECLARED

Brunswick-Balke Collender Co.—Regular, quarterly dividend of 1¾ per cent on the common stock; payable November 15, 1922, to stockholders of record November 5, 1922.

B. F. Goodrich Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable January 2, 1923, to stockholders of record December 22.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8 per cent preferred stock; payable November 15, to stockholders of record November 1, 1922.

Lee Rubber & Tire Corp.—Dividend of 50 cents; payable December 1, 1922, to stockholders of record November 15, 1922.

Miller Rubber Co.—Regular, quarterly dividend of 2 per cent on the preferred stock; payable December 1, 1922, to stockholders of record November 10, 1922.

A. O. Smith Corp.—Dividend of 25 cents on the common stock; payable November 15, 1922, to stockholders of record November 1, 1922.

Stewart-Warner Speedometer Corp.—Regular, quarterly dividend of $1; payable November 15, 1922, to stockholders of record October 31, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automotive securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended November 1. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
Advance Rumely	16⅛	15
†Advance Rumely, preferred	50	48½
Ajax Rubber	13⅞	12⅞
Allis-Chalmers	46⅝	42¾
American Bosch Magneto	39	34¾
Case (J. I.) Plow	4¾	4
Chandler Motor	61¼	59⅛
Chicago Pneumatic Tool	82¼	75
Cleveland Motors	30	29
Continental Motors, common	10½	10
Daniels Motor	10	10
Durant Motors	51⅛	47¾
Durant Motors of Indiana	13¾	13
Fisher Body	151½	137½
Fisher Ohio Body, preferred	94¾	93½
Fisk Rubber, common	12½	12
General Electric	178	174
General Motors, common	14¼	13½
General Motors, preferred	83½	83½
General Motors, 6% deb.	83½	82
General Motors, 7% deb.	95	93½
B. F. Goodrich, common	33⅜	30½
B. F. Goodrich, preferred	84	83
Goodyear, common	9¾	9⅛
Goodyear, preferred	27	26¾
Goodyear, pr. pf.	60½	60½
Gray & Davis	11¼	9½
Hayes Wheel, w. i.	38	36⅜
Hudson Motors	20⅛	19⅞
Hupp Motor Car, common	21⅛	20
International Harvester, new (5)	106	103½
International Harvester, new (7)	118¾	118½
*Kelly-Springfield Tire, commcn.	42	39¼
Kelly-Springfield, pf. (8)	100	100
Kelsey Wheel	99	94
Keystone Tire	7	6⅝
Lee Rubber	25¼	25
Mack Trucks, Inc.	56½	53⅝
Martin-Parry	28¾	28
Maxwell Motors, Class A	49½	48
Maxwell Motors, Class B	15	14
Mercer Motors	2¾	2⅜
Moon Motors	15¼	14⅛
Mullins Body	18	17¼
Parish & Bingham	11	11
Pierce-Arrow, common	12¼	10⅝
Pierce-Arrow, preferred	29	25¼
Reo Motors	13	12¾
Republic Motor Truck	2⅛	1¾
Saxon Motors	3¾	3¼
Stewart-Warner Speedometer	53	50¾
Stromberg Carburetor	52	50⅛
Studebaker, common	129¾	123
Studebaker, preferred	117	116
U. S. Light & Heat	1⅜	1⅜
U. S. Light & Heat, pf.	1⅞	1½
U. S. Rubber, common	53¾	50⅛
U. S. Rubber, 1st preferred	96	94¾
Westinghouse Air Brake	98	95
Westinghouse Electric & Mfg.	62¼	59½
White Motors	48¼	47¼
Willys-Overland, common	6⅛	5⅛
Willys-Overland, preferred	39½	38⅛

†Par $50. *$25.

Prices for automobile securities quoted in Detroit during the week ended October 31 are as follows:

	High	Low
Auto Body	4¼	4¼
Charcoal Iron, common	1¾	1¾
Charcoal Iron, preferred	2¾	2½
Columbia Motors	2½	2¼
Commerce Motors	5	3½
Continental Motor	10¼	9⅞
Edmund & Jones, common	28	24½
Federal Truck	20	18
Ford of Canada	400	390
General Al. & Brass	10¼	10¼
Motor Products	91	87
Motor Wheel, common	12½	12⅛
Packard Motor, preferred	92¾	91½
Paige-Detroit Motor Car, common	24¾	23
Reo Motor	13⅛	12⅞
Timken Axle, common	28	27⅝
Timken Axle, preferred	92	89
Truscon Steel, common	20	18
Truscon Steel, preferred	10½	9¾

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ELECTRIC ALLOY AND ATLAS STEEL MERGED

Combine to Extend Activities to Fine Automotive Steels—Basing Campaign for Business in New Field on "Price per Pound of Finished Piece."

Atlas Steel Corporation, Dunkirk, N. Y., has been formed as a merger of the Electric Alloy Steel Co. and the Atlas Crucible Steel Co. With the combined plant facilities and technical organizations, backed by the development and successful prosecution of a strict policy of quality in the tool steels field, the new corporation plans to extend its activities to the development of fine steels for the automotive industry. It is on the consideration of "price per pound of finished piece," generally recognized in the industry as depending fundamentally on the quality of the original steel, that Atlas is making its campaign for business.

"The policy of the Corporation in extending its endeavors to the automotive field is based on numerous outstanding examples of the superiority of good electric steel in that industry," said W. C. Peterson, metallurgist of the Atlas Crucible Steel Co., whose work in Detroit has brought him widely into contact with the industry. He further explains; "Examples come readily to mind, such as that of one large manufacturer who found, although open hearth steel was costing but 8 cents, against 10 cents per pound for electric steel, that the disproportionate rejections raised the 'price per pound of finished piece' to 15 cents for the open hearth steel against 12 cents for the electric.

"Another large manufacturer raised the percentage of accepted camshafts from 83 per cent to over 99 per cent by changing from open hearth to good electric steel, and the examples multiply. The slightly higher first cost will be far more offset by the ultimate economy and it is obvious that the policy of the new corporation will be welcomed by the intelligent buyer of automotive steels."

In telling of its policy, the new Atlas Corporation states that "Taking for granted the more usual guarantees of uniform chemical composition, and proper reduction in mill operation, the Corporation proposes to specialize on those finer points which spell service or rejection for the fabricated part. It is the custom of discriminating laboratories to follow the chemical analysis by a test for cleanliness and absence of slag or oxides.

"The Corporation's practice prevents the necessity of this test by the customer. Every single heat of steel, regardless of its nature, is tested under the microscope for cleanliness when made. Satisfactory standards of cleanliness are a requisite for shipment.

"Primarily also, careful attention is paid to the quality of the ingot from which the finished bar is to be made, its size and the temperature at which it was poured. Careful control also governs the temperatures at which the various mill operations are carried out, and the absence of seams or pipe is of course guaranteed."

PIERCE-ARROW CUTS DOWN LOSS IN THIRD QUARTER

Decrease in Costs Following Increased Orders Will Now Begin to Show

Pierce-Arrow Motor Car Co., Buffalo, N. Y., reports for the quarter ended September 30, with corresponding figures for the June 30 quarter in parentheses: operating income after expenses, $11,209 ($348,855); provision for taxes, etc., $351,178 ($360,621); deficit, $339,969 ($11,766). Deficit in the 1921 September quarter was $2,109,999. Net operating income for the nine months ended September 30 was $650,138; reserves for interest, taxes and other charges, $1,027,099; deficit, $376,961, as against a deficit of $4,000,051 for the same period last year.

After a meeting of the directors it was stated that a rumored plan of reorganization had not been discussed. A statement was issued to the effect that volume of orders since July 15 price reduction had permitted manufacturing on an enlarged scale and that resultant decrease in cost "will be apparent from this date." Difference between old and new prices on both factory and dealers' stocks has been absorbed in operations from July 1 to September 30, it was further stated.

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended October 31 are as follows:

	High	Low
Firestone	79	71
Fisher, Ohio	60	50
Fisher Body, Ohio, preferred	96	96
Goodyear	10¼	9
Grant	⅜	¼
Grant, preferred	5⅜	1½
Jordan, common	229	211
Jordan, preferred	85	80
Peerless	57¾	56½
Standard Parts	3¼	2½
Standard Parts, preferred	18	17
F. B. Stearns	22	21¼
Torbensen Axle	24⅜	22
W-S-M, common	35	33
W-S-M, preferred	65	60
Winton, preferred	30	30

Prices for rubber securities quoted in Akron during the week ended October 31 are as follows:

	High	Low
American R. & T., common	25	15
Amazon Rubber	5	5
Firestone, common	74	73
Firestone, 6% preferred	94	94
Firestone, 7% preferred	88	85¼
General Tire, common	300	250
General Tire, preferred	100	96
B. F. Goodrich, common	35	33½
B. F. Goodrich, preferred, 6½	102	101½
B. F. Goodrich, preferred, 7	85½	84
Goodyear, common	10	9¾
Goodyear, preferred	28	27
India, common	86	80
Marathon, common	2½	2
Mason, common	10	8½
Mason, preferred	52	50
Miller Rubber, common	75	70
Miller Rubber, preferred	100½	100
Mohawk Rubber	15	10
Mohawk Rubber, preferred	80	70

SHULER AXLE AGAIN IN ACTIVE OPERATION

Reorganization Completed with Ample Cash for Development—New Officials Adopt Aggressive Manufacturing Program—Factory Nearing Capacity.

With its reorganization and refinancing plans completed, providing ample cash for the continued growth and development of its activities, the Shuler Axle Co., Inc., Louisville, is again in operation. The official personnel has been rounded out by the appointment of W. E. Dugan as vice-president and general manager, and the reappointment of F. A. Shuler as director of engineering and manufacturing.

Dugan, formerly manager of the Cincinnati axle plant of the Standard Parts Co., and Shuler, for several years associated with the Timken organization, will have active charge of the manufacturing and sales policies of the Company. The factory is being rapidly placed in full production on a line of front axles for motor coaches, trucks, tractors and trailers.

A feature of the front axles built by the Company as its sole output, is the mechanism providing simultaneous breaking on all four wheels through the Shuler wheel brake. Patents on this device were granted during the past Summer, the Company states.

Stutz Capital Increased

Stockholders of the Stutz Motor Car Co. of America voted on November 1, to issue $1,500,000, 7½ per cent debenture bonds, maturing October 1, 1937. Holders are authorized to turn these bonds into stock at the rate of 33 shares for each bond held. It was also voted to increase the shares from 200,000, without par value, to 263,000.

Rolls-Royce Offers Bonds

Rolls-Royce Co. of America, through Aldred & Co., New York brokers, this week offered $2,000,000 15-year, seven per cent sinking fund gold bonds at 98 and accrued interest to yield 7.20 per cent. The Company is now running at capacity, it is reported, officials declaring it is possible, in view of orders and dealer reports, to increase output to more than 450 cars yearly. The concern now has three branch offices and thirteen dealerships and distributerships.

Yellow Cab Profits High

Yellow Cab Manufacturing Co. net profits for the three months ended September 30 were $819,626 after all taxes and employes participations. Net for the nine months was $2,102,978. The capacity of the cab factory is being increased 50 per cent while the general plant capacity is being expanded another 50 per cent in preparation for the manufacture of buses for the Chicago Motor Bus Co.

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HUGE SUMS INVOLVED IN RESEARCH TODAY

U. S. Finds $70,000,000 Spent Annually Saving $1,500,000,000—Trade Associations Urged to Participate—Will Strengthen Them, It Is Declared.

American industry, spending upwards of $70,000,000 annually in scientific research, is saving a billion and a half dollars every year thereby. Never before in the history of American business has the value of such activity in connection with efficient operation been so clearly demonstrated, according to the Department of Commerce, which provides the figures.

About one-half the $70,000,000 is spent in the conduct of laboratory research while the remainder is expended in experimental and development work in plants. Approximately 500 concerns now maintain these departments, which were an outgrowth of the wartime direction of thought. The Department, pointing out that among 500 or more firms, duplication might become an evil, urges that trade associations take up the work for each industry.

"This enables a pooling of resources to maintain a central laboratory," the Department explains, "to render service to a larger group than is possible with only individual laboratories. Another and very important factor, especially valuable in strengthening trade associations, is that such centralized research work makes it possible for the small manufacturer, financially unable to support an individual laboratory, to profit from the investigations carried on.

"It is not surprising, therefore, that a continually increasing number of trade associations are realizing the value of research as one of their most constructive activities. Of the 65 to 70 associations now engaged in this work to whom a recent inquiry was sent by the Fabricated Production Department, 33 gave specific replies, indicating that 8 were conducting their research independently, and 25 were acting in cooperation with some other agency. The general leaning is toward the scientific aspect of research work. Nineteen trade associations are so engaged.

Ford's Cut Sells Cars

First returns of actual sales of Ford dealers following the October 17, price reduction indicates an average increase of 500 cars daily, the Company finds. Daily receipts of orders at the Detroit plants, which averaged 5,200 before the reduction, now run at a rate of 5,700 daily.

FISH STORY

TWO years ago when a certain salesmanager accepted his position he took one look at the sales force, then went out and bought a bowl of gold fish so that he would have something alive near him.—*Harry T. Gardner, General Manager, Cincinnati Automobile Dealers' Assn.*

Hold Rickenbacker Rainbow Parade

Something new in automobile parades and an affair that attracted unusual attention was the event staged by the Leon T. Shettler Co., Rickenbacker distributer at Los Angeles, last week, when nine cars of that make, no two alike in color scheme drove through the business section, noisily tooting horns to notify the passersby of "Rickenbacker's Flying Circus," as it was styled. A splendid idea in advertising, the Company asserts that a good part of its sales of 245 cars in the last 183 days were due to the "Circus" which commemorated Capt. Eddie Rickenbacker's "Hat in the Ring" squadron of flyers during the war.

PACIFIC PORTS RATE CUTS AID SHIPPING

N. A. C. C. Figures Show Advantages of Export Through West Coast Points—Plan to Extend Application to Ports from Points East of Buffalo.

Efforts of the Traffic Committee of the National Automobile Chamber of Commerce for better exports rates have had material result on such costs as far as shipments to China, Japan, Manila, India, Australia and New Zealand through Pacific Coast ports is concerned. This was evidenced this week through the establishment of substantially reduced railroad shipping schedules as between these ports and middle western points and New York and Philadelphia.

Passenger automobiles, knocked down, and parts, boxed, now are given the rate of $2.50 per 100 pounds under a minimum of 16,000 pounds. The old rate was $3.65 with a minimum of 10,000, thus showing a saving of $1.15 aside from the advantages of the greater poundage. On automobile parts, exclusive of bodies, boxed, the rate is now $1.75 per hundred pounds with a minimum weight of 30,000. The old rate was $2.73 per 100, minimum weight the same.

These rates, as before stated, apply in the East only to New York and Philadelphia on the Southern Pacific and Mallory lines for the former and on the piers of the Southern Steamship Co. in the Quaker City. Negotiations are under way, however, looking to the application of these rates from points East of Buffalo. The rate of $2 per 100 pounds, minimum 20,000 pounds, is continued as applied to chassis, k. d., freight or passenger, and freight bodies, k. d., from all automobile manufacturing points to Pacific Coast ports.

Teach the Boy About Motors!

ONE of the most striking pleas brought before the conference of educators and highway engineers at Washington last week was that the public be taught how to use the roads properly. It is a novel thought, in a way, that a people using the automobile to a greater extent than any nation on earth do not know how to travel over the roads in such a way as to preserve them.

Throughout the Land, those whose business it is to build and maintain highways and the people who pay for the building and repairing are bitter in their denunciation of the way their work is prostituted by the passenger car and, particularly, the truck driver. It cannot be hoped that the rural population will cheerfully provide funds every year for the endless chain of repairs needful to maintain their arteries of traffic and transportation in good shape.

This is not merely a problem of the moment, but a perpetual problem. "Teach the Boy About Motors," and he will soon learn how vital is the up-keep of roads. If the rising generation is taught to properly estimate the capacities of the automotive vehicle—capacities as to performance and endurance and operation—it will know that constant overloading, constant straining of the mechanisms, constant careless driving is not good for the car or truck, and is bad for the owner and the public. A naturally acquired knowledge—and what more natural than a grammar school course in the study of the gasoline internal combustion engine—will breed care of the vehicle and care of the vehicle really means care of the roads.

AUTOMOBILE TOPICS urges the attention of the industry and the public at large be given to a fair proposition: The study of the internal combustion engine and its application to the automotive vehicle be made a part of the curricula of grammar schools—particularly for boy scholars. For that is

An Industrial and National Need

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EDUCATION OF PUBLIC NEEDED FOR HIGHWAYS

Conference at Washington Develops Lack of Wide-Spread Knowledge of Subject—Speakers Review Matters of Interest to the Automobile Industry.

"The time has come when the public support of good roads in this Country, the public faith in the good roads movement must be justified by the wide dissemination of information about the highway and its needs and service. The highways must have the intelligent support of a public that is informed as to the practicalities and economies of the good road."

This was one of the keynotes of the message Harvey S. Firestone, president of the concern bearing his name, sent to the Second National Conference on Education for Highway Engineering and Transport held under the auspices of the Highway Education Board at Washington, D. C., October 26, 27 and 28. The message touched upon the most stressed point brought before the five hundred educators and engineers who gathered at the New Willard hotel to hear what had been done, what was being done and what should be done for the cause of good roads in the United States.

Briefly summed up, those who spoke at the conference made it plain that a number of great tasks face the field. First among these is the ever prevalent need to educate the public as to the vital necessity for good roads, to the consequent spending of money to build and maintain them and to the proper way in which to use the highways. Second place might be expressed as the task of educating educators to the need of educating highway experts. In the third place comes the necessity of awakening the automobile manufacturers and industries to a realization that they must take a wider and more active interest in the good roads movement.

Of course, the technical side of road building and maintenance received detailed and lengthy consideration, of greatest interest to those who must undertake the construction of adequate highways. Elsewhere in this issue some of the outstanding addresses along these lines are discussed.

Members of the National Automobile Chamber of Commerce represented the trade at the conference. Those who spoke described what the industry offers in the way of positions and co-operation and these were not small. George M. Graham, of the Chandler Motor Car Co. struck a popular note when he declared: "For the sake of us all the highway must not be permitted to lag. It must keep pace with the school, so that the union of the two, both freed of politics and both intelligently administered, may render its priceless service to the nation. There can be no higher aspiration, no more dignified career, no better citizenship, no more practical patriotism than to strive for this result."

W. H. Lyford, vice-president of the Chicago & Eastern Illinois railroad, speaking on co-operation as contrasted to competition between motor truck and railroad transportation, reviewed the varied and numerous fields wherein the truck may operate in conjunction with other means of transportation with benefits, the "greatest" he called them, to itself and its associated industries. Concluding his remarks, he hinted at a matter of great interest to all concerned when he said:

"If, however, the trucker, first, would perform that part of transportation furnished by the railway at an operating loss and on which the trucker could make a reasonable profit; second, would cease to compete with the railway for the traffic which the railway can carry at a profit and on which the profit of the trucker is very doubtful; and third, would cooperate with the railway in handling traffic which requires transportation both by rail and highway; in other words, if the truck would supplement the railway service instead of competing with it, then it would be to the interest of the railway that the expenses of the trucker should be reduced to the lowest possible limit, and, in my judgment, the railway could well afford to pay substantial taxes for highway purposes and to make no objection to the free use of the highway by the trucker."

Taken all in all, the conference cleared the air. Seldom has any great question been so illuminatingly charted and those who attended found their time well spent indeed. While little in the way of definite action was taken outside of technical matters, the men who have the good roads movement most at heart were greatly encouraged in their work which, as many pointed out, is not as a profession adequate as to rewards of a monetary nature.

Dorris Names Two Executives

A. C. Behringer and Arthur S. Goodall have been appointed assistant sales manager and advertising manager, respectively, for the Dorris Motor Car Co. Behringer has been with the Dorris organization for more than two years as traffic manager. Goodall, formerly advertising manager of the Streckfus Steamboat Line, has been attached to the advertising and sales staffs of Dorris for a year and a half.

S. A. E. PRAISED FOR ITS WORK FOR PRODUCTION

Meeting at Detroit Featured By Address of du Pont—Struggles of Groups Termed Industry's Benefit, He Says—Others Speak of Many Problems.

By common consent the Society of Automotive Engineers has taken a wide and progressive step in advancing to a definite consideration of the problems of the production man. This was proved by the favorable reaction to last week's special session held for consideration of that subject in Detroit, October 26 and 27.

The meeting reached its high point at the banquet Thursday night, when 500 men, including many of the industry's leaders listened to the utterances of such men as Pierre S. du Pont, president of the General Motors Corp., A. B. C. Hardy, president of the Olds Motor Works, whose remarks appear elsewhere in these columns; and others.

To the S. A. E. belongs the credit for having induced du Pont to make his first public appearance as a speaker before an audience composed exclusively of automobile men. He made an agreeable and convincing impression, leaving no doubt as to the earnestness and purpose with which he views the industry, nor the force of his personality.

"Great groups in the automobile industry are struggling against each other in only imagination," du Pont said. "In reality, we are all working together and what develops to benefit one of us benefits all of us.

"Present automobile engines, in the light of future developments, are very imperfect. Many changes will come as the industry grows. Thousands of uses to which the automobile engine may be put will be discovered by the next generation. The United States is practically the only Country in the world which uses automobiles to a large extent, and it has most of the automobiles. The rest of the world has most of the people and, when they begin to use the automobile as we have, a development will come which we cannot now appreciate."

Among others at the speakers' table were Henry M. Leland, W. L. Day, president of the General Motors Truck Co., C. S. Mott, vice-president of the General Motors Corp., and Herbert C. Alden, vice-president of the Timken-Detroit Axle Co., and presidential nominee for the S. A. E. in 1923. President B. B. Bachman of the Society welcomed the production men to the dinner and introduced Harold H. Emmons, who proved a forceful but kindly toastmaster.

Since only data furnished and checked by car makers is used, the Table on pages 1175-7 is official.

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McNAUGHTON BELIEVES TARIFF AIDS MOTORS

Elasticity of New Statutes His Point—Example to Foreign Countries Now Putting Higher Duties in Effect—Means of Forcing Fair Rates Abroad.

Lynn McNaughton, general sales manager of the Cadillac Motor Car Co., sees the new tariff, in so far as it affects the automotive world, as an outstanding accomplishment of the years in its tendency to stimulate American foreign trade. He bases his conclusion on the fact that the rate of 25 per cent is an example to fair-minded foreign governments which may be expected to now reduce their higher tariffs to conform to the American standard, and that the Presidential powers to raise the rate is a sort of whip whereby recalcitrant nations may be brought to terms.

"The automobile duty has been reduced to 25 per cent, but elastic powers are accorded the President. And, if conditions warrant, this could be increased by one-half, bringing it up to a maximum of 37½ per cent," explains McNaughton. "Thus the American manufacturers will be accorded an equality in foreign countries that will enable them to retain the dominant share of the world automotive trade.

"For instance, France, noting that duty on her cars has been reduced 25 per cent, will undoubtedly reduce her duty, which amounts to 45 per cent on American cars. Italy has been collecting 35 per cent plus a duty based on weight ranging from 60 to 120 liras per 100 kilos. There is no doubt lowering of the Italian duty will take place, once we take the initial step.

"If some manufacturing countries are unwilling to allow a duty as low as 25 per cent on American vehicles in return for an equally low rate on its automobiles brought into the United States, steps could be taken to have a higher rate, up to 37½ per cent, apply.

"Likewise the new arrangements will help our trading with colonies of foreign countries or non-industrial countries, since the President has been accorded powers to increase the duties by one-half on products from any country or sub-division thereof, that fails to afford fair treatment to American commerce. Thus, countries blocking our exports would be deprived of our trade and those favoring it would receive it.

"That is all the American manufacturer of automobiles wants—fair treatment from foreign countries. Once we get this, we will, as a nation, continue to supply more cars than any other nation to the whole world."

Paris to Have Motor "Trams"

Paris tramways are to be revolutionized by the introduction of a new car constructed on the principle of the automobile, which will be propelled on the tracks by electric power. The innovation will save 15,000 tons of coal yearly. The new car has been tried out successfully, the mechanism of propulsion, suspension and braking being said to be new in principle, providing a light-weight engine with a clutch.

Canadian Goodyear Prospers

Reorganization of the Goodyear Tire & Rubber Co. of Canada has proved successful beyond expectations of those concerned. Profits for the year ended September 30 last are estimated at close to a million dollars after depreciation and after providing a special reserve account of $400,000. Production is speeded up to meet demand, the plant working night and day.

Power Company Buys 22 Overlands

After severe and complete tests, the Southern California Edison Co., ordered a fleet of 22 Overland "lours" and is now operating them out of Los Angeles. The tests were designed to "wreck 'em if possible" the Willys Overland Co., reports.

TRADE OPPORTUNITIES IN SOUTH AFRICA IMPROVING

Number of Cars in Bond Reduced as Industries of Country Expand.

Motor trade in South Africa is at present in a very satisfactory position, the Department of Commerce reports. The trade is brisk in the main centers and even the agricultural sections are showing signs of improvement. The number of cars in bond has been so reduced that it no longer constitutes a menace to the trade, although a serious matter for the few firms in whose hands the remaining cars are concentrated. The general tendency toward lower prices that has prevailed in recent months has contributed substantially to the increase in sales while another important factor has been the lower cost of motoring.

Passenger car imports for the first half of 1922 were very good considering the general economic conditions that have prevailed since the first of the year. Whereas, in the whole year 1921, only 802 American passenger cars were imported, 854 were imported in the first six months of 1922, and 421 of them in May and June. Imports of Canadian cars in the first six months of this year were 959 compared with 1,010 in all of last year. Combining the two, we find that 94.03 per cent of the entire imports were of American origin as compared with 87 per cent in 1921.

Bosch Sale Inquiry Launched Again

The investigation, started several months ago by a Federal grand jury in Boston into the sale of former German-owned property of the Bosch Magneto Co. by Martin E. Kern, was re-launched this week by a special "war frauds" grand jury at Washington under the direction of the Department of Justice. The former investigation, it will be recalled, was dropped without any indictments being returned.

FOREIGN DEALERS ON MOON FACTORY VISIT

From England, Scandinavia and Mexico, They Report Sales in Advance of Last Year—Manufacturer Finds Business Abroad Now at Highest Point.

Distributers from England, Scandinavia and Mexico, visiting the factory of the Moon Motor Car Co. at St. Louis, this week, reported extraordinary demand for American automobiles in their respective territories. Reflecting these assertions is the experience of the Company which finds its business abroad greater now than at any time in its history with cars being shipped to practically every country in the world.

E. Bennett, managing director of Northwestern Motors, Ltd., Liverpool, sole commissionaires for Moon in the British Isles, declared business is "coming back strong" in his territories. He asserted that while the English have been hard hit by the war every Briton is striving to get back to normalcy and that the outlook is not so black as might be expected. The Moon will be exhibited at the Olympia Automobile Show in London the week of November 5.

Henry Malgren, controlling selling rights in Norway, Denmark and Sweden, also reported demand as high and asked for increased shipments, leaving instructions for 25 cars a month. Enrique Miranda, Moon dealer in Mexico City, drove a car back to the Mexican capital and ordered 35 monthly be sent him.

Cut Mexican Freight Rates

Freight rates from American border points to Mexico City have been cut from 39 per cent on first class to 16 per cent on twelfth class merchandise. The reductions were made to meet water competition from New York via Vera Cruz.

Sees Higher Prices Soon

George W. Booker, president of the F. B. Stearns Co., looks for higher prices for automobiles in the near future. He declares that all materials, with the exception of tires, cost more than they did 60 days ago and labor is 10 per cent higher.

McFarlan Builds Gold-Plated Car

Nine hundred and fifty-eight parts used in the construction of a special seven-passenger Knickerbocker cabriolet will be gold-plated for the owner whose order has been received by the McFarlan Motor Corp., Connersville, Ind. Such items as dash instruments, head-lamps, horn and other exposed parts ordinarily nickeled, will be given the 22 to 24 carat gold wash. The identity of the owner who is to pay $25,000 for his fancy, will not be revealed until the Chicago show when the car weighing 2½ tons, will be displayed in a specially constructed booth under guard.

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G. M. C. CREATES FOUR DIVISIONS OF SALES

Plan to Help Salesmen Includes Loose Materials, Bus, Highway Engineering and Statistics Departments — Selling Problems to Be Handled by Divisions.

As a means of increasing the cooperation between the factory and the dealer the General Motors Truck Co. has created four divisions under the sales department to assist truck salesmen in all sections of the Country. The four new divisions come directly under the supervision of the sales promotion manager and are, in turn, supervised by experts in truck statistics and sales.

The new divisions are the loose materials, bus, highway engineering and statistical. The loose materials division is that in which dealer and factory problems in the hauling of sand, gravel, ashes, garbage and any other article which can be dumped are worked out. The bus division is that where figures are prepared and problems worked out in the marketing of bus chassis for school work, interurban and city transportation.

The highway engineering division will work out demonstration problems and dealer's questions. A function of this department is to help the dealers and distributers in closing sales either through the use of literature or by personal factory representation. The statistical division will gather figures on motor truck registration and many other subjects of help to the dealers. The executives believe that with these divisions the organization will be equipped to handle almost any sales problem which may arise in any field.

Prest-O-Lite Offices Moved to Plant

Bringing sales, service and production into close relation at a central point, main offices of the Prest-O-Lite Co., Inc., were removed on October 28 to the Speedway plant at Indianapolis. This included all departments except the small tank sales division, which, however, after November 25, will also function at Indianapolis.

Dorris Truck Owners Parade

More than 50 Dorris trucks participated in a parade of St. Louis owners on October 28, which started at the factory in that city and proceeded through the business district. In a list of 24 makes of trucks used in St. Louis, Dorris ranks first as to number in use with 275, the Company asserts.

Vacuum Oil Warns Against Impostor

Through a letter broadcasted over the entire Country by the various Chambers of Commerce the Vacuum Oil Co. is issuing a warning against the operation of an individual who claims to represent that organization. This man is making fraudulent advances in offering Gargoyle Mobiloil far below the Company's lowest net price and in addition offers without charge a large electric sign, or some other advertising scheme. In each instance a check is demanded for a 10 per cent advance of the amount of the purchase.

To Film Continental Motors Plant

Department of Commerce men will make a moving picture film of the plant and operations of the Continental Motors Corp. Planned for distribution at the close of the year, the film is one of a series being put out by the Department, mention of which has been made in these columns at sundry times in the recent past.

MOON ORGANIZES DEALERS IN WESTERN TERRITORY

P. W. Wisdom Establishes Line-Up, Beginning in California

Determined to take advantage of what it believes to be a field for unprecedented sales, the Moon Motor Car Co. has despatched P. W. Wisdom, as western factory representative, to California to perfect a dealer organization throughout the West. Headquarters have been established in San Francisco and Wisdom already reports the granting of many dealerships in the northern part of that State.

"There is a keen demand for automobiles in California," Wisdom finds. "The demand for our cars has increased by leaps and bounds, especially the closed models. Farmers of this State are in better position to buy cars than ever before and are buying more of them now than they did a year ago. We look for an increased demand throughout the Fall and Winter with a record-breaking Spring trade."

Case Prices Marked Lower

Prices on Case model "X" closed cars and all types of model "W" have been reduced anywhere from $70 to $370. The new prices set by the J. I. Case Threshing Machine Co., Racine, Wis., compared with former lists are:

Body Type	Old	New	Change
Model "X"			
Roadster (3)	$1,750	$1,750	....
Touring (5)	1,790	1,790	....
Suburban coupe (4)	2,550	2,480	$70
Sedan (5)	2,690	2,575	115
Model "W"			
Sport (4)	$2,200	$1,950	$250
Touring (7)	2,250	1,990	260
Coupe (4)	2,850	2,480	370
Sedan (7)	3,250	2,975	275

Ancient Cadillac a Traveller

After completing a 783-mile trip from Detroit to the East under its own power, a Cadillac curved-dash, chain-drive, motor-amidships car, built 20 years ago, participated in a procession of 25 type "61" Cadillacs held in Philadelphia on October 23. The ancient car attracted considerable attention, particularly by reason of its rear-tonneau entrance. The Neel-Cadillac Co. reports the old car travels from 25 to 30 miles to the gallon.

OLDS CONVENTION ON SERVICE SUCCESSFUL

Seventy-Five Delegates Concentrate on Problems with Good Results — Urge Factory to Make Event Annual—Addressed by Plant and G.M.C. Officials.

Owner satisfaction and how to establish it in the highest state was the keynote of the several discussions entered into by the service managers of the Oldsmobile organization at their convention held at the factory at Lansing recently. More than 75 service and parts men representing Oldsmobile distributing organizations in United States, Canada and from the General Motors Export Company were present at the session.

Carefully prepared service plans and methods of rendering economic service to owners were discussed at meetings held under the direction of R. M. Hatfield, general service manager. The convention was conducted on a strictly business basis and delegates were kept busy during their entire stay. At the close the delegates presented a resolution asking that the service convention be made an annual event. The program also included discussions and lectures on the servicing of the Oldsmobile "Four" and "Light Eight" models as well as past models, service tools, flat rate service, stocking of parts and parts records, and other important problems.

A. B. C. Hardy, president and general manager, appeared before the convention several times and in his speeches impressed the delegates with the importance of their part in the automotive industry and in automobile merchandising. Hardy sees the railroads as a permanent part in the nation's transportation system but is convinced that the automobile will experience a greater growth in the next decade than steam transportation. G. H. Peasley, general sales manager, and Thomas O'Brien, assistant sales manager, spoke on the important relation of service to sales and stated that good service, well rendered, is a stimulant of sales.

C. F. Kettering, president of the General Motors Research Corporation, pointed out that great progress could be expected in the design of motor cars during the next five years when discoveries and inventions will be made that will revolutionize fuel and lubrication problems. The gist of his remarks was presented in AUTOMOBILE TOPICS under date of October 28.

Pioneer Opens Used Car Branch

Pioneer Motor Co., San Francisco automobile merchants handling the Peerless line, reports opening of a salesroom exclusively for used cars. Large sales of the new models Peerless cars is held responsible for the rapid expansion of the business. The new addition to the "row" will be in charge of Edward Burke. The factory policy of rehabilitating and guaranteeing all of its used cars will be maintained.

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EUROPE BATTLES WITH U. S. IN LATIN LANDS

South America Scene of Strenuous Fight for Automobile Trade Supremacy—Monopoly of America in Danger—May Retain Virtual Monopoly.

South America is becoming a veritable battlefield whereon automobile manufacturers of Europe and America are staging intensive sales campaigns, the former seeking to wrest what is virtually a monopoly away from the latter. The outcome of the strife, which is reported by the Department of Commerce this week, will decide which nation or nations is to get the bulk of South American automobile trade in the future.

The United States has become the big salesman of cars in its Latin American neighboring countries since the war when European States were unable to compete. Now vigorous steps are being taken by Europe to regain her lost prestige.

Department officials are concerned over what effect the new tariff will have on the situation. South America is the land of promise for the automotive exporter, it is pointed out, and an enormous demand must be satisfied. Statistics show that in Brazil the 25,000 motor vehicles registered are mostly American with competition steadily increasing. In Argentine, competition doubled last year when it was found 36,415 cars were American out of a 50,000 registration. So also is the case in Chile, with 10,000 cars, Peru with 2,565, Venezuela with 3,000, Uruguay with 12,050, Colombia with 2,000, and Costa Rica with 245. In each of these lands American machines are by far in the majority.

The greatest demand seems to be for small, moderately priced cars. Americans therefore have the great advantage because the industry is so immeasurably better developed here. Germany, Great Britain, France and Spain are the principal competitors in the order named. It is asserted by Department of Commerce representatives in South America that the Europeans now have the ascendency though Americans can still maintain place if properly gauging their efforts.

Mitchell (S. D.) Dealers Join Hands

Dealers in automobiles and accessories, owners of garages and battery and tire repair stations and others connected with the automotive business in Mitchell, S. D., have formed a local unit of the Automotive Trades Assn. of South Dakota. The State organization is under the direction of Fred J. Grace at Wessington Springs.

Tennessee Studies Bus-Truck Rules

As the result of recommendations of J. H. Corbitt, secretary of the Tennessee Public Utilities Commission, that body may soon denominate buses and trucks as common carriers. Corbitt, who studied the situation as relating to his State thoroughly, made the suggestion, believing that such vehicles should be made to comply with State statutes governing other common carriers.

Cincinnati Used Car Show Effective

One hundred and eleven used cars, the majority open models, were disposed of by Cincinnati dealers during the open-air used-car show held recently in that city. The statistics are as follows:

	Open Models	Closed Models	Total
Total sold.....	90	21	111
Cash value.....	$53,361	$18,035	$71,395
No. traded in.....	32	5	37
Cash value.....	$8,670	$1,940	$10,610

Costs of operating were placed at six per cent. It was decided to shorten the exhibition to ten days, use more advertising and call the affair a "Sale" instead of a show.

Charlotte to Hold Show

February 5 to 10 are the dates set by the Charlotte (N. C.) Automotive Trade Assn. for the first annual automobile show to be held in that city. President Lane Etheridge of the Association is in charge of the preparations.

AIDS TO SALES ABROAD

Surveying the markets for automotive products in foreign fields, the Department of Commerce this week points to the reports listed below. Culled from the findings of the Department representatives in many lands, the information here is passed on as particularly interesting to those of the American industry who bid for sales abroad. The following thus summarizes the situation:

Cuba—Motor vehicles with short wheel base much preferred in Havana, owing to narrowness of streets. Cars with wheel base of 140 inches can not be operated in some financial sections of city. Quick starting ability important feature, owing to congested traffic. For this reason taxicabs still use gasoline, although it sells at about 37 cents per gallon, as compared with 18 to 19 cents for alcohol.

France—Manufacturers putting on market cars which sell from 14,000 to 20,000 francs. Are widely advertised and very well known, and while American made cars selling for similar prices outclass French in appearance and performance, in Calais district dealers feel greatly handicapped in introducing unknown, unadvertised American car. If possible, liberal terms should be granted, allowing sufficient time to demonstrate car and advertise thoroughly.

Canada—Sales of motor vehicles in district of Fort William and Port Arthur, Ont., exceptionally brisk during past Spring and Summer. Most cars of American manufacture and distribution affected through eastern Canadian representative. Sales stimulated by deferred payment plan, but many cars turned back to dealers. Number expected to increase with approach of Winter. Of 57,503 motor car licenses issued in Quebec since April 1, 1922, 20,085 are in Montreal while only 2,745 registered in Quebec.

Great Britain—Recent reduction of five pence per gallon in price of petrol to the dealer and five and one-half pence to the consumer, caused considerable stir. Expected demand will increase accordingly.

Mexico—Although only about twenty motor vehicles at present in Guerrero, estimated at least one thousand motor cars will be purchased almost immediately upon completion of various Government roads already surveyed and partially constructed.

Belgium—Use of motor trucks becoming more general as result of number of used trucks put on market after war. Fully 80 per cent of those now in use from this source. Considerable traffic between various towns and sale of war trucks greatly increased popularity. Not particularly good market for new trucks, but within year or six months, users educated to trucks will have to buy new ones. Trucks for use on roads must be strong, capable of carrying heavy loads.

NOTED FOREIGN CARS TO SHOW AT SALONS

Voisin to Make Initial Appearance While Bouton and Hispano Suiza Return—Seven Europeans to Exhibit at New York and Chicago Displays.

Eight nations will display their wares at the New York and Chicago Automobile Salons. To the four foreign manufacturers whose participation had already been promised, three were added this week, the Voisin, which on this occasion makes its initial appearance at these events; the De Dion Bouton, which returns after an absence of six years, and the Hispano Suiza, which made its debut at these shows last year.

The countries which will send their best to the American salons are England, France, Belgium, Italy, Spain, Germany and Austria. The American cars listed for exhibition are the Brewster, Cunningham, Daniels, Cadillac, LaFayette, Lincoln, Locomobile, Marmon, McFarlan, Packard, Peerless and Winton. Body builders planning special exhibits are Brewster, Brooks, Ostruk, DeCausse, Demarest, Fleetwood, Healey, Holbrook, J. B. Judkins, LeBaron, Locke and Rubay.

The De Dion Bouton and Voisin are being imported for the occasion by John H. Stelling, who will soon re-establish on New York's automobile "row." A four- and a six-cylinder model of the Hispano Suiza are being imported by the recently organized Hispano-Suiza Motors, Inc., of which A. B. Caragol, a prominent importer, is president, and Alfred E. Manning, sales director.

Indianapolis to Stage Closed Car Show

Twenty-three local dealers have reserved space at the first Annual Closed Car Show of the Indianapolis Automobile Trade Assn., to be held the week of November 6. Staged at the Cadle Tabernacle, the exhibition will feature the new models of the various manufacturers.

Form Minneapolis Organization

Organization was approved, a constitution adopted and officers elected of the Allied Automotive Industries, an association of about 300 men from all branches of the trade, at the initial meeting in Minneapolis last week. The organization is designed not only to serve the industry it represents but to take an active part in civic betterment, as evidence of which its first endeavor will be to stir up interest and "get the people out" to the registration for voting in an election soon to be held in the Minnesota city. J. H. W. Mackie, general manager of the Payne Motor Co., was elected president and Walter Wilmot, of the Minneapolis Trade Assn. secretary.

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RISING RUBBER COSTS CAUSING NO ALARM

Big Operators Protected Six to Eight Months Ahead — Divergent Reasons Govern Current Purchases — Economies Affecting Manufacture.

Rising rubber prices and uncertainty over the outcome of the Stevenson plan for protecting the interests of the British plantation interests are producing no immediate worries for the larger tire and rubber producers in this Country, it was said this week. As a matter of fact, the big operators are themselves completely protected six to eight months ahead as far as supplies are concerned, consequently whatever concern is felt relates to the more distant future.

While there has been a large amount of buying for current requirements during the past few months, in which large as well as small tire producers have participated, it is explained that this has arisen from divergent reasons. The host of small tire builders who came into the business after the war have led a hand to mouth existence, having been forced to live by the expedient of turning their limited capital as rapidly as possible. This advantageous method of operation, coupled with the fact that dealers were in a mood to absorb almost unlimited quantities of tires, so long as they had no compunctions about cutting prices, made the newcomers' pathway seem smooth. In fact the freedom with which the trade took over the product made possible the seemingly anomalous result of apparent prosperity in the face of a declining commodity market.

With the older-established concerns, and especially the larger ones, on the other hand, current purchases were dictated by entirely different motives. Necessity compels the large operators to protect themselves far enough ahead so that marine disasters and contingencies on the other side of the world, as well as variables in local manufacturing conditions can cause no unforeseen interruptions. These same circumstances, however, force the larger buyers into long-term commitments, which leave them more or less independent of market fluctuations, save that when commodities are low they are accustomed to buy in the open market as much material as they can safely accumulate without crowding their inventories.

Thus while one group has been buying from both habit and necessity while rubber has been low, the other has been buying from economy, rather than necessity. Thus the sharp upturn in rubber while causing anxiety to one class of producers is a matter of more or less indifference to the other.

In some ways, therefore, it is felt that present conditions, which are the reverse of those prevailing during the past two or three years, may work to the disadvantage of the newer concerns, whose chief prospect for continued safety would lie in advancing prices for their products. Higher prices would, in fact, be indicated by the general trend of all business relations, and have been forecast in some quarters for tires.

Conditions affecting the larger concerns, however, in some ways are working against such a development. Their very independence of immediate market conditions is one of these. Another and more important one, however, is that these concerns are just beginning to realize the effects of operating economies which have been progressively effected during the past eighteen months. Conceived when the general outlook was far worse than it is today, the combined inertia and complexity of the big organization has deferred the realization of many projects for reducing costs. As these plans become effective, however, the standard companies are finding the manufacture of good tires at current prices a good deal more profitable than at one time would have been thought possible.

Ajax Rubber Issues Attractive Booklet

"The Road to Bigger Business" is the appealing title given an attractively executed booklet issued by the Ajax Rubber Co., Inc., for the benefit of tire dealers. The cover in itself indicates plainly where lies the road in question by showing the Ajax tread leading directly into the words that form the title. Inside are found sixteen pages in which are presented complete facts on every feature of the Company's activities.

CONNECTICUT IGNITION PATENTS AGAIN UPHELD

Telephone Company Given Injunction Against Illinois Corporation

In a suit brought by the Connecticut Telephone & Electric Co., of Meriden, Conn., the U. S. District Court at Chicago has granted an injunction against the Illinois Starter & Magneto Corp., restraining it from "selling, advertising or offering for sale parts intended as replacements" on Connecticut igniters. This covers breaker plates, breaker arms and springs therefor.

This suit marks another successful prosecution of patent infringement by the manufacturers of Connecticut ignition, undertaken in the interest of protecting the car user against substitutions. Several earlier actions to the same purpose, and with similar outcome, have been reported in these columns.

SEIBERLING PATENT DECISION REVIEWED

Lengthy and Involved Decision Upholds Appellant on Every Point—Bears on Appeal in Firestone Suit—Disclaimer an Important Consideration.

Perusal of the printed decision of the U. S. Circuit Court of Appeals for the Third Circuit, reversing the finding of the New Jersey District Court and upholding the patent infringement claim of Frank A. Seiberling against the John E. Thropp's Sons Co., emphasizes the sweeping importance of the patent involved. As recorded in these columns under date of October 28, the Court of Appeals held Seiberling's patent valid and infringed and directed an accounting.

The case involved letters patent 941,962 for a tire-making machine, granted November 30, 1909, upon the application of Will C. State, who subsequently assigned his interest to Seiberling. The present decision will have a bearing on the suit brought against the Firestone Company, decided in favor of the tire company in the court of appeals at Cincinnati and now pending on appeal.

Following a lengthy and involved review of the making of tires by hand and the process employed by the State machine, the Court states: "Seeing then, that State's contribution to the tire-making machine art was novel and useful, that it passed into general use and that its worth and the validity of his patent have been acquiesced in by large numbers of manufacturers in the automobile industry, who naturally would not pay tribute unless they were satisfied of the validity of his patent, we turn to the question whether such a meritorious patent is to be invalid as held by the Court below, on account of the disclaimer State filed after the decision in the Sixth Circuit. We cannot give the disclaimer that effect. . . ."

"Broadly speaking, the essence of State's invention consisted of the combination of a power-driven core, with spinning rolls mounted on a radial, moving support, the rolls being so laterally spring-pressed as to compel them to follow the lessening contour of the shoe down to the bead edge. The Court of Appeals of the Sixth Circuit had held that it was an aggregation to claim a tread roll in combination with the spinning rolls, and the disclaimer withdrew all claims embodying the tread roll. . . . All of these claims disappeared from the patent and are not involved in this case. . . . As to the claims which are here in suit and which embody the essential elements of State's disclosure, there was

(*Continued on page* 1142, *second column*)

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points appears on pages 1175-7 of this issue.

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FAGEOL SAFETY BUS SEEN IN THE EAST

New California Product Demonstrated to Government Officials and Traction Men—Parlor Car an Eye-Opener—Fleet of Sixteen Purchased in East.

Frank R. Fageol, president of the Fageol Motors Co., Oakland, Cal., is returning from an eastern trip in the interests of the Fageol safety coach, which is rapidly making a name for itself wherever it has been introduced. Fageol brought with him to the recent American Electric Railway convention one of the buses equipped with a parlor car body. Following the convention he made a tour of the eastern states over the road, going as far south as Washington, where the coach was exhibited at the automobile show, and later swinging up through New York and New England as far as Boston. Inquiries and orders flowed wherever he went.

The safety coach, as described in these columns June 10, 1922, is unique. It has 218-inch wheelbase and 70-inch tread and is powered by a 60-horsepower, four-cylinder special Hall-Scott engine. Due to the frame construction the bus has an absolutely flat floor only 20 inches above the ground. It is equipped with Gruss air springs.

Of unusual interest is a newly-developed application of the Westinghouse air brake. This system uses vapor compressed into a tank from one of the engine cylinders, which operates a diaphragm chamber to apply both outside and inside brakes to the rear wheels simultaneously. It is controlled by a pedal beside the accelerator, actuating an "automatic-lap" brake valve, which permits varying the pressure up or down, thus securing great flexibility in both application and release.

The parlor car proved an eye-opener to most of those who saw it. It differs from the standard safety bus in having eight individual wicker chairs with adjustable backs which are mounted on suction cups, which permit them to be moved about at will, but prevent them from sliding except when the vacuum under the cups is released. The seating is luxurious in the extreme, as is the entire interior, which, however, but for the seating, is identical with that of the 20-passenger inter-city type of bus, with which a number of western lines have already been equipped.

From the moment of his arrival in Chicago, where the demonstration coach was forthwith sold for delivery at the end of the trip to a prominent local traction man, Fageol's eastern tour provided a surprising demonstration of the receptiveness of the public in general and transportation experts in particular, toward the motor bus. Enjoying the advantage of special introductions in influential quarters, he showed the coach to prominent officials of the Government, including Secretary Hoover of the Department of Commerce, gave an impressive demonstration to members of the Interstate Commerce Commission and other prominent men in Washington, and there and at other points was almost constantly in conference with the heads of traction companies, railway officials and others.

The Fageol coaches have been in production only about six months, yet already some sixty of them are operating on lines on the coast and as far east as Denver. A fleet of 16 has been purchased by Stone & Webster for use in Everett, Mass., where they are to replace one-man trolley cars. One purpose of the New England trip was to show the car to the officials of the big street railway operating concern, who had never seen it, although their order was placed some weeks ago after a representative had been sent to California to study its operation there.

Two-Cent Fuel "Inventor" Convicted

Louis Enricht, 76-year-old inventor of Farmingdale, L. I., who attracted public attention several years ago by announcing the discovery of a 2-cent-a-gallon fuel and to whom Henry Ford gave a car with which to test out his "discovery," was convicted of larceny in a Long Island court on November 1. The indictment grew out of charges made by a garage owner that he had been led to invest $3,000 in the Enricht Peat Corp., on false representations by Enricht concerning making the fuel from peat.

SEIBERLING PATENT DECISION REVIEWED

(*Continued from page* 1141, *third column*)

no abandonment of them but simply an assertion of and emphasis upon those vital elements which we have indicated."

The decision then reads: "The question of infringement is confined to a narrow limit. The essential elements of State's machine are found in the defendant's machine. We have the rapid rotation of the core. We have the loose edges, stretched by the centrifugal force induced by rapid core rotation. We have a radially moving tool support, and those tools laterally power-pressed not by the spring of State's machine, but by a weight which functions in the same way to bring the spinning rolls into one continuous shifting play, and the whole machine devised to adapt and combine in the same mechanical way State disclosed, the use of spinning rolls, cooperating with centrifugal radial stretch of the fabric to produce the unitary machine-made product, which State first made possible in the art."

The importance of the disclaimer is indicated in the dissenting opinion handed down by Judge Davis. Solely because of the disclaimer which had been filed, he dissented, claiming "the disclaimer invalidates the patent and the decree dismissing the bill, in my opinion, should be affirmed."

DRIGGS TO PRODUCE ITS OWN TAXICABS

Ordnance Manufacturer Decides to Make and Sell Cabs for Own Account—Col. Garrison Heads Sales Company—Diamond Plans Remain Unchanged.

Driggs Ordnance & Mfg. Co. is to make and sell taxicabs on its own account. The decision is an outgrowth of negotiations whereby the concern was to build the new Diamond taxicab, as noted some weeks ago. Accordingly two new companies have been formed, closely allied with the Ordnance company, which is also manufacturer of the Driggs car.

As the line-up now stands, the Driggs Taxicab Corp. will build in the New Haven, Conn., plant of the Driggs Ordnance & Mfg. Co., the Driggs taxicab, which will be sold by the Driggs Taxicab Sales Co., Inc., New York. Plans of the Diamond taxicab company, behind which is the guiding hand of Nat Jacoby, president of the Black & White Cab Co., New York, are to be carried out as originally reported.

Directing the sales of the newly organized Driggs Taxicab Sales Co., Inc., and prominent in its organization, is Col. Elisha E. Garrison of the New York engineering and auditing firm of Garrison & Co. The Driggs cab is to have a power plant similar to that used in the car of that name and a special taxicab chassis. Cabs are expected through the plant in about three weeks.

In response to an inquiry regarding the present status of the Diamond taxicab plans, an authoritative source in close touch with that project gave AUTOMOBILE TOPICS the following statement: "The design of the taxicab which was to be adopted by the Diamond Cab Co. was decided upon two or three months ago—yes, even a year ago. The contract for manufacture of the cabs was allotted to two or three manufacturers, among them the Driggs Ordnance & Mfg. Co. That company proposed the adoption of a new Driggs engine which is claimed to give 30 miles to the gallon of gasoline.

"In respect to the adoption of this motor, some of the manufacturers were reluctant to use some other power plant. Apparently, then, seeing that their motor was not to be adopted at once, Driggs has decided to make its own taxicabs.

"Original plans of the Diamond company are merely held in abeyance, pending negotiations regarding the installation of the Driggs motor. So far as the Diamond taxicab plan is concerned, Diamond gave them the blue prints and plans and worked with them in building the Diamond cab—a pioneer in light weight cabs. Design and construction all started with Diamond."

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SALES REPORTS FROM WEST SHOW CONTRAST

Dealers in Different Sections Find Business "Spotty"—Used Car Market Generally Heavy—Higher Priced Products Move Rapidly in Some Localities.

Conditions in the retail automobile trade through the States of Ohio, Indiana, Kentucky, Illinois and Michigan, are showing marked contrasts in volume of business done and stocks on hand, according to this week's reports from dealers and distributers to AUTOMOBILE TOPICS. The general status of the trade seems to be a good present turnover and bright prospects for the late Fall and Winter sales periods.

"People seem to be buying more cars than ever," is the way the Premier Motor Sales Co., Premier distributer at Cincinnati, characterizes the market there. "We exceeded our September business of 1921 by 200 per cent this year and September, 1922, compares very favorably with any that preceded it in the nine months' period. We have very few used cars on hand."

The Lathrop-McFarland Co., Indiana distributer of Oldsmobile and Cole at Indianapolis, on the other hand, finds September trade not so good and October "looking up for the first time this year, being fair." The outlook is very much more promising now than a year ago, the Company states, and an excellent business is seen for next Spring.

At Louisville, Ky., the United Motors Corp., distributer of Hupmobile and Wills Sainte Claire, finds the price cuts of September hurt business. Prior to that time business had been good though not up to that done in 1921 in August and September. Stocks of used cars in Louisville are higher than ever before in local automobile history, if the Company's review rightly shows conditions. Two used car dealers have gone out of business and a third is considering doing so, J. R. Boyd, president, asserts. But, he points out, the "used car situation has never been handled in a business-like way in Louisville and it simply compels the distributer who is selling automobiles as a high class merchandising proposition to stop trading and reduce his stock of used cars until such time as he reduces his investment in same."

Motch Motor Co., of Middlesboro, Ky., believes its sales in October will prove to have been much better than in September. Unsold car stocks are low and the present trade "good."

Louis Geyler Co., Stephens and Dort dealer at Chicago, finds the trend of trade "not encouraging for immediate results." Farmers are expected in the market in 1923, although they have not purchased many cars since 1920. Sales for September were less than 50 per cent of September, 1921. Used car stocks are normal but only so because the Company prefers to have new cars in stock "on which there is an opportunity to make some profit rather than used cars which we would have to sell at a loss."

Good present business and good prospects for the immediate future is the opinion expressed by the Jefferson Garage, Durant dealer at Peoria, Ill. At Grand Rapids, Mich., the Becker Auto Co., handling Cadillac and Studebaker, reports a "very decided falling off in this territory for medium and lower priced cars though business in the higher valued products is surprisingly good. The used car situation is the one hindrance to doing a more than normal business at this time, the Company thinks.

Automobile sales in Detroit are holding up remarkably well, asserts Williams & Hastings, Inc., Hupmobile. Business through the State has fallen off somewhat, however, due to early snow storms in the northern sections as well as "lack of aggressiveness on the part of the State dealer associations." Sales for October were 180 per cent better than in the same month last year. Used car sales are likewise high, having been better for this firm in October than in any month this year excepting May and June.

TOPICS' TOPICS

South African distills "motor spirit" from prickly pear juice, agriculture's pest growing wild, said to beat gasoline as automobile enlivener. Pshaw! American bootleggers sell something to make 'em run wild too.

* * *

Dane invents mechanism to turn motor cars into fire engines throwing 60-foot stream of water. Picture Henry, down on the farm, sawing wood with one hind wheel, running grindstone with other, mother boiling potatoes on engine, while baby sleeps in rocking front seat and dad irrigating from radiator! Happy days.

* * *

Wild press agent declares motor tourists nowadays "out-Lochinvar's old time rumatic heroes." There's poetry and truth for you!

* * *

New Yorker brings home French "tank-pleasure" car guaranteed to climb obstructions, go through snowdrifts, skate over ice and plow through sand at 10 miles the hour with five passengers; capable of 20 miles per hour on clear highway. Now bring on your detours!

New Home for Haynes in Indianapolis

Larger quarters have been obtained by the Sanders-Haynes Motor Co., Haynes distributer in Indianapolis at 1025 North Meridian street. Twenty-two thousand square feet are available for Haynes sales and service. The Company formerly was located at 538 North Meridian street.

May Stage Show At Greenville

Plans are being made to hold an automobile show at Greenville, N. C., this coming year. The Chamber of Commerce of that city has taken the matter under consideration.

QUAKER CITY TRADE AIDS SAFETY PLANS

Automobile Accessories Business Assn. Provides Novel "Stickers"—Arrow Reminds of Right of Way to "Right" Cars—Holds First Seasonal Meeting.

Boy Scouts were pressed into service by the Automobile Accessories Business Assn., Philadelphia, to distribute during the past week hundreds of red arrow "stickers" to owners, each arrow bearing the legend "Car to Right Has Right of Way." The novel device, reproduced herewith and de-



signed to be pasted on the windshield facing the driver, attracted wide attention, as was evidenced by communications received last week at the first meeting of the season held at the Hotel Lorraine. The activity of the Association materially helped the director of publicity of safety of the city, who is staging a particularly effective drive on accidents.

Nearly 400 members and guests attended the meeting, which was addressed by R. A. Stranahan, of the Champion Spark Plug Co., Toledo, and W. C. Hooker, of the Curtis Pneumatic Machinery Co., St. Louis, both members of the Automotive Equipment Assn. and active in that body's "Ask 'em to Buy" campaigns. Both spoke on matters pertaining to shop practice.

The nominating committee presented the names of those to be voted upon at the election in December. In addition to 15 named for the board of directors, Guy Lane was nominated for president, George S. Fischer vice-president, and N. A. Petry as secretary.

Cincinnati Dealers "At Home"

Cincinnati dealers, members of the local association, will hold an "at home" closed car week November 6 to 11, when displays will be staged in individual showrooms. A feature will be a "starting" ad covering the entire affair and individual advertisements daily thereafter.

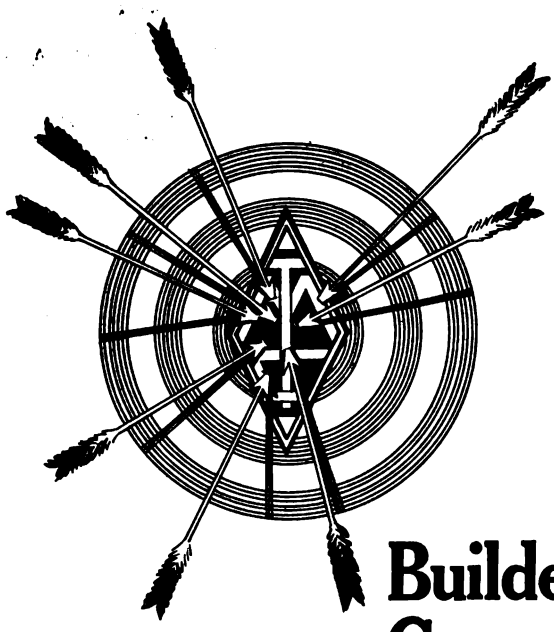
Want Capital Highway Extended

Directors of the Kansas Automobile Owners' Assn. have endorsed entension of the Capital route into a system of highways covering Kansas. A flock of ducks, symbolizing the route's following of the migratory air-lane of that bird, will be the sign. Plans to extend the highway into Mexico were also endorsed.

Atlantic City Joins N. M. A.

Atlantic City Automobile Assn. has voted to affiliate with the lately formed National Motorists' Assn. Edward L. Bader, mayor of the city, is president of the local Association.

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Builders of Better Bodies Concentrate in Ternstedt

In the building and selling of modern motor cars, bodies have attained a new and vital importance.

Better **bodies must, of necessity, be fitted with** ***better*** **body hardware.**

Which undoubtedly is the reason why so great a majority of representative body builders are now concentrating their body hardware purchases in Ternstedt ***proved-in-service*** **products; why so many more are contemplating doing likewise.**

TERNSTEDT MANUFACTURING COMPANY
6307 Fort Street West . . . Detroit, U. S. A.
Division of Fisher Body Corporation

TERNSTEDT
Largest Manufacturers of Automobile Body Hardware in the World

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

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C. D. WIGHT, Secretary

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For Service Rendered

Employes of the Southern Railroad who remained loyal during the recent strike are offered $350 cash or five shares of preferred stock, whichever they may choose, as a gift. Here is something for employers to think about, and employes too. The unpromised reward for loyalty has no strings attached to it, compromises neither giver nor receiver, has no bearing on the issues of the late dispute between the unions and the roads, even ignores the question of "seniority." Nevertheless, come another time of stress and its influence is bound to be felt.

Too Much Law

Always, the Country suffers from too much law. Reformers and people with axes to grind are forever making them, while a nervous public dodges this way and that, seeking to evade or obey as taste or conscience may dictate.

Where the uses of the automobile are concerned the danger of statutory excesses is aggravated by the advertising propensities of the subject. An epileptic fit is an incident apt to pass almost unnoticed; but an epileptic fit in an automobile is a catastrophe that may lead to the point where every motorist will be compelled by law to have an examination of his liver, or whatever the seat of epilepsy may be. Witness the Parisian doctor who wants every motorist examined physically.

There may come a time when only serious-minded and far-seeing lawmakers will find their way into the legislative halls. But until that time the motorists, and all who may guide or counsel, instruct or admonish him, should watch their several steps.

What's wanted is the rule of reason on the road. It will largely abolish the need for justice, since reason ever counsels justice and requires no enforcement. It will short-circuit many a needless statute, otherwise destined to be bred of prejudice, and sometimes of the thought of perquisite.

This is merely common sense, and it can be brought about by the better observance of the "common law" of the highway—the unwritten rules of the road—by courtesy and unflagging zeal in prosecuting habitual offenders, by the continual observance of the same decency in handling automobiles that is expected of the individual who enters an elevator or crosses a door mat. But if it be not brought about, ten, then twelve, then none knows how many millions of well-meaning and sometimes honest citizens must inevitably suffer the penalty of too much law.

Back Yards

If automobile dealer associations seek a direct avenue of trade betterment, let them inaugurate a regular clean-up campaign. The retailer's back yard has never been anything to boast of, but in recent years it seems to have accumulated a litter of disfigured and dismantled cars, bodies, tops, wings and chassis suggestive of nothing so much as the inept observation that "every Doctor has his boneyard." Dealers of the better sort no longer permit junk to accumulate; they feel, aside from the waste of it, that somehow the sight of it may count against them with their customers. Perhaps it does. Perhaps that is why some dealers house such accumulations in old barns, or up side streets, but even so, why perpetuate the clutter? A dirty back yard is always a decided disgrace.

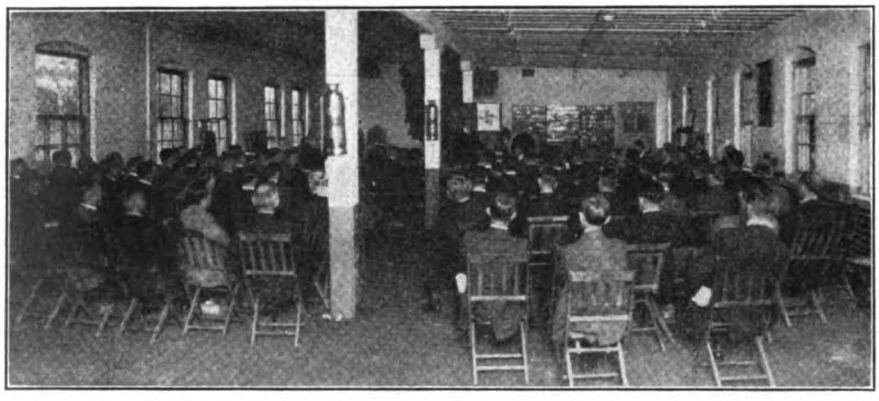
Disadvantages in Custom Cars

There are disadvantages, as well as advantages in owning custom-built motor cars, as the experienced user knows full well, and these are working constantly to the advantage of the factory-built car of high grade and exclusive design. It is conceded that the made-to-measure machine possesses, at least ostensibly, the distinction of being unique; yet the most successful models are always those that attain some vogue and may be even built in series. Over against this, however, is the fact that the automobile maker has no responsibility for the performance of the special body, such as he has for the body built either by himself or to his own specifications. Hence, if the inviting lines and lustrous finish are found to conceal poor workmanship, it is the owner who must treat with the haughty "carrossiere," always paying for his experience in good, cold cash. If rattles and squeaks annoy, doors fly open and windows jam, these are but arguments in favor of the standard car, which, though available to other buyers, has the great advantage that it is backed by service and underwritten by the producer.

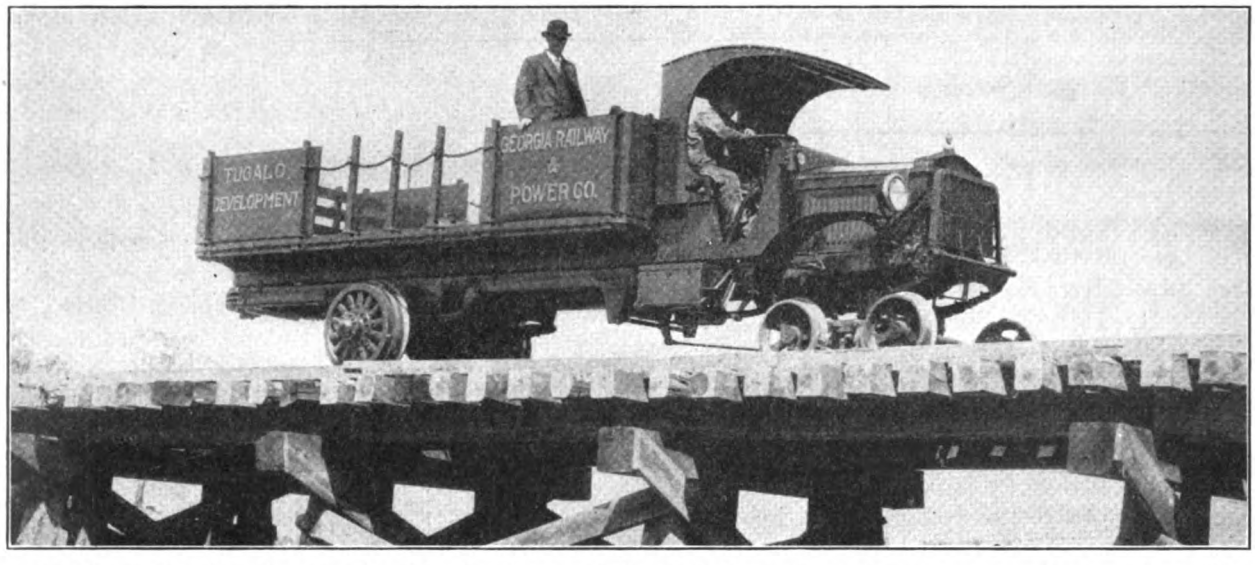
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Railroads Little Source of Worry to Automobiledom

Selden as Locomotive; Federal Dump Body; Buick Employs Truck



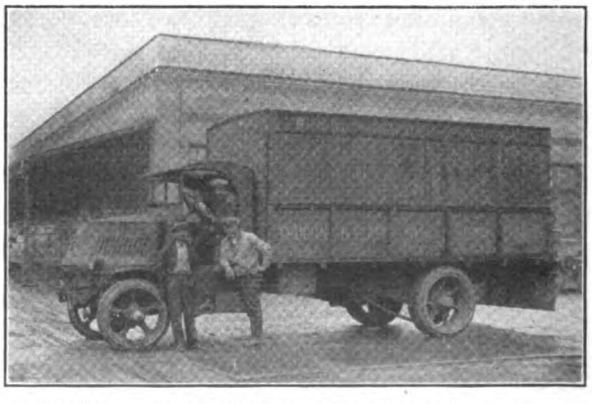
MORE than fifty service managers, representing Oldsmobile distributers from all sections of the Country, attended the company's annual convention. A special exhibit was staged to better explain the car's features. It consisted of a chassis, a cutaway light eight engine and a similar display in the four-cylinder model



A Selden railroad truck is employed by the Georgia Railroad & Power Co. in the construction of a huge dam. The truck pulls regular freight cars, flat cars equipped with seats to carry passengers and any freight to go to the dam



FEDERAL trucks, equipped with dump bodies, have proved very useful in the coal mining sections, as the product can be dumped directly into the rail cars



WHEN the Buick Motor Car Co. found the rail routes closed to a shipment of brass ordered from Bristol, Conn., a motor truck was hired to save the situation

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Highways—The Pressing Problem

Educators and Engineers, Convening at Washington, Discuss Their Profession—Popular Education Imperative

STARTLING facts and figures, surprising information, an opening vista of numerous knotty problems yet to be even attacked, disclosure of a widespread, though hitherto largely scattered interest in the roads movement, a heartening and growing cooperation in making American hitherto largely scattered interest in the roads movement, other educational and engineering realities were conveyed to those who attended what has been termed the most important event of its kind since roadways became a national affair, the Second National Conference on Education for Highway Engineering and Highway Transport, held under the auspices of the Highway Educational Board at Washington, D. C., October 26, 27 and 28.

Two pressing needs found expression in the utterances of those who addressed the five hundred leading educators and highway engineers who came as delegates from all quarters of the United States and from Canada and even from France and England. These were, briefly, the crying necessity to educate the public at large to an understanding of the real significance of road construction, maintenance and development and highway legislation, and, secondly, the dependence of the entire structure of future road systems on the ability to obtain trained highway engineers who are not only experts, but possess the "spark of divinity" making them research workers of real accomplishment.

These two factors drifted through the many discussions, reports, addresses and informal remarks that occupied the three days. It found early expression in the opening address of the congress when Maj.-Gen. Lansing H. Beach, chief of engineers of the War Department, discussing the essential nature of good roads in national defense, declared "the public must be educated to the need for good highways." Thomas H. MacDonald, chief of the Bureau of Public Roads of the Department of Agriculture, speaking later on the same day, with the subject of the field and the need for trained men, asserted: "We must awaken the public understanding to the real significance of highway legislation."

Arthur H. Blanchard, professor of highway engineering and highway transport at the University of Michigan, urged the spread of propaganda among potential users of trained highway workers that the former might be encouraged to undertake the study of their problems. A. J. Brosseau, of the Chamber of Commerce of the United States, discussing the highways from a financial standpoint, again sounded one of these keynotes when he declared the education of the public to the necessity of good roads, more of them and better ones, must include education as to the proper methods of financing. And so many others might be quoted.

The need for trained men was, naturally, the secondary, but, nevertheless, a vitally important problem to be presented. Perhaps the most illuminating remarks along this line were presented by MacDonald and C. C. Hanch, vice-president of the National Automobile Chamber of Commerce and vice-president of the Lexington Motor Company, although others stressed the point.

MacDonald's survey of the conditions obtaining in the field of highway engineering but demonstrates the inherent fault to be found with all poorly paid professions—the high-class men are wooed away by other industries, the sincere lover of his work is martyred and the inefficient, half-educated engineer-by-courtesy remains to muddle things. Industrial conditions affect the road building field immediately and ofttimes destructively, MacDonald pointed out. When times are good and employment ready, the best of the highway engineers are absorbed by other

WANTED—ROAD BUILDERS AND ENGINEERS

SINCE the days of the Romans nothing had been done to build highways scientifically, to improve man's transportation until a bare 120 years ago. Ages came and went, dynasties rose, flourished and fell. The Dark Ages, the Middle Ages, the Renaissance days, the budding of the Age of Machinery came, yet the Man of Galilee found transportation as far advanced as the Man of Valley Forge saw it in his day.

In the brief span of these 120 years since 1806, transportation has been born and has reached up into the sky-ways for room to grow. Thousands upon thousands of men living today remember the first automobiles. Thousands alive today helped build the first motor cars. So with the roads. Not even good enough for horse-back travel, they were inevitably subjected to improvement.

But the improvement has been hit-or-miss until very recent years. Only "lately" has the building and maintenance of roads reached the threshold of science. So it is no aspersion to speak of the new science of road building. And in the last week of the month just passed, when educators and highway engineers met in Washington to discuss their problems, the phases of the science yet to be viewed seemed many and varied. Many facts of universal interest—and they must be universal since no man in this Country but uses the roads—were unearthed from amidst academic forests.

The accompanying article outlines briefly some of these discussions. Perhaps the most characteristic feature, the most outstanding factor of the report is the specimen of educational shortsightedness revealed only indirectly. It was pointed out that a man studying for a profession can receive as a maximum, mind you, but 700 hours of the 6,800 he spends in four years of college, in the study of such subjects as highway engineering when he has the misfortune to have undertaken the university to become a professional engineer.

This is ridiculous. A man given 700 hours of classroom instruction in four years and then turned out as a highway or any other sort of engineer! Unless educators stop figuring out a man's destinies by means of that pernicious instrument, the "slide-rule" they will ever fail in their endeavors. A business man would laugh at the idea of giving an employe charge of any department, no matter how insignificant, who boasted of only 700 hours actual training. Yet colleges and college professors gravely lay down the law that a student seeking to become a highway engineer can have, at the outside, 700 hours instruction in four years in his chosen field!

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industries and the more public enterprises are left to rue their parsimonious policies. Only when industrial conditions are bad do the engineers turn to employment in public service.

Of course, none of this can reflect on the capable, conscientious man who sticks to poorly paid public service at very real cost to his own monetary affairs through admirable loyalty to an ideal. And their number is not small in the highway field.

What good are good roads without vehicles? What good are vehicles without good roads? And perhaps the second question of these two is more startling. As AUTOMOBILE TOPICS has stressed for years, as the far-seeing in the industry have preached for these many months, as the public, particularly the rural public, has known for decades—the best vehicle ever invented to move on land becomes a chariot of torture when the roads are unimproved and "natural."

A glance at comparative statistics is a revelation. There are 2,500,000 miles of rural highway in the United States. There are approximately 10,620,471 automobiles, passenger and commercial, in the Country. That means there is but little less than a quarter of a mile of road to every automobile. That means that every time an automobile travels 100 miles it would, in the light of averages, share the road with 400 other machines. Actually the state of affairs is much worse, since miles upon miles of the national roads lie in more or less deserted sections of the Country.

Again, MacDonald said, the investment in the automobile industry and in its products increased 1,800 per cent between 1910 and 1921. In the same period expenditures for roads increased 400 per cent! In 1918 the automotive world spent 1,100 per cent more than in 1910, roads meandered along with 125 per cent increase in expenditure, which means increase in facilities to care for the automobile production. Between 1918 and 1921 the automobiles' god-fathers decreed an increase of 700 per cent all around. The road builders had to be content with a growth of 280 per cent in expenditures.

$700,000,000 Spent on Roads in 1921

In 1921 $700,000,000 was spent on roads. In 1922 the sum will fall below this figure. Meanwhile the automobile business has reached a billion-dollar yearly basis.

There were 21 speeches made. There were reports of 11 educational committees heard. There were discussions of great length. Those who brought note books took them home filled with facts. And the results will be broadcast for the United States Government was there through its Department of Commerce, its Bureau of Public Roads, its Commissioner of Education, Dr. John J. Tigert; the War Department and its subsidiary, the air service, and the Department of Agriculture; the automobile industry was there in the persons of representatives from the National Automobile Chamber of Commerce; France was there in the person of Col. George A. L. Dumont, French Military Attache at Washington, who spoke; Canada was there in A. W. Campbell, commissioner of highways of the Dominion, who also addressed the delegates; the colleges were there and the railroads had sent W. H. Lyford, of the Chicago and Eastern Illinois, to speak clearly on the truck-rail controversy.

"Will the future offer an honorable, useful and remunerative calling to those who accept highway transport as a calling?" George M. Graham, of the Chandler Motor Car Company, asked the question in making a speech that was one of the highlights of the meeting. "Are we in time, or has the subject been already over-exploited?" he continued.

"None will deny that food, fuel, raw material, finished product and facile passenger communication are highly necessary and that whatever brings them to the people at lowest cost constitutes public service. If this be true, the case of highway transport is established.

"I doubt not that there will be ample rewards for trained men who can develop the highways so that they may take their proper share of distribution. Far from being over-exploited, highways transport is still an infant industry.

"In directing his attention to highways transport, the educator does not limit his scope. I should like to recommend six main types of men they must produce and there are highly remunerative opportunities for all."

Graham Lists Six Types of Men

The following is the list Graham presented:

Road builders, motor car producers, highway financiers, highway lawmakers, transportation analists and real estate experts. The program before the road builder is enormous, comprising as it does the planning of roads for 3,000,000 square miles of country, the expenditure of sums of money dwarfing the cost of the Panama Canal and the study of the technical side of road construction.

The military men on the program spoke of the need for better highways for their activities. Thus Maj.-Gen. Beach declared good roads essential to national defense.

The War Department, he declared, wants to see roads, good roads, connecting all centers of importance throughout the Country, in fact an ideal transcontinental route. It wishes to see all roads built in such manner as to adequately serve in times of war, as well as in peace movements.

It is argued, and was at the congress, that long-term bonds should be the medium of raising money for the roads, since the roads will serve the next generations, even down to the fourth, and they should pay for what they get from this day. Detractors, short-sighted and misleading in their handling of statistics, would claim that the rapidly growing automobile traffic wrecks roads before the next generation comes along and so should be paid for by short-term notes—by the present road users. Happily, this is not the fact today. Brosseau, one of several experts who spoke on the same subject, pointed out that nowadays only the surface of the roads wear away.

AUTOMOBILE TOPICS intends to review other phases of the conference at future times. The subject is broad and among the many authorities who addressed the crowd in the Fairfax room in the New Willard Hotel were voices of a prophetic nature. It will not be taken amiss, perhaps, to reiterate the outstanding conclusions reached by those present—though the conclusions were not formally expressed as such, but are rather the most stressed points in nearly all discussions.

Thus is it apparent that Uncle Sam must have trained men to build the road of the new era. The "white ribbons" must unite all the important centers of every community when the plan is completed. And, finally:

The automotive industry must help, for what good are roads without vehicles, but how immeasurably does the automobile and the truck lose value when the good road comes to an end in the mud and sharp stones that are mute translations of the immortal cry of France, "They shall not pass!"

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The Production Man Has His Problems

Controls 70 to 80 Per Cent of Plant as Well as Majority of Organization—Now Gaining Recognition

By A. B. C. HARDY, President and General Manager, Olds Motor Works

An address delivered before the Society of Automotive Engineers

IN getting at the production man and his place in our industry I believe it may be not only permissible, but illuminating to list in their natural order of operation the six main line divisions of automotive organization—at the plant.

Given an automobile company—a plant and management—come then:

1. Engineering (Designing—Experimenting).
2. Purchasing (Buying, releasing and follow-up).
3. Production (Manufacturing — inspecting — assembling — testing).
4. Selling (Advertising—Sales—Service).
5. Traffic (A double service—inbound to serve between Purchase and Production—Outbound to serve between the Sales Department and the Company's Distributer and Dealer customers).
6. Accounting (A multiple service—serving all of the other five departments as well as the stockholders and the management—estimates—costs, direct and overhead, accounts — credits, collections, disbursements, records of results, etc.).

The above six divisions of work with a reasonable amount of general management sandwiched in between, make up the average central operating organization.

One can not help but note that five of these six main divisions of the work are almost self defined by their titles. Engineering presents the design charted in blue prints backed by data and records of tests and opinions of other engineers, paints the picture and sells the picture to the "Old Man" or to the Committee or to the Board with enthusiastic assurance that it is so real a picture that the public can be depended upon to joyfully furnish the gold to frame it, and if the "Old Man"—be he 25 or 50 years of age—buys the picture. We all clearly vision just what Purchasing, Selling, Traffic and Accounting proceed to do as their part of the work.

But Production? Of course we can say "why, that is the manufacturing end of the business" and let it go at that—but it is a broad field and the outlines of its territory, its authority and its responsibilities are not so easily defined. We do note, however, that this production or manufacturing division of the work requires and occupies 80 to 90 per cent of the acres of land and 70 to 80 per cent of the acres of floor space which the sales and advertising department boasts of, and it requires and directs the work of 5, 10 or even 15 times the total number of people required by all the other divisions combined, and it requires and uses more kinds of people, that is, people in more kinds of trades and training than all the other five divisions combined.

And to head and direct and lead the leaders of the multiplicity of departments, trades and groups appears the Production Man, the "real" manufacturing man whose place in our industry we are discussing. Before attempting to define his status in the industry, let's see what the Production Man must know, or know about, at least in a general way, to qualify for his job.

He must above all be a good judge and a just judge of men, and a fair and square man himself. And he must be strong enough to play no favorites. Surely he must know the general labor conditions in the many subdivisions of his own industry, as well as in kindred or related industries, whether his factory be next door to the factory of its strongest competitor or hundreds of miles from it.

He must at all times know the basic rates and changing labor conditions in his own city—and the general sentiments of his city. He must know in a general way about day work, piece work and group bonus systems as he is the first man that we have to sell any new rating system to and he in turn must help sell it to his department heads and they in turn to their employes. And he must in a general way know the results expected from each one of these systems.

He must have at least general knowledge about plant layout and plant construction. He must know generally much more about machinery, plant equipment, electric equipment, power transmission, patterns, tools, jigs, dies, fixtures and supplies; about ovens and methods of heating by gas, electricity or oil burning. Oh! yes, he must know generally about electricity for power and light and about air compressors and air transmission, steam power and heating, steam fitting, plumbing and sanitation.

As to materials: He must know somewhat about the nature of castings, steel, grey iron, malleable, brass, bronze and aluminum alloys—from foundry into machined, finished and assembled parts; forgings and their machining; heat treating, hardening, grinding, etc. Sheet metals through deep drawing to stampings, and on through nickeled, painted or enameled finish. Woods of the various kinds and their working. Fabrics, carpet and leather

PRODUCERS HAVE MADE GOOD

WHATEVER may be said of other departments of the business of automobile manufacture, the highest tributes it is possible to pay to the production man are apt to fall short of the mark of his actual achievement. Yet, strange as it may seem, most of the credit which the industry has received has been lavished upon administrative officers of the more successful corporations, sales managers and engineers.

Hence a professional session of the Society of Automotive Engineers, devoted exclusively to production matters, rather than matters of design only, and introducing some of the questions that are of particular moment to productionists, is both a novelty and a logical departure. As a feature of this session, which was held in Detroit last week, the tribute of A. B. C. Hardy to the production man himself, occasioned wide comment and approbation

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through their various automobile uses. Paints and enamels and their processes and results.

Sub-assemblies, assemblies, finished units and complete car assemblies and tests. Inspections—Yes, endless inspections from the receiving doors on through to the finished automobiles.

He must respond in his work to the service information from the field. In addition to the above few things he must be the type of man who can steady and lead in a crisis—when comes a serious accident or fire or strike—and he must in some way keep in touch with and in sympathy with welfare work and the living conditions of the employes.

Is He a Super-Man?

Is this Production Man, who must know broadly about so many things, a super-man? Not at all—and fortunately for him and for the industry he has never been touted as such. And does he do it or even direct it alone? Not at all; no one accomplishes anything alone in our complicated and fast moving industry. The fact is that his specially trained assistants and department heads from plant engineer (who keeps the physical plant in sweet running condition) on through the divisions, to and through final car test and inspection—when his product is turned over to the Traffic Department ready to ship,—carry their share of the load and responsibility.

And the Production Man—their leader of today—if he be a wise man, is always on the lookout in his own plant and he also takes a side look into other plants—your plants—to seek out the production talent which is being developed to help him with the work in hand. By going around his job so as to look in at it from the human or employe angle, from the service or customer angle, from plant and machinery angles, from material and finished car angles, I wonder if we have not shown pretty clearly his status. And it is some status now.

For he uses most of the land, plant, machinery and equipment and constantly demands more, and that he be allowed to assist in its selection. He influences and controls most largely the hiring and firing—which means the pay rates or incomes and the working and living conditions of far the largest number of people on the job.

He and his department heads are the means of conveying to the workers the standards and character of the company. And the workers judge the company accordingly.

He and his department heads and inspectors affect, almost more than they realize, the future of the company and its success, by the manner in which they build, test and inspect every item in the car, and the finished car itself. As to his importance in the industry, he is not much concerned, for you and I and he happen to know to which department the head of the house or the committee or the board just naturally turns when there is a mess or a mix-up or a big job at hand.

Perhaps, he has been too backward in making himself known. But he has been too busy on the job—and besides the spot-light was busy elsewhere, turned first on the engineer or designer with the great idea, then on the promotion engineer, next on the commercial promoter, next on the star manager or sales campaigner, all of whom made good publicity during the rapid expansion of the industry.

But at length while the Production Man was being ground and polished through the mill, the real bosses of all our jobs, The Motor Using Public, began to control the spot-light and to throw it no longer upon individuals nor upon any one or few departments, but upon what we all as organizations did to them; upon our product, our car, and upon the organization behind that car, as a whole.

And our bosses who have found out that there are few mysteries and that personal names and reputations perform no miracles and make no cures, are going to hold this spot-light mercilessly upon us all; not as individuals, but as organizations and upon our product. If the question Production vs. Design as to importance to our industry were put up to us, I for one should have to vote for Production, because I have seen some poor designing turned into fairly good cars by production work and refining, and because those companies and cars which have had the best production or manufacturing attention are strongest and safest today. But I may be prejudiced.

But why raise such a question? It is too late. The public, our friends and customers are not interested in it. The public, our bosses, have come to realize that individual and independent transportation units which we together as organizations design, produce, sell and service, are the things most needed by them after food, clothing, fuel and housing—even more than the telephone.

Through the medium of the S. A. E. the designing engineers have been able for years to cooperate extensively, this cooperation augmented ten-fold by the necessities and pressure of the World War standardized many materials, parts and practices and many data, thereby simplifying construction and making vast savings to the industry, to its material suppliers and to car owners. Production engineers unfortunately have to date been denied the opportunity of cooperating with each other to any extent, because only the largest companies felt justified in training and maintaining all-round men, and most of the production engineers to date are trained only in very limited and specialized fields of work.

In addition, the automotive industry had been so grievously disappointed by the work of the early so-called efficiency and economy experts, and groups brought in from other industries that it has not looked with general favor upon production engineering until recently. However, dodging the word efficiency, which was in disrepute, practically every plant of any size today maintains a reasonable amount of production engineering as a Standards or Planning Department or Production Office.

The First National Production Meeting

But it is only today, when its commercial age is fully 21 years, that our own great automotive industry (making with the related industries of tires, parts and accessories, The Individual Transportation Industry—the largest combined industry in the world), is holding its First National Production Meeting. So our production engineers can take heart with renewed patience, and if the S. A. E. has not already done so, should not its logical expansion open a Section for Production Engineers and possibly for Plant Engineers?

Some of us have drawn engineering and production into closer and constant cooperation by a combined engineering and manufacturing committee consisting of general manager, assistant general manager, chief engineer and manufacturing manager. By calling into this meeting from time to time the sales or service manager or field service engineer or manufacturing department heads we may hope to stop the "passing of the buck" and to make our organization so closely woven a production fabric, that we shall all become real production men on the one job. And we know that along this way lies permanence and success.

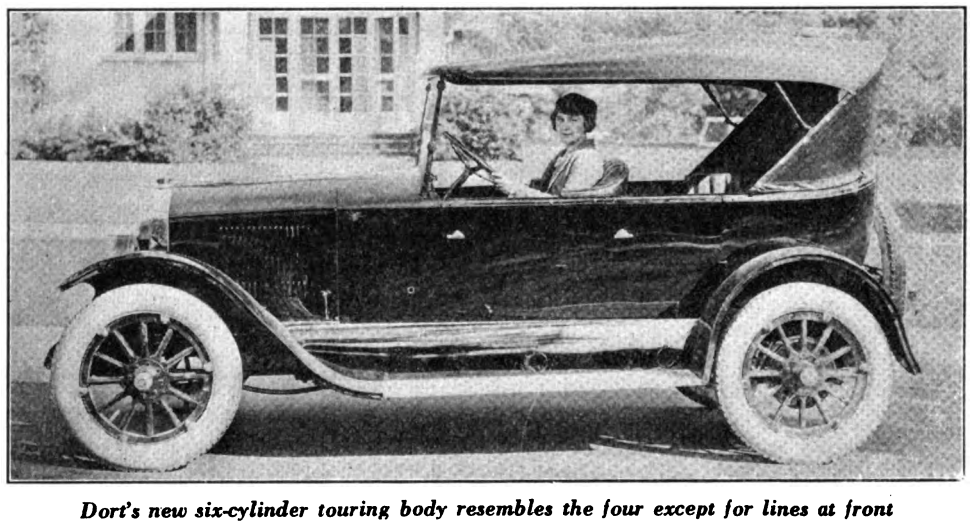
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Dort Branches Out into Light Six Field

Adds Six-Cylinder 115-Inch Wheelbase Series—Open Cars Listed at $990—Four-Cylinder Models Cut to $865

DORT is entering the light six field with the addition of a six-cylinder line to its present four-cylinder series. The six is a slightly longer car, has heavier chassis units and rounded nickeled radiator and rounded hood. In the touring and roadster models the six will sell for $990. With the introduction of the new series, the Dort Motor Car Company, Flint, Mich., has reduced all four-cylinder cars, the open models listing at $865 according to the new schedule.

Six bodies are included in the six line, corresponding to those of the present four-cylinder series. They are: five-passenger touring and three-passenger roadster, $990; two Yale closed models — three-passenger coupe at $1,145 and five-passenger sedan, $1,195; and also two Harvard closed cars — a coupe at $1,365, and sedan, $1,495. Both Harvard closed models are fitted with disc wheels, wood type being optional. Disc wheels may be had on any of the other six-cylinder and all four-cylinder types for $25 additional.



Dort's new six-cylinder touring body resembles the four except for lines at front

Four-cylinder models have been reduced from $15 to $25, the new list leaving a price differential of an even $125 between them and the corresponding body types of the six-cylinder series. In other words, the new four touring and roadster, prices effective November 1 are: $865; Yale coupe, $1,020; Yale sedan, $1,070; Harvard coupe, $1,240, and Harvard sedan, $1,370.

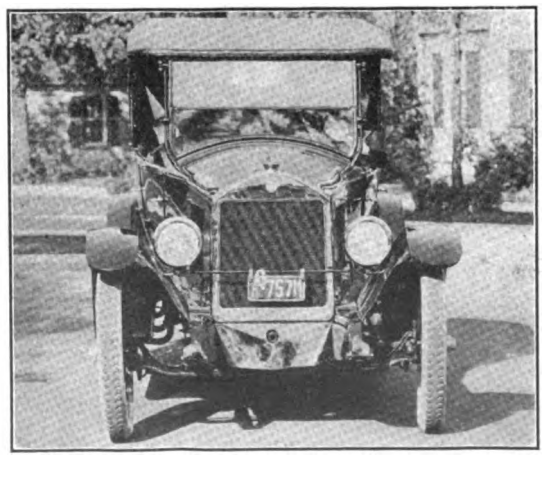
The radiator and hood top lines have been rounded off to conform with the new rounded effect adopted for the six. The four and six are distinguishable since the radiator of the latter is nickeled. Except for this difference, the six resembles the four in appearance throughout.

The six has a wheelbase of 115 inches as against 108 inches for the four. Its frame is 5 inches deep, of 5/32-inch channel steel. Other respects in which the six-cylinder chassis differs from the four are: clutch, a six-plate dry-disc type; transmission and universal joint heavier, differential and rear axle reinforced, and other parts carrying the additional stress of the larger engine made correspondingly larger.

The biggest selling point of the new series is, of course, the engine. This is an overhead valve type, 3⅛ x 4¼ inches, the six cylinders being cast in one block with removable head. It is said to develop 45 brake horsepower, give 24 miles to the gallon of fuel at 30 m. p. h., show two to 60 miles an hour on high gear, and a pick-up of 5 to 25 miles in 9 seconds.

Lubrication is by full-pressure system, regulated to load, to all bearings. There are direct leads to the valve mechanism. The pistons, cylinders and wrist pins are lubricated by the throw-off from crankshaft. Chassis parts are lubricated by the Alemite system. Engine cooling is by thermo-syphon.

Bosch ignition and lighting are employed. Clutch, as mentioned, is a multiple dry-disc type with six plates. Gearset is selective. Rear axle is a spiral bevel gear design with heavy differential. A Gilliam bearing is used at the base and Hyatt at the top of pinion shaft and in the rear wheels. Brakes are external contracting service and internal expanding emergency on 12-inch drums. Rear springs are cantilever, 50⅛ inches long; front springs are semi-elliptic, 37½ inches, bronze-bushed throughout, including shackle brackets.

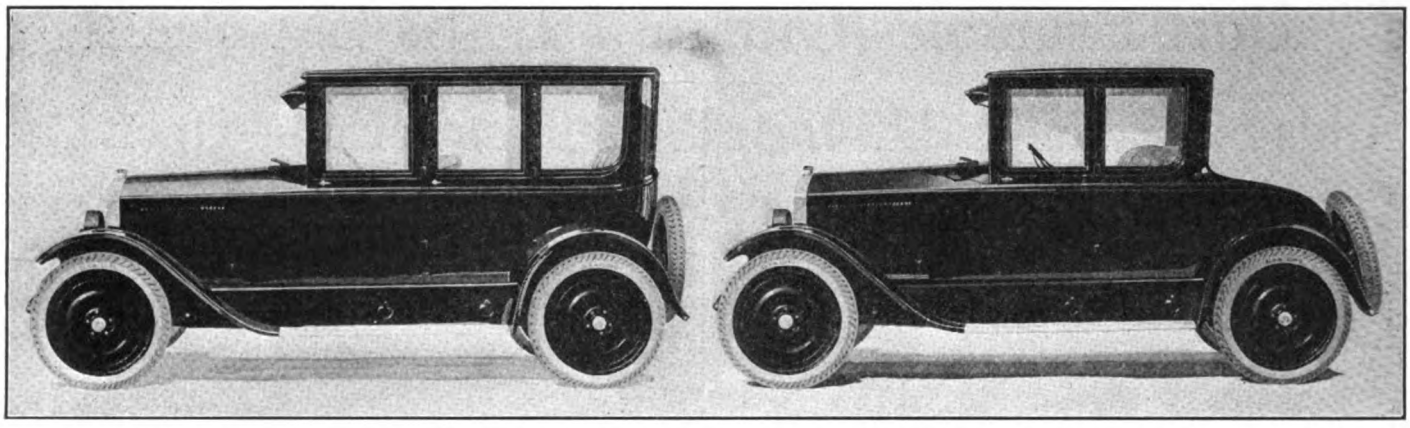


Nickeled radiator and hood have rounded lines

Equipment and finishing details include drum-type headlights, full-crown fenders, slanting windshield, cowl ventilator, foot rest, nickeled door handles, genuine leather upholstery, extra rim and carrier, 31 x 4 cord tires, non-skid all around; artillery type wheels with steel felloes. Heater, leather-covered visor and windshield cleaner are furnished on regular closed models.

Coming back to the engine, this

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Harvard sedan and coupe of Dort six series, priced at $1,495 and $1,365 respectively, carry disc wheels as regular equipment

presents some interesting details. Final finish on cylinder walls is put on by grinding, not by reaming. This leaves a highly glazed surface, which not only holds measurements to close limits, but furnishes artificially what is accomplished ordinarily by the first running of several hundred miles. This finish eliminates, therefore, the dangers sometimes resulting from the first driving by an inexperienced owner and reduces the first wear due to driveaways from the factory.

Pistons are of thin section cast iron, weighing only 19.5 ounces. Measurements are held within close limits of accuracy, not more than plus or minus .010 inch. When fitted in the cylinder a clearance of only .002 to .0015 is allowed. The piston has been made light by cutting down the amount of material used without lessening the thickness of the head. The skirt is kept very thin, resulting in keeping piston cool. Within the head are six radial ribs for strength. Before assembly in the engine all pistons are weighed and all six must be of equal weight within one-eighth ounce.

Piston pins are of chrome-nickel steel and taper-reamed on the inside, making them thinner at the ends without decreasing exterior diameter. The full thickness of the tube, however, is left at the middle when the greatest strain is exerted. Wrist pin ends work in bronze bushings, while the center is gripped by the connecting rod.

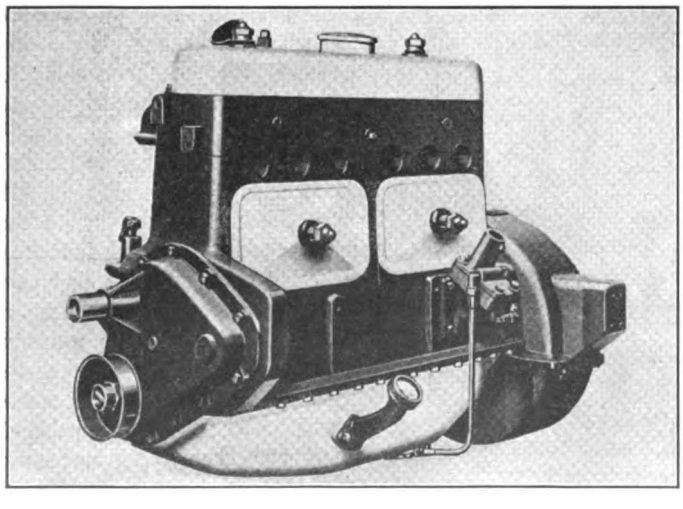
Piston rings are concentric type, three to each piston. They are one-eighth inch thick, this thinness cutting down weight and making rings seat more quickly.

Connecting rods are of "I"-beam section, 8⅛ inches long center to center, and weigh 2 pounds. Material is dropped forged from .35 carbon steel, heat treated. Not only are rods balanced against the others used in the same engine, but the heavy ends of the connecting rods are balanced, too, within the same one-eighth ounce limit. Rod bearings are 1.997 inches in diameter and 1.626 in length, steel-backed and babbitt-lined, the babbitt bonded to tin, and tin bonded to the steel. Surfaces of these bearings are unbroken; they are cylindrical surfaces of the floating type. In fitting they have a clearance of two- to three-thousandths, allowing for a film of oil which is forced from the interior of the drilled crankshaft.

Crankshaft is a three-bearing type, forged from .45 carbon steel, heat-treated and brought to a tensile strength of 110,000 pounds per square inch. Main bearings are bronze-backed and babbitt-lined, held in place by brass screws. Upper halves are counter-sunk in the upper half of crankcase. Front bearing is 2.19 inches long and 2 5/32 inches in diameter, middle bearing 2 x 2⅛ inches, and rear bearing 3 x 2 3/32 inches.

Cams are integral with the camshaft. Cams with a large base circle are employed to obtain a long, quieting curve which is material in keeping down noise in valve lifting. Operation of the cam is gradual and quiet, particularly because both cam and tappet are bathed in oil, which flows down the push rod from the rocker arm movement, on down through the hollow tappet, coming out the center of the mushroom and through a hole drilled for the purpose, spilling directly on the cam face. The three camshaft bearings differ in size, the front one being the largest.

Valve mechanism with its built-in pressure feed oiling is especially emphasized. The oiling method helps eliminate noise by cushioning contact surfaces with a film of oil. The push rod rests with a free end in the bottom of a tubular tappet, thus getting rid of side strain and consequently undue wear on the surface of the tappet, such as would



Dort's new six-cylinder power plant presents a clean-cut design

AS DORT LINES ARE NOW OFFERED

Body Type	Six-Cylinder	Four-Cylinder	Reduction on Four
Touring (5)	$ 990	$ 865	$20
Roadster (3)	990	865	20
Yale coupe (3)	1,145	1,020	25
Yale sedan (5)	1,195	1,070	25
Harvard coupe (3)	1,365	1,240	25
Harvard sedan (5)	1,495	1,370	15

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occur were the push rod solidly aligned with the tappet. Push rod is of 5/16 tubular carbon steel. Its lower end rests on a small floating block in the bottom of the tappet interior. This block prevents too great an amount of oil passing through and forces excess to overflow over the upper rim, bathing the glazed outer surface where it works in a guide.

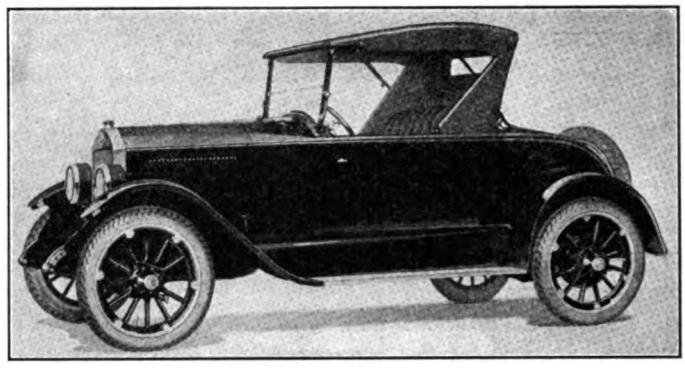
Top of push rod ends in a cup in which the ball end of the rocker arm operates. Oil flowing under pressure from the rocker arm shaft, through drilled rocker arms, comes out through a hole in the ball and into this cup. The ball, therefore, operates in a cupful of oil and a liberal film is always present to cushion the shock and reduce wear to a minimum.

The ball is adjustable from the top with a screw driver, and is held by a lock nut. Rocker arms, drop-forged, are mounted on the rocker arm shaft with bronze bushings which are slotted to pass oil from the shaft through the arm to the ball and cup.

Valves are tulip-shaped and said to be 15 per cent lighter than mushroom valves of the same diameter. Head of the valve is machined out to remove excess material. Under the head, the valve tapers more gradually to the stem diameter, this serving the purpose of not only strengthening but of giving gases an easy turn in or out of the cylinders.

Cooling of the engine is by thermo-syphon circulation through large water jackets. Radiator is a Fedders cellular type and fan is Automotive Parts belt-driven dynamically-balanced design.

Designer of the engine contends that oil pressure and supply should be based upon amount of torque being exerted rather than on engine speed. Accordingly, the oil supply is regulated in relation to the fuel supply, or in other words, the throttle opening. A geared pump is located on the outside of the crankcase on the same shaft with the distributer, both of which are operated from the timing gears. This pumps oil from a screen-enclosed well in the crankcase oil sump.



Three-passenger roadster of Dort six line is priced at $990

The oil column is forced through the center of the crankshaft. Another lead carries oil to each of the camshaft bearings and to the timing gears. Still another lead carries oil to the rocker arm shaft. Oil flows under pressure through this hollow shaft and through holes matched by corresponding openings in the rocker arm and its bushing.

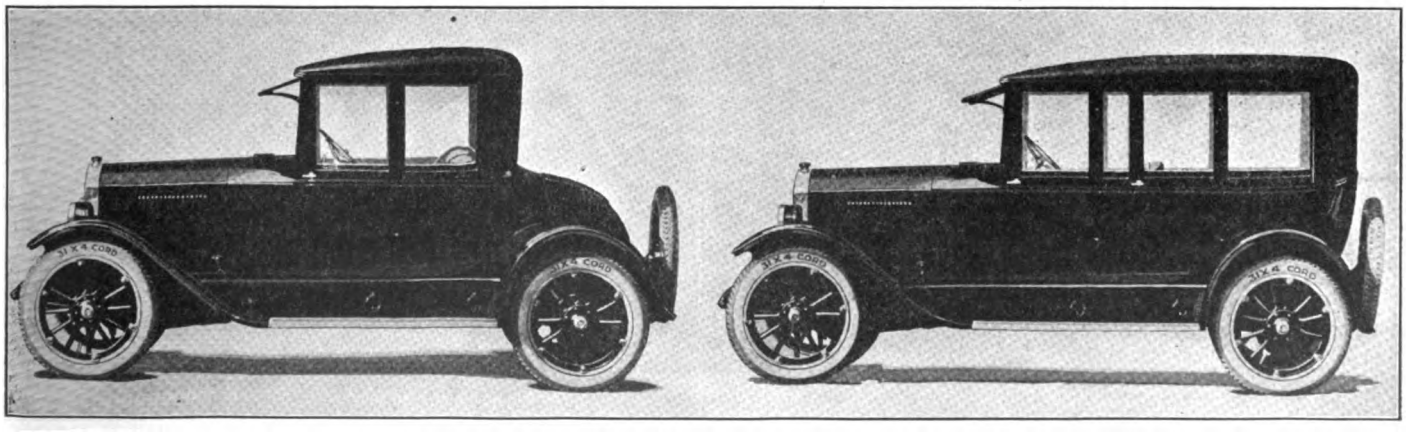
Oil passes through the rocker arm to the valve stem end on the one side and on the other to the ball end, which articulates after the manner of a ball and socket joint in the cup and the top end of the push rod. Part of the oil overflows the cup and runs down its side to the tubular tappet. Part flows through the drilled center of the tappet to where the lower end of the push rod sets in the bottom of the tappet as a pencil would set in an empty cartridge.

Oil coming down the push rod fills the tappet. This supply escapes in two ways; first, by overflowing and lubricating the tappet in its guide, and second, by passing through the hole in the bottom of the tappet through the mushroom base to directly lubricate the face of the cam. Oil then drops back into the crankcase.

The oil pressure ranges from zero to 40 pounds. Splash oiling is used only for the cylinder walls and piston wrist pin bearings. This part of the lubrication is supplied by throw-off from the lower ends of the connecting rods. This supply is so directed and regulated by the construction of the connecting rod and crankshaft that a perfect supply is obtained, it is claimed, without excess at all engine speeds. This oiling and the fact that cylinders are ground make scoring unlikely when car is driven new.

DORT SIX CHASSIS SPECIFICATIONS

Wheelbase—115 inches. Tires—31 x 4 non-skid cords.
Engine—6-cylinders en bloc, overhead valve, 3⅛ x 4¼, 45 brake h. p.
Engine lubrication—full pressure, regulated to engine load.
Ignition and lighting—Bosch. Carbureter—undecided.
Clutch—multiple dry disc type with six plates.
Gearset—selective type with annular ball bearings.
Rear axle—spiral bevel gear. Front—"I"-beam, irreversible steering.
Springs—rear, cantilever, 50⅛ inches; front, semi-elliptic 37½.
Frame—5 inches deep, 5/32 channel steel, with 3 cross members.

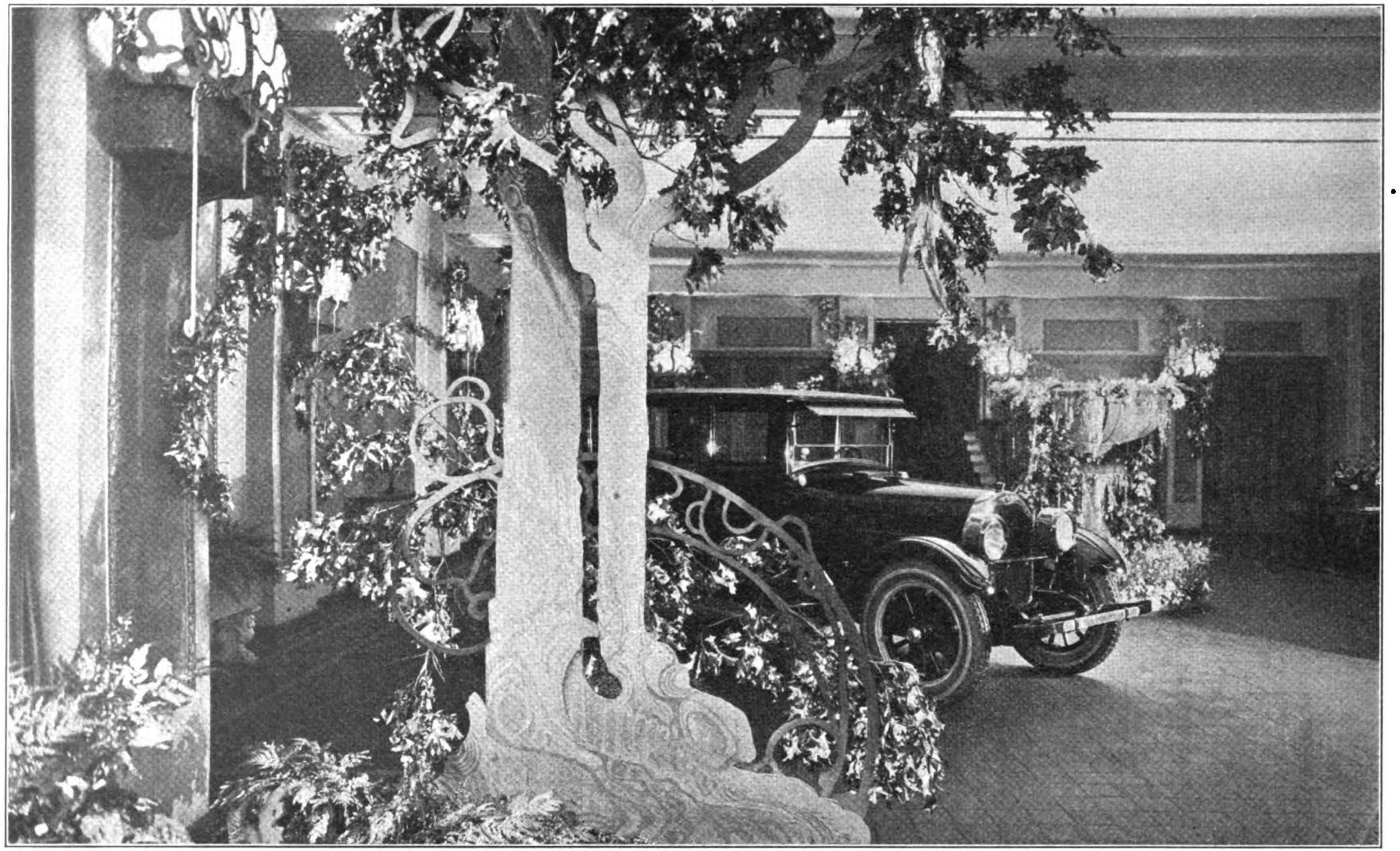


Lower-priced closed models are included in the six as in the four series, they being Yale coupe and sedan at $1,145 and $1,195

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Art and Nature Combine in Forming Gorgeous Setting for Peerless

Skill of Decorator Revealed to Advantage in Scenic Effect Staged in Chicago Salesroom



Special scenery was constructed for this display which attracted crowds of enthusiastic spectators to the Chicago branch of the Peerless Motor Car Co. during the week of the Chicago Closed Car Show. Opalescent colorings in the foliage used added to the effect of the decoration

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SELLING GOODS AT RETAIL

INACCURATE mailing lists are a liability rather than an asset. At least one large parts manufacturer realizes this and seeks to reduce such waste to a minimum by means of a postal card.

This acts as a check-up, through carrying with it a return card on which appears the addressee's complete name and address. He is requested to correct this if necessary and return.

It is an idea that the retailer might well consider seriously. For strange as it may seem, the average man is very partial to his own name, and remains singularly unresponsive when addressed by any other.

"ASK 'EM TO BUY FOR CHRISTMAS"

WITHIN a short time the usual seasonal slackening in repair work will become manifest. Many shops will lie idle or practically so until early Spring. But is this flow and ebb of business necessary? Is there not some way by which the car owner may be educated to the benefits to be derived from placing his work in the hands of the repairman when he is best able to give it careful attention?

In this connection attention is directed to the campaign inaugurated a year ago by the Automotive Service Association of Brooklyn.

Large display advertisements were placed in the local papers soliciting business during the dull season. Backing up this educational copy, folders were mailed.

And the car owner was willing to be shown. With the result that the seasonal slump was dispelled in good measure.

AS "SID" SNYDER SAYS

SOME folks work mighty hard to escape work. They'll rack their brains to find some way out of it, and walk miles to leave it behind. An' all the time they're workin' without knowin' it.

* * *

Used to be an old feller in the nut asylum 'round here who was set to pushin' a wheelbarrow. He was willin' to push so long as he could hold it upside down. One day someone asked him why he did it. "If I don't," he explained, "some guy'll fill it with bricks"

"ASK 'EM TO BUY FOR CHRISTMAS"

LOCATION contributes much to successful selling. The store that is now doing well on some side street will expand with far greater rapidity if moved over to Main street. In the same way, the store now doing nicely on Main street may enjoy still greater business if moved to some other spot on the same thoroughfare.

Particularly in the larger cities do the main arteries of trade change rapidly. And the merchant who is alive to the importance of occupying a strategic spot will watch carefully the business trend in his section.

Undoubtedly there is much truth in the familiar saying that the public will take the path through the woods to the door of the man who builds the best mouse traps. But there is this to be considered. How much more business that man would get were he to manufacture his mouse traps on Main street!

"ASK 'EM TO BUY FOR CHRISTMAS"

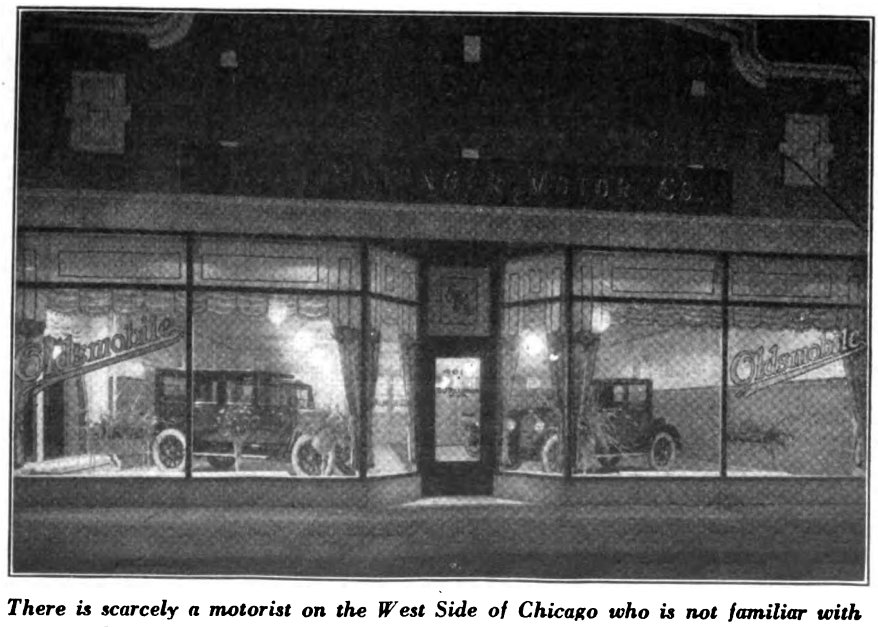
JUST a reminder. Thanksgiving Day is less than four weeks off.

There is no time to be lost, therefore, in making preparations for a suitable window exhibit, which will reveal the automobile amidst a harvest setting. Such a display can be disclosed to advantage at least two weeks preceding the holiday.

Many merchandisers in past years have made such a display an important factor in arousing interest in their enclosed models. Nor has it been accomplished at great expense.

As has been pointed out before, plenty of dead leaves as a floor covering, and a pumpkin or two placed about, with possibly bunches of corn stalks standing in the background, afford an effective setting. Now's the time to get busy!

One of Chicago's Oldsmobile Homes



There is scarcely a motorist on the West Side of Chicago who is not familiar with this attractive building occupied by the E. J. Pillinger Motor Co.

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One Way to Boost Tire Sales and Shop Work

"Let the Public Know What You've Got to Sell" Urges Indiana Dealer—Shows His Method of Going at It

CAN the automobile merchant build up his accessory department and shop so that in themselves they represent highly profitable organizations? If so, how?

Frederick D. Bethard, of the Bethard Auto Company, Dodge Brothers dealer in Richmond, Ind., has answered that question in such manner as to leave little doubt in the minds of those who have watched his progress. He has studied ways by which he might sell every branch of his work with just as much care as he has devoted to the merchandising of Dodge Brothers vehicles.



If he were to be asked how he had accomplished this, he would undoubtedly point to his series of advertisements which have appeared in the local papers. For, first of all, he emphasizes the need of letting the public in general know what you have to sell.

To show how Bethard has boosted tire sales during the past Summer, for example, it is necessary first to describe briefly some of the conditions under which he operates.

Richmond, it appears, is a city of less than 30,000 people, but it is overrun with tire dealers. To use Bethard's own words, "there are over fifty—nearly as many as grocers.

"Our tire business was almost nil," he states, "until we started our campaign on Michelins. Last month we sold $2,000 worth of tires."

And how has this record been accomplished? Bethard describes it as follows:

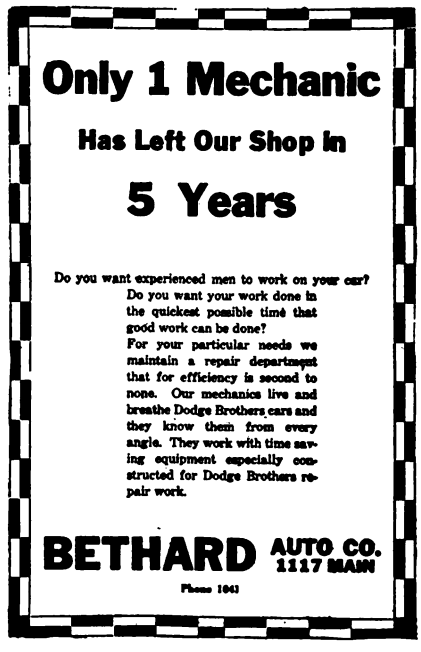
"The most valuable part of our campaign," he points out, "is a series of newspaper advertisements that we have been running. We run them three times a week. In addition to these we have sent out letters and inserts.

"We have one man out on tires. He is a good, live salesman, and is talking for the Bethard Auto Company whether he sells tires or not. He carries a satchel on which is painted the Michelin rubber man, and his cards carry the same picture. He has found, however, that his way is well paved for him by the advertising."

Each one of the Bethard advertisements has a distinctive touch which carries the message home at a glance. In the majority of these displays some heading is played up in big type to attract attention.

"Can You Talk When You Ring the Bell?" reads one. This is used as an introduction to the following printed matter, which is quoted in part, as typical of the copy that Bethard has found effective in stirring up business:

"Once a man didn't have a telephone, and his wife said: 'John, I won't stand this any longer; you've got to get a telephone in this house.' So John went to the telephone company and asked the price of the phone, and they told him $25. Well, he couldn't see that, so he went back



home, got out his catalogs and got a telephone for $15, and it came, and he put it up, and it looked nice. Next morning his wife rang the bell, but she couldn't get any answer. Why? *No Service!* 'Ownership without service is of no value.'

"The real motive of a purchase is not that of saving in 'Cost to Buy,' but in 'Cost to Use.' The buying cost merely gives you the ownership of the article—nothing more. The bell will ring, but you can't talk.

"'The quickest way to wreck the full value of a dollar is to buy something of inferior quality merely for the low price.' It is quality of service rendered that gives to a dollar its premium value—service makes dollars worth more than 100 cents, and the world's shrewdest buyers always figure cost from the standpoint of the value of service.

"Some people try to save money by buy-

WITHIN a fortnight, interest of the trade will be centered on Chicago, where, during the week of November 13, the Automotive Equipment Association, will hold its annual meeting and show.

For the benefit of those who are unable to attend, and also as a guide for those planning to be present, AUTOMOBILE TOPICS in its issue of November 11 will devote a special section to seasonal goods and staple devices that are to be introduced and sold through jobbing channels during the coming season. This will serve as a valuable forecast of an annual event which looms large in the trade's activities

"ASK 'EM TO BUY FOR CHRISTMAS"

"ASK 'EM TO BUY FOR CHRISTMAS"

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ing 'cheap' tires. What is the usual result? They buy two or three tires instead of one. In the end their outlay amounts to probably double what it would have been had they bought Michelin tires in the first place. They need the best, but buy the cheapest."

Still another of these displays, five of which are here reproduced, bears the following heading: "Men Mussed Their Hair for 1900 Years." Then follows in smaller type the explanation, "before one of them discovered he could button his shirt all the way down the front.

"That was just a little thing, but listen—Tires have been pinching tubes for twenty years. Michelin has discovered a way to stop it, and has built it into every Michelin tire today. Is that worth while?

"Ask us—we'll show you, and several other little secrets about Michelin tires and tubes that make them supreme. (Michelin tubes are ring-shaped, you know.) Better investigate."

As for the matter of layout a general idea of how this copy is set up to attract attention may be obtained by studying the examples here shown. As has been pointed out before, a head is employed in each instance to catch the eye and arouse the curiosity so that the reader will read on and see what it's all about.

Undoubtedly it is this characteristic about the Bethard displays that has been responsible for their success. For the chances are there are few readers who could resist the temptation to read on after catching a glimpse of such headings as "Men Mussed Their Hair for 1900 Years" and "Can You Talk When You Ring the Bell?"

Analyzing the layout still further, it will be noticed that each head is followed by some sort of explanation in smaller type. In one of the displays shown at the bottom of this page the explanation takes the form of an illustration.

In several of the advertisements space is allowed for listing prices. In each instance the name of the Company appears in large type at the bottom.

The same informal tone that adds interest to the tire advertising of the Bethard company is also used to advantage in selling the service which the Company's shop offers.

One of these, which is illustrated on the preceding page, plays up a popular member of the organization. Personalities always awaken interest, and referring to the car washer as an old friend serves to create a feeling of good-will, in addition to stimulating a desire on the part of the car owner to make the acquaintance of this man who has established such a reputation for good work.



"We mention Steve," the copy reads, "because he is the best car washer in the world. He has operated our wash-stand for ten years.

"Did you ever try him?

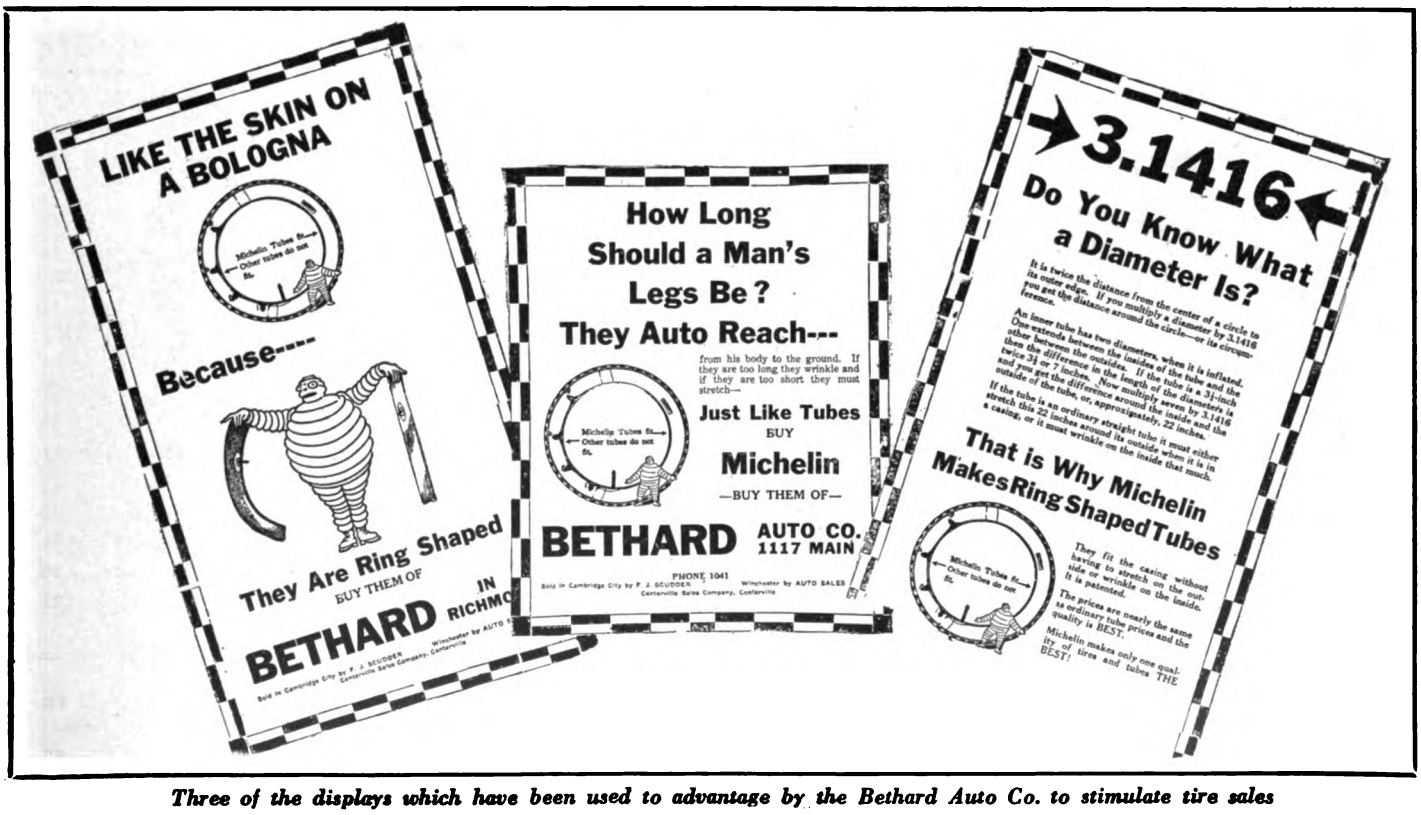
"We try to make every other department of our business just as good as our wash-stand."

In another advertisement intended to sell its shop work the Company plays up the term of service of its personnel.

"Only one mechanic has left our shop in five years," reads the heading to this.

As was intimated at the beginning of this article, if Bethard were to be asked how he has developed every division of his organization to the point where it is a highly profitable unit, he would undoubtedly call attention to these advertisements. And he has every reason to be proud of what they have accomplished.

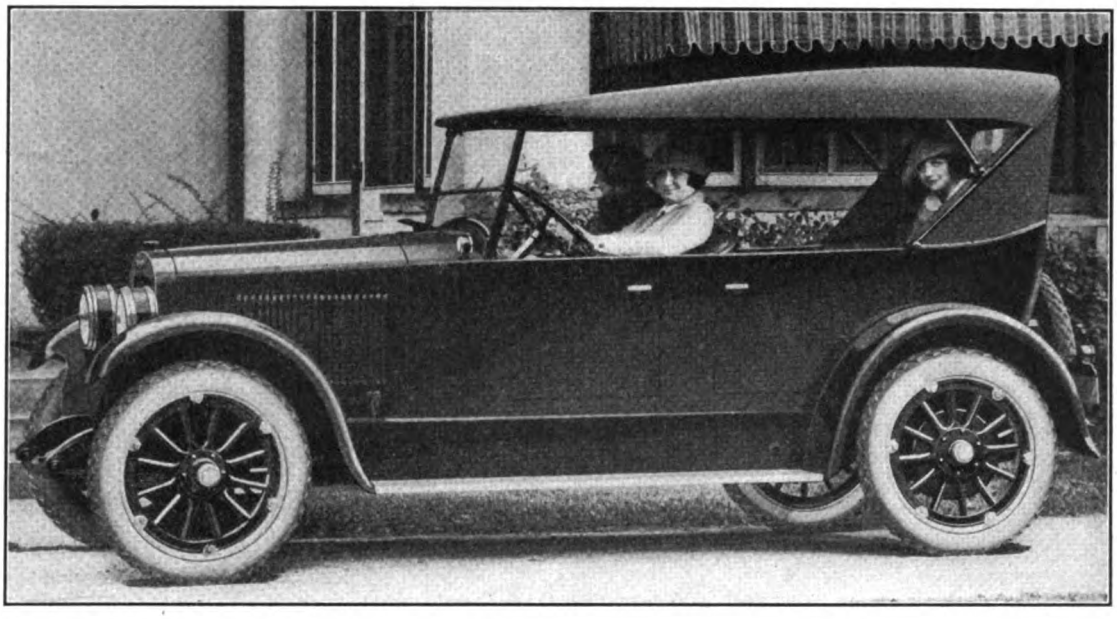
The fact remains, however, that they represent but one method by which this keen merchandiser has sought to sell his business—every branch of it. How well he has succeeded is shown by the fact of his having boosted tire sales from almost nothing to $2,000 a month.



Three of the displays which have been used to advantage by the Bethard Auto Co. to stimulate tire sales

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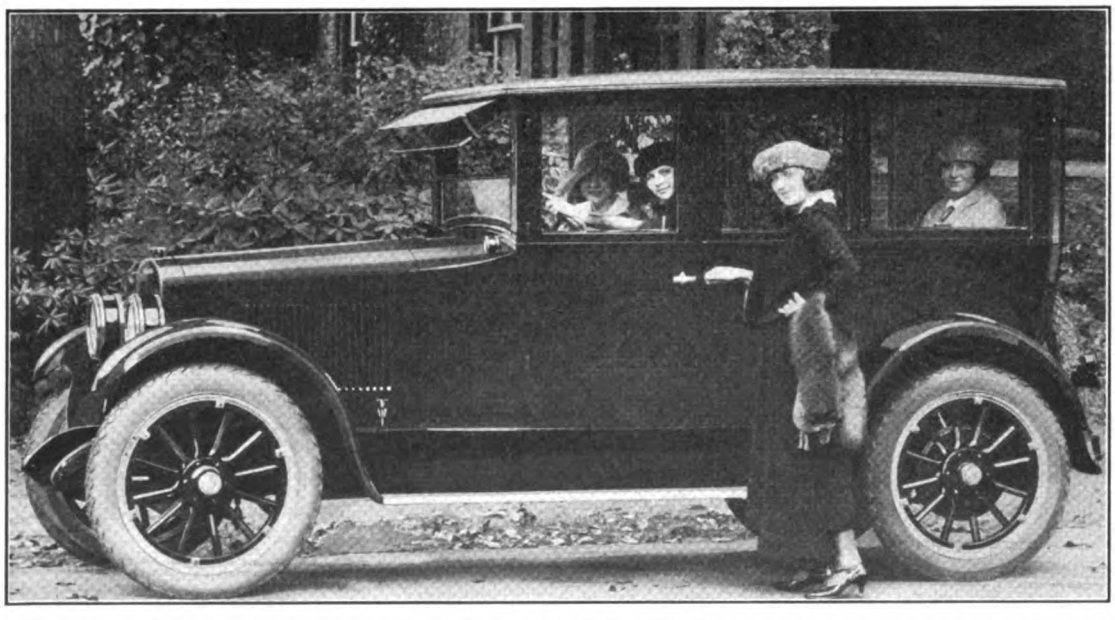
New Cleveland Models Attract Attention



SELLING at the lowest prices in their history, the three new Cleveland models just introduced are attracting considerable trade interest. The touring model above, for instance, is now listed for the first time under a thousand dollars—$995 to be exact.

The line is particularly strong on closed cars. The five-passenger, four-door sedan below, now $1,495, promises to be in even greater demand than it was at its higher price.

The third new model, a two-door, five-passenger sedan at $1,295 offered in place of the coupe and previously described and illustrated, is an important addition to Cleveland's closed-car offerings. All three new models have Fisher-built bodies. The roadster, $1,085, and sport model, $1,260, are continued.



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PASSENGER CARS NEW IN THE FIELD

Studebaker Adds New Big-Six Closed Model

Five-Passenger Two-Door Coupe at $2,375 Replete with Equipment

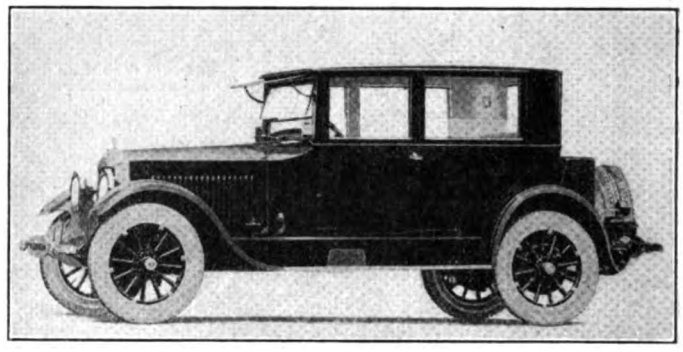
ANOTHER new closed model has been added to its big-six line by the Studebaker Corporation of America, South Bend, Ind. It is a two-door job, styled a five-passenger coupe, with a trunk at the rear and numerous other equipment details. It lists at $2,375, but one hundred dollars over the four-passenger coupe of the line.

The five-passenger coupe is fitted with nickel-plated front and rear bumpers, automatic windshield wiper, rear-view mirror, Moto-Meter, nickeled radiator shell set off by an ornamental radiator cap. A spacious trunk, as mentioned, is provided at the rear.

Other features of comfort and convenience furnished with this new closed model include heater, theft-proof transmission lock, cowl ventilator, automatic window regulators, silk roller curtains, three-piece rain-vision windshield with visor, eight-day clock, and door locks.

Upholstery of this two-door body is in rich dark brown velour, with floor carpets, top lining and trimming harmonizing in color. The design provides a close-coupled effect. Three adults are accommodated in the rear seat which extends clear across the body. The driver occupies an individual seat, while a folding seat—a comfortable chair, with padded back, arm and seat—is placed opposite the driver for the fifth passenger carried.

Illumination includes massive headlights, artistic side coach lamps, and a courtesy light on the left, or driver's side. Opalescent corner reading lights illuminate the interior. Seat cushions nine inches deep; long semi-elliptic springs, 56 inches in the rear and 38 inches in front; and the long wheelbase of 126 inches all provide for maximum riding comfort.



NEW five-passenger coupe of Studebaker bix-six line carries a full roster of equipment, including a trunk at the rear. Radiator is nickeled on this model

New Leon Rubay Design Is of High Interest

Four-Wheel Brakes, Engine and All Closed Bodies Featured in Line

MANY points of high interest abound in the new Leon Rubay car which the Rubay Co., Cleveland, widely known for its coachwork, will introduce at the coming New York Salon. Among them are a small bore and long stroke high speed four-cylinder engine, four-wheel mechanical brakes, steering column housing supported by the crankcase, and not the least interesting by no means, the fact that only closed body types are to be included in the line.

Not definitely determined at this time, the price of Rubay's creation will necessarily be high. As one observer remarked when shown some of the parts at the factory, "they look almost like jewelry." The car is designed especially for city use, hence the name Voitures de Ville applied to it. Throughout, it bears evidence of the influence of French design.

The four-cylinder engine is an overhead valve type with overhead camshaft driven by vertical shaft and helical bevel gears. While actual dimensions are not stated, it is said the engine has an "exceedingly small bore" for economy and light weight, and a long stroke for ability in traffic and on hills. The speed range is from 200 to 3,000 r.p.m., developing a maximum of 36 horsepower.

Among the features of the engine might be mentioned forged, heat-treated aluminum connecting rods; aluminum pistons; automatic lubrication, using cool oil; center line of cylinder offset from center line of crankshaft, minimizing friction loss and wear due to piston side thrust; valves vertical in center line of cylinder head, operated directly by cam through an interposed finger to take side thrust of cam; lubrication of the cam and rockers through hollow camshaft.

Engine block design is also of interest. The case is provided with integral webs between the arms, forming an unbroken surface from the side rails of the frame to the deck which supports the cylinder block.

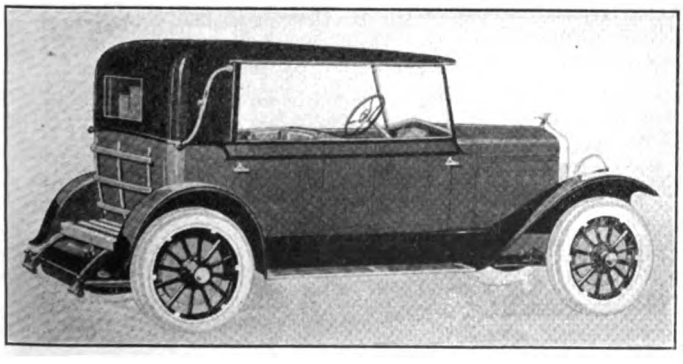
At this point the retaining studs are all internal so that no fastenings project to mar the symmetry of the construction. There is an absence of exposed pipes and connections.

Water pipes of copper are integral with the engine case and the connections of the water pump are all internal. Passages from the oil pump to all main bearings are copper tubes integral with the aluminum case, giving full free passages and freedom from leakage. Engine is inclined slightly to the rear to obtain normal straight line drive.

Special Stromberg carbureter is attached directly to cylinder head, no external manifold being used. Air supply to carbureter is taken from a sleeve surrounding exhaust manifold through a passage directly through cylinder block to carbureter.

A passage from the case connects with the passage through the block so that all oil vapors are taken directly into the carbureter. This method, furthermore, provides a slight vacuum in the case and is said to overcome the

(Continued on page 1160, first column)



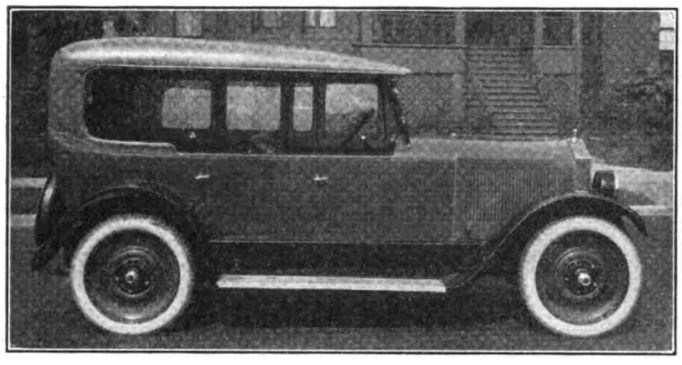
THOUGH normally a closed car the Leon Rubay cabriolet may be converted into an open car with permanent top. Compartment in panel between doors and low trunk rack are features

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Moon Tourlux an Ideal Winter-Summer Car

New "6-40" Model Has Permanent Top with Unique Side Enclosures

AN ideal Winter-Summer car is what the Moon Motor Car Co., St. Louis, terms its new five-passenger Tourlux of the "6-40" series. The body is fitted with a permanent top which by adding side enclosures gives a sedan for cold weather, and without the enclosures gives the open-air freedom of a touring car for Summer. This body type is listed at $1,445 at the factory.



BOTH a closed and open car is the new Moon "6-40" Tourlux. One side shows the open arrangement while the other with side enclosures in place gives closed-car effect

The illustration shows one side of the car without side enclosures and the other with them in place. The ⅜-inch plate glass rear side windows and frame snugly lift into the roof of the car, out of sight.

When down, they give a California top. In addition, the usual side curtains are furnished for use during the Summer months.

The extra weight of the top is but 70 pounds. It is of substantial construction, claimed to be absolutely free from rattle or roof rumble. It is made of moleskin, lined with whipcord and matches the body color of Versailles blue.

The top is fitted with a dome light. It also has what is said to be an exclusive ventilating feature above the windshield, this feature being covered by a rear-vision mirror.

For this body, the standard "6-40" chassis of 115-inch wheelbase is used. Besides those items mentioned standard equipment includes cord tires with demountable rims, extra rim on the rear; robe rail; tool kit, carried in front door; and the usual jack, ammeter, oil gauge, speedometer, carbureter dash control and motor-driven horn.

NEW LEON RUBAY DESIGN IS OF HIGH INTEREST

(Continued from page 1159, third column)

tendency of oil to leak outward. Finish of the engine is black enamel contrasted with polished nickel and aluminum fittings.

Clutch has a single high carbon steel disc 1/16-inch thick for its driving member, gripped between two Raybestos discs by 12 coil springs. Light weight of steel disc makes possible easy shifting while the 12-inch diameter combined with multiple spring action gives smooth engagement. Clutch runs in oil.

Gearset is a conventional type on annular ball and roller bearings. Mounted on either side and carried in integral brackets are a Bosch lighting generator and the starting motor, the former being silent chain driven from clutch sleeve, an eccentric sleeve mounting of the generator allowing for chain adjustment. Outboard Bendix gear starting motor engages a gear on clutch plate which forms rear section of flywheel. At rear end of transmission is carried the ball end of torque tube, housing the single universal joint used in the drive.

System of braking on all four wheels—and incidentally the Leon Rubay is the second American-made car to be so equipped—is a direct mechanical connection throughout and fully equalized. Drums are of ribbed aluminum cast on high carbon steel linings attaining great rigidity and light weight. Hinged aluminum brake shoes are Thermoid-faced and cam-expanded, alike for all four wheels.

Front axle beam is a modified "I"-section, chrome-nickel steel forging, the deepened channel of the rear section housing and protecting brake mechanism, so that cam extensions only are visible from front. Steering pivot pins are inclined to meet point of contact of wheels with ground. To withstand braking stresses, front spindles of chrome-nickel steel are same diameter as rear spindles, all being hollow-bored for lightness. Front and rear bearings are interchangeable.

Rear axle is full-floating. Drive shafts are provided with a jaw clutch of gear tooth form that engages with a corresponding internal gear cut in rear wheel hub.

Contrary to conventional American practice, differential of bevel gear type is carried from the rear cover plate by cast steel carrier that centers in the front flanged housing of axle. Withdrawing axle shafts the entire differential may be withdrawn from the rear without disturbing any other parts of the axle. Axle ratio is 5.1 to 1.

Chassis is built with a cast aluminum dash permanently fixed to chassis frame. This dash forms hood support at front and at rear the supporting brackets for aluminum toe boards. Bracketed from dash is the instrument board, carried entirely independent of body.

The five bodies—brougham, coupe, sedan, cabriolet and berline—are Rubay creations, each individually finished to suit buyer's taste. While they are all closed types, the cabriolet as illustrated is convertible into an open car with permanent top by removing side glass enclosures. This body is interesting because of the low-hung trunk rack at the rear and the fact that the body panel between the two doors is hinged at the bottom, thus forming a folding compartment for the glass enclosures.

Peerless Carbureter Gives Economy

Gasoline economy of the eight-cylinder Peerless is due in large measure to the double-jet, or two stage carbureter used. When throttle is opened slightly for idling or low speeds, gasoline is drawn from float chamber through a primary jet into mixing chamber, where it is mixed with a sufficient amount of air to provide an economical fuel. As throttle is further advanced, flow of gasoline is augmented by additional supply from a secondary jet. An additional amount of air is also introduced. This secondary supply of fuel and air is not needed for speeds up to 45 m.p.h., thus the cylinders are not being fed with a greater supply than is actually needed. The carbureter also has a pick-up plunger, controlled by suction in intake manifold and used for quick acceleration.

Oakland Bearings Interchangeable

Interchangeable engine bearings, such as were developed during the war for Liberty engines, have been standardized in the Oakland "6-44" models as crankshaft bearings. Measurements are held to one-twelfth the size of a human hair. Main bearings are made within an accuracy of .0003 inch and bearing bores in the crankcase .0005 inch. This permits assembly into the crankcase without reaming, burning or scraping. The Oakland company also claims its babbitt lining has a greater density than any now used, with 50 per cent greater tensile strength.

Elcar Taxicab Business Growing

Its taxicab business is developing substantially the Elkhart Carriage & Motor Car Co. states. The Elcar six-cylinder cab has been adopted as standard fleet equipment by the Diamond Cab Co., Chicago; Chauffeurs' Cab Co., New York, and Black & White Cab Co., Philadelphia. Over 400 of its cabs have been in service in Chicago and some of these have now traveled over 100,000 miles, the Company reports.

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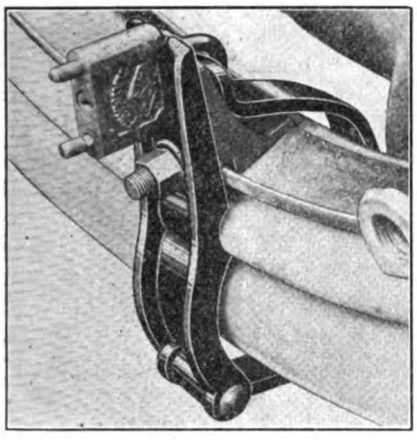
ACCESSORIES FOR CHRISTMAS TRADE

HERCULES PROTECTOR GUARDS SPARE TIRES

At the moderate cost of $1, the owner of any light car may protect his spare tires from theft through purchase of the Hercules spare tire protector. This device has been introduced lately by the Hercules Mfg. Co., Indianapolis.

It consists of a hinged clamp that fits around the spare tire and rim, attaching them securely to the carrier by means of a padlock passed through both ends of the clamp and the bracket on the rim band of the tire carrier. Front part of the device is a sturdy malleable casting which takes the place of the regular wedge used to hold the rim and tire on the carrier. Hinged part is a band of high carbon steel.

Installation is accomplished easily by slipping the front part on over the threaded stud from which the original nut and rim wedge have been removed. The nut is then



Hercules spare tire protector

replaced onto the threaded stud and tightened, the hinged band swung up into place, and the padlock hooked through both ends of the clamp and tire carrier bracket.

The Hercules protector is finished in black enamel and fits outside of the spare tire cover. Without the padlock it costs $1.

"DIREX" REAR TRAFFIC SIGNAL HAS THREE LIGHTS

"Stop" warning in the Direx rear traffic signal works automatically from the service brake. "Right" and "left" signals are controlled by specially designed nickel-plated buttons mounted on a steel arm, japanned and baked, and attached to the steering column.

In this way the Akron Signal Co., 1178 Edison avenue, Akron, Ohio, brings the control of its signal within easy access of the finger tips without moving the hand. If desired, these buttons may also be placed on the instrument board, door or cross-arms of the wheel.

Body of the Direx is made in one piece from cold rolled steel, japanned and baked.



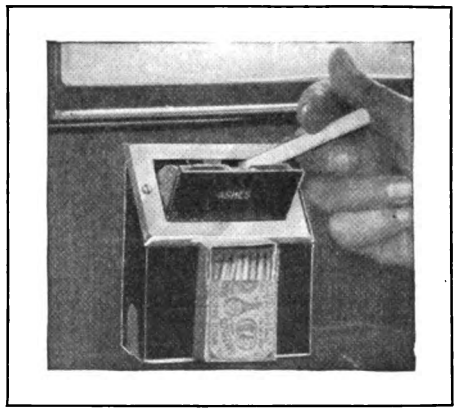
Direx rear traffic signal

It contains three compartments, each with its own light and control, and each compartment a complete signal in itself. A brass reflector heavily silvered and polished, insures a maximum of reflection and even distribution of light.

A special lens one-quarter inch thick with ruby letters raised from a black background assures distinct and clearly displayed signals. The lens is held in place securely between an inner bronze rim and the outer rim which is nickel-plated and polished. This makes the reflector and bulb chambers dust and moisture proof. Price of the "Direx" signal is $10.

FARGO ASH RECEIVER MADE IN TWO MODELS

A spring door, opening at a touch provides a place for ashes, matches and stubs in the Fargo ash receiver, a new appointment for closed cars that has been placed



Fargo ash receiver

on the market by the Fargo Co., Ripon, Wis. This device makes it unnecessary to open windows or doors, and permits the smoker to keep the car clean.

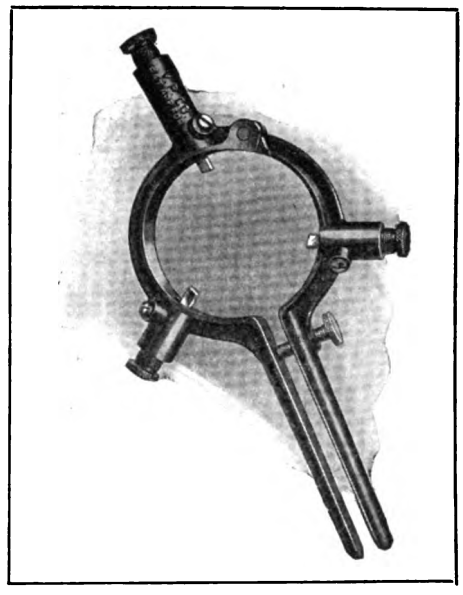
The Fargo ash receiver comes in two models. One of these is designed for insertion in the dash, and the other for fastening on the side-wall of the car.

Finish is in black enamel and nickel. The price of either of these models is $3.

V-P GROOVE CLEANER REMOVES CARBON QUICKLY

Cleaning carbon from the piston ring grooves has been simplified considerably through the introduction by the Vedoe-Peterson Co., Norfolk Downs, Mass., of its V-P groove cleaner. This tool is handled easily.

Three cutters are adjusted to approx-



V-P groove cleaner

imate depth of groove with adjusting screws, locked by means of small set screws. The piston is placed on a bar clamped in the vise, and final adjustments are made with a knurled screw in the handle.

Two sets of cutters are furnished with each V-P cleaner, sizes 3/16 in., and ¼ in. The cleaner will accommodate pistons from three to four inches in diameter. Price of the tool is $5.

POWERLITE IS FLASHLIGHT WITHOUT BATTERY

A flashlight without a battery has made its appearance on the market in the form of the Powerlite. This device which is claimed to embody the smallest real electrical generator in practical use, after winning much popularity abroad, is being sponsored in this Country by the Powerlite Co. of Cleveland.

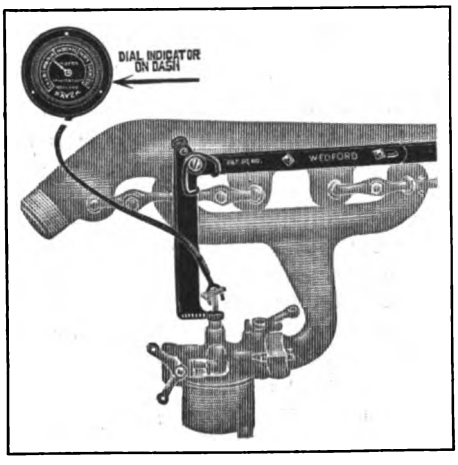
The complete outfit can be grasped in the hand, yet it will go on producing current and light for years. Mechanism is con-

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tained in a "pistol grip" aluminum case that just fits the hand.

WEDFORD SAVEX WARNS OF ENGINE TROUBLE

An automatic carbureter adjustment designed for the Ford engine has been brought



Wedford Savex

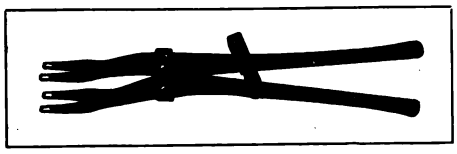
out lately by the Wedler-Shuford Co., 3,540 Olive street, St. Louis, Mo., in the form of the Wedford Savex. Actuated by expansion and contraction of the exhaust manifold this device tells the engine temperature, and regulates the carbureter and gas flow.

Condition of the engine is kept before the eyes of the driver by means of a dial indicator placed on the instrument board. On this dial appear the words "cold," "warm," "normal," "hot," and "danger." Thus a warning is flashed if anything goes wrong under the hood.

Wedford Savex has been tested carefully by its makers who claim it to be efficient in every respect. Ready for installation it is priced at $9.

"FAY-OH-RITE" VALVE LIFTER ACTS QUICKLY

Its quick action is a feature of the "Fay-Oh-Rite" No. 1 valve lifter, a new device sponsored by the Bridgeport Hardware Mfg. Co., Bridgeport, Conn.



"Fay-Oh-Rite" No. 1 valve lifter

When in use the forked ends of this tool operate at an angle which holds them in place under tension.

One movement compresses the spring so that the key can be removed, and the lock holds it positively in proper position. It can be released instantly by pulling the lock back with the thumb.

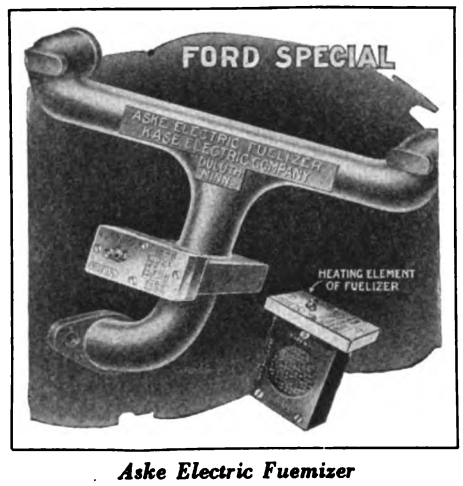
The two parts are joined by "rocker-links." These permit the forked ends to work slightly forward or back, thus adjusting themselves when pressure is applied. This feature is also claimed to prevent cramping or binding of the valve stem or washer. When the forked ends are together they form a shape like a chisel so that they can be easily inserted under the spring.

All parts of the tool are made of high grade forged steel, the forked ends being especially strong and tough. Length of the "Fay-Oh-Rite" is 12½ inches. It weighs 1½ pounds.

ASKE ELECTRIC FUEMIZER IS FORD ENGINE STARTER

Minimizing troubles connected with starting the engine is the purpose of the Aske Electric Fuemizer which is now being produced by the Kase Electric Co., Sherwood building, Duluth, Minn. This device which is designed for Ford cars, electrically preheats the gasoline to so perfect a vapor that the weakest spark will start the engine immediately.

It consists of a cast iron manifold with



Aske Electric Fuemizer

a chamber formed in the gas passage for the reception of the heating element. The heating element consists of four metal grids encased in a thermoplax cover, one terminal of which is self-grounded to the aluminum cap of the Fuemizer. Only one wire is required for connecting it up.

Operation is simple. To start the engine the switch button on the dashboard is pressed down for five seconds. When the finger is removed the current is shut off automatically.

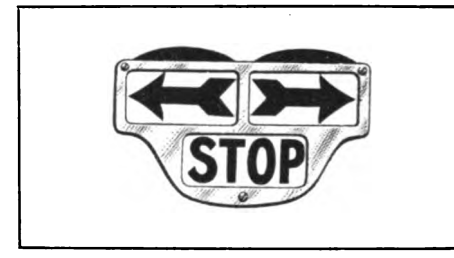
Whereas the Ford model is being featured at the present time, it is understood that special designs will be made for other cars in the near future. Price of the device, ready for installation is $9.50.

LEFT-RITE STOP SIGNAL ACTS AS REAR GUARD

Left and right arrow signals of the Capco Left-Rite stop signal are operated mechanically by a switch on the steering column. The stop signal operates automatically with the foot brake.

This device which has been placed on the market by the Cino Auto-Products Co., Third and Race streets, Cincinnati, Ohio, known formerly as the Cincinnati Lamp and Bracket Co., is simple to operate and can be installed on rear fender, tire carrier, or frame of car. The arrow switch is attached to the steering column and two levers extend a trifle beyond the steering wheel. When the driver wants to signal a turn he merely extends his finger to the lever which he presses down.

Body of the signal is made of high-grade cast aluminum, measuring 8 x 4¼ inches and contains three compartments each measuring about 1⅝ x 3½ inches. Face plate or rim



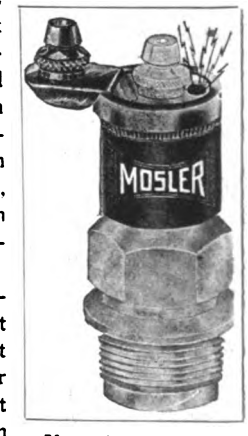
Capco Left-Rite stop signal

and all screws are brass. Lenses are bright ruby with prismatic back.

Regular finish is black enameled body with polished nickel face plate. The signal can also be supplied, however, all black enameled, or all nickel and buffed aluminum. Complete with two switches, three bulbs, all wiring, screws and attachments necessary for installation, it sells for $10.

VESUVIUS INTENSIFIER ALSO PROTECTS ALL PLUGS

Two distinct services are offered by the Vesuvius protector and spark intensifier which is being produced by the Mosler Metal Products Corp., New York city. This little device has a vulcanized fiber body which protects the insulator from any form of wrench blow, while a combination cap acts as an intensifier.



Vesuvius protector and spark intensifier

Design of the intensifier is such that it holds the current at the intensifier point until it is built up to its maximum strength. By means of a visible spark gap it is possible to detect trouble, the absence of any spark in the hole on the top being sufficient evidence of the fact that something is wrong either in the wiring or at the source of current.

The intensifier is easily applied to any plug. All that is necessary is to remove the nut holding the wire on the top of the plug; set the protector down; connect the wire, and screw down the thumb nut. The Vesuvius sells for 25 cents.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

NEW JERSEY—MORRISTOWN.—Nellie Dovell has sold the brick and frame garage, operated for many years by her late husband at 105-107 Maple avenue, to Patrick J. Koyce, who takes possession on November 1.

NEW YORK — NEW YORK. — National Biscuit Co. has purchased property at 407-409-411 West Sixteenth street. On the combined site, 70 x 95, the company will erect a three-story garage and storage building, estimated to cost $60,000.—Scott estate has sold the six-story garage at 256-258 West 36th street to Joseph G. Abramson.—Peiper Garage Co. has purchased the garage located at 225-229 St. Nicholas avenue with an L of 50 feet on 121st street from Michael Kaufman.—Laurel Garage Co. has sold its garage at 112 West 145th street, 150 x 100, to Harry Cahn, who has leased the property for ten years.

Plans have been filed for the construction of 243 one-story garages and a gasoline station at 219-253 West 149th street, 218-254 West 150th street and 6-16 Macombs place. Each garage will occupy a plot 10 x 17 and will cost $150, making a total cost of $36,450. Vincent Astor is the owner of the property and Joseph R. Thomas the lessee.

MIDDLE WEST

INDIANA — INDIANAPOLIS. — Salesrooms and service station of the Sanders-Haynes Motor Co., distributer of Haynes cars, will be moved from 538 North Meridian street to 1035 North Meridian street. The new location will provide about three times as much space as the old.

ILLINOIS — LINCOLN. — Ryan Brothers are installing a steam plant in their garage building on North Chicago street which will soon be occupied by the Langellier Motor Co.—A partnership formerly existing under the trade name of L. & L. Oil Co., has been dissolved, John A. Lutz acquiring the interest held by Arthur M. Landauer.

MICHIGAN — DETROIT. — Pan-American Garage has opened its headquarters at 425 East Willis avenue.—Holden Hardware Co. has changed its name to McGraw Hardware Co. and has moved to a new location at 3619 McGraw avenue.

IRON RIVER.—A $30,000 garage will be erected for Lindall & Lindstrom.

LANSING.—P. S. Stevens and Claude Miller have purchased the D. & S. Sales Co.

WISCONSIN — DELAVAN. — Frank J. Osterman has sold his interest in the Park Garage to R. D. Tift.

GAY MILLS.—O. A. Sherwood and Nelson & Young have taken over the business of the Young-Mook Garage. The business will be conducted under the name of Buick Garage.

JANESVILLE. — Robert F. Buggs, Ford dealer, has sold his Milton Junction branch to Clarence Alter, of Manitowoc.

KAUKAUNA. — B. Herziger, H. J. Stack and Louis Mayor have formed the Buick Motor Car Co.

LAKE GENEVA. — Lowry Bros. Motor Sales Co. will open ready for business in the former restaurant building.

MILWAUKEE. — P. R. Williams, former dealer of Chalmers and Maxwell cars at 242 Fourth street, has sold his lease to the Schmidt Motor Car Co. He has purchased the interest of Neitzel in the Neitzel-Wussow Co., Studebaker and Chevrolet dealers, located at 1130 Teutonia avenue. As a result the firm will be known as the Wussow-Williams Co.—Weiss Garage has located at 3009 Lisbon avenue.—W. R. Sherin Co., automobile repairers and painters, has opened a storage battery station at Martin and Edison streets. Monroe Kleinsteuber will assume the management of the business.

OMRO.—Chas. Christianson & Son has sold the Omro Tire & Battery Shop to Ernest Butt.

PORTAGE.—F. C. Miller, formerly of Detroit, Mich., is installing machinery and equipment in the old Doherty building on West Canal street near the Willard Battery Station, preparatory to opening a general vulcanizing business.

RHINELANDER. — Organization of the Segerstrom-Dandoneau Motor Co. has been completed. J. Segerstrom has been made president; Peter P. Dandoneau, secretary, and A. J. Seyfert, sales manager. A sales and service building is being erected for the concern on South Stevens street opposite the city hall.

VIOLA.—Half interest in the Whiteis Garage has been purchased by Delbert Tilley. The business will be conducted under the firm name of Whiteis & Tilley.

MISSOURI—BEVIER.—J. W. Nisbeth of the Nisbeth Motor Co. has purchased the Frederick building on Main street. The structure will be remodeled into salesrooms, offices, and a parts room to be used in the handling of Ford cars and tractors.

(Continued on page 1164, first column)

ACTIVITIES OF THE WHOLESALERS

Elliot-Brunt Motor Co., located at Springfield, has been named distributer of the Oakland for Central Illinois territory.

Waddles Garage has been appointed by the Dort Motor Car Co. to distribute its car in Kalamazoo, Mich., and vicinity.

Strack Motor Sales Co., with Frank K. Taylor as sales manager, has secured the franchise for the distribution of Columbia cars in central Iowa.

Sydney J. Morris has been appointed distributer for Franklin cars in Laramie, Wyo., and adjacent territory.

Jaekel Motor Sales Co. has secured the distributing franchise of the Moon in Detroit and surrounding territory. The concern will operate from headquarters located at 3225 East Jefferson avenue. W. H. Jaekel, who has been connected with the automobile business in Detroit for the past five years, will act as general manager.

American Auto Co., Inc., located at 68 French street, New Brunswick, N. J., has secured the agency for Buick as well as Peerless cars.

Pratt Motor & Implement Co. has been appointed Franklin dealer for Newbern, N. C., and vicinity.

J. Wendell Green has contracted for the distribution of the Dort motor car for Pontiac, Mich., and adjacent territory.

Overland Sales Co., Central Texas distributer for the Overland, has opened a sales agency at the Motor Inn, at Marlin, with L. L. Ainsworth as manager.

A. T. Mast has been appointed distributer for Franklin cars in Nacogdoches, Tex., and surrounding territory.

Thorpe & Knight has been organized in Atlanta, Ga., to distribute Gray cars for the entire state. Headquarters have been located at 239 Peachtree street. The company formerly operated as state distributer for Florida, with headquarters at Miami.

Peerless Motor Sales Co. of New Jersey, with salesrooms and service station at 12 Banta place, Hackensack, N. J., has taken on the Peerless eight for Bergen county, N. J.

Hood Tire Co., formerly located at 518 North Broadway, has changed its name to Cope Tire Service and has moved to new headquarters at 316 West First street. It will continue to handle Hood tires and has obtained the agency for Dayton Thorobred cord tires, both wholesale and retail.

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IN THE TRADE

(*Continued from page 1163, second column*)

CALIFORNIA. — Walter G. Heidbreder has about completed his new garage, 200 x 80, an enlargement of the old one.

CARTHAGE. — P. Stemmons has leased the former Webb Garage in which he plans to conduct a general automobile garage business. W. Crawford has leased the repair shops in the building. He will move his Overland shop into these quarters from his present location on Fifth street, west of Grant.

HIGGINSVILLE.—Jackson Price has purchased a half interest in the Wegener Garage. Henceforth the business will be operated as the Price-Wegener Garage.

HOLDEN.—Dodds Motor Co. has traded its garage to G. W. Parker, who, in turn, has sold it to Don. Harryman, of Wheatland, Hickory county.

KANSAS CITY.—A new store has been opened by the Western Auto Supply Co., of which D. W. Davis is president. This makes the sixty-seventh store in the chain operated by George Pepperdine and D. Davis, and the twenty-fourth established this year. The new store will be operated as an overflow store in conjunction with present quarters at 1422-24 Grand avenue, with W. J. Boshell in charge. The new structure will provide 9,000 square feet of floor space, 3,000 feet of which will be occupied by a salesroom.

MAGNOLIA.—Hubert Elliott has purchased the garage of Nathan Fischer.

MEXICO.—Audrain Battery Service, located at 112 West Liberty, has been appointed Exide Service Station for this city.

PALMYRA.—W. A. Anderson has completed a garage in the western part of the city to replace the one recently destroyed by fire.

ST. LOUIS.—An addition to the establishment of the Carondelet Motor Car Co., at Grand boulevard and Kookuk street has just been completed. The new building occupies the lot immediately north of the old structure, providing a space 110 x 125. A double driveway, 20 feet wide, is at the northern end of the addition. The remainder of the front is occupied by a showroom 40 feet deep. A total floor space of 62,000 square feet is provided by the addition.—Lemay Ferry Auto Sales Co., composed of E. Brubner and William Watson, at present occupying quarters at Lemay Ferry and Weber roads, is having a salesroom and repair shop erected at Lemay Ferry and Bayles avenue. The new building will be constructed of brick and will be 56 x 100 in size.

KANSAS — ANTHONY. — Chester Cooper has sold his interest in the Dodge agency and garage to Elmer Schmidt, who will assume full charge.

ARKANSAS CITY.—George W. Rice has sold his battery station in Shidler, Okla., and has returned to this city to take over the management of J. F. Whalen's Exide Service Station on South Summit street.—Newman Motor Co. has purchased the business and stock of the Willard Service Station. It will continue to handle Chevrolet and Franklin cars and Goodyear tires.

ARLINGTON.—An air tank at the Trembley Garage in the west part of the town exploded. The garage was badly damaged.

CLAY CENTER.—C. L. Gebhardt's garage has been leased by E. Blackburn who will conduct an automobile repair business in the building.

COTTONWOOD FALLS.—Clarence Garrison has purchased Knight Ketchersid's interest in the Ketchersid Motor Co., Ford and Fordson agent. He plans to enlarge the stock of parts and accessories and will add another mechanic to the repair department.

EMPORIA.—J. A. Lawrence has purchased the interest of Frank Murdock in the Murdock-Lawrence Motor Co. Consequently the name of the concern has been changed to Lawrence Motor Co.

EUREKA.—Leader Garage has been opened on North Main street for storage, repair shop work, and filling station.—C. E. Leonard, formerly of Wichita, has purchased a half interest in the battery business of C. W. Rippetee. The new firm will operate as the R-L Battery Co. In addition to the Gould battery service, the company is equipped to handle all kinds of electrical appliances for automobiles, including starters, ignition and magnetos. The service station is located on West Third street.

GREENLEAF.—William Hansreth has re-opened the Scott Garage.

HUTCHINSON.—Palace Garage will occupy the new building at the corner of Fifth avenue and Washington street.

LEAVENWORTH.—A. G. Clark has purchased the Coliseum Garage at 433 South Fifth. He will conduct the business under the name of the Fifth Street Garage.

Work has been started on an addition to the Specialty Garage & Manufacturing Co. at Third and Seneca streets. The new structure will occupy the two lots immediately to the east of the building and will be 48 x 125, constructed of hollow tile. When completed the company will have 24,500 square feet of floor space. The large room in the brick building will be used for repair work on automobiles, with an accessory department and an office in one corner.—Ehart-Compton Motor Co., Nash dealers, plans to move from its present quarters in the Nietzke Garage to the Fifth Street Garage, which is being remodeled.

OLATHE.—Cecil and Stanley King have purchased the K. K. Flanner Garage known as the old Wolfkuhl place.—S. F. Davis has bought and opened the Overland Park Garage.

OSWEGO.—Dewey Tire Shop was badly damaged when the vulcanizing plant exploded.

OTTAWA.—Harrison Bros. have purchased the vulcanizing and battery business of Glen. LeMaster at 103 North Main.

SALINA.—S. R. Bragg, who for the greater part of ten years has been connected with automotive mechanical work in this country, has opened his own shop.

STAFFORD.—W. D. Upson, proprietor of the Exide Service Station, has purchased the Stafford Radio & Electric Co.

TOPEKA.—Distribution of the Chevrolet has been secured by the Topeka Chevrolet Sales Co., of which Carl W. Linge is general manager. The concern is located at 910 West Sixth avenue.

WASHINGTON.—Frager Battery & Electric Service Station has moved its battery station and general automobile repair shop to the old Wolf building on South Main street.

WICHITA.—A three-story garage will soon be erected for H. Rosenbloom on the second block on North Lawrence.

NEBRASKA — AURORA. — Ninth Street Auto Parts Co. has opened for business at 613 Ninth street.

BLADEN.—John Jenkinson has purchased the South Garage from Laughran and has assumed the management of the business.

BUFFALO.—G. Carlson and George Mitchell have purchased the Daul & LeMaster Garage.

CLARKSON.—Anton Prazek has disposed of his garage and tools to J. J. Camera, of Brainard.

HAMBURG.—Good Bros. have secured distributing franchise for Durant and Star cars for this territory.

LOUP CITY.—A. C. Ogle and E. A. Keeler have purchased the garage business of A. O. Zimmerman. The new firm took possession last week.

MEADOW GROVE.—J. R. Burch has disposed of his repair shop at Battle Creek and has taken charge of the repair department of the Huddles Garage of this city.

NEBRASKA CITY.—William G. James has purchased the interest of Walter C. Grassmueck in Grassmueck Bros., an automobile concern.

OAKLAND.—William Swanson has started to erect an $8,000 service station on the Washington highway.

OMAHA.—P. J. Wernsman and J. D. Youngman have purchased the Park Avenue Garage, located at Park avenue and Leavenworth street.

RUSKIN.—Ruskin Auto Co. has been purchased by F. B. Thieme, of Hebron. The new owner has taken possession.

SARGENT.—J. Gregory has opened a battery station in the A. J. Reath Garage building.

SIDNEY.—L. E. Metzker and Noble Anderson have sold the Petter Garage to

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THROUGH his own or his neighbor's experience with "bargain tires" the car owner has learned the value of concentrating on quality.

Natural enough that under these circumstances he prefers to do business with a like-minded tire merchant.

Because there is a tire for every motoring need under one quality standard, car owners recognize that—

United States Tires are Good Tires

And dealers recognize that—

The U. S. Sales Relationship is a good relationship.

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United States Tires

United States Rubber Company

Fifty-three Factories | The Oldest and Largest Rubber Organization in the World | Two hundred and thirty-five Branches

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W. Goding, who has assumed management.

SUTHERLAND.—Ford Garage has been purchased from J. D. Walsh by the McNeel Motor Co.

WATERLOO.—Emil Dolezal and T. Vybiral have opened an automobile repair shop at 138 West Fourth street.

WEST POINT.—A battery service station has been opened by Hollister Bros.

NORTHWEST

MINNESOTA — DULUTH. — Forty automobiles were destroyed and a three-story brick building was gutted when the H. B. Knudsen Auto Co., located at 202-204 East Superior street, was destroyed by fire. The total loss is estimated at $225,000.

NEW ULM.—A. C. Ochs will erect a garage here.

SOUTHWEST

ARKANSAS — ARKADELPHIA.—Lawrence Newberry has purchased the Dodge Brothers agency from Irvin Rudolph who has conducted the business at the corner of Sixth and Clay streets.

CONWAY.—Bolls Brothers have purchased the garage equipment and stock of the Alewyne Overland Co. in the Douglass building located on West Oak street. The building will be used as a salesroom for the company's Hupmobile agency. Alewyne will continue the agency for Overland cars and will probably obtain a new location.

FAYETTEVILLE. — A garage will soon be opened in the old Vaughan livery stable on West Mountain street by B. Davis Palmer of Jefferson, Tex. Cars will be stored and a general repair business conducted.

LITTLE ROCK.—O. K. Matthews Tire Co. has purchased the Big Stephens Tire Store, and will take possession on November 15.

PACIFIC COAST

WASHINGTON—CAMAS.—Highway Garage, of which T. A. Vehers is manager, is being remodeled at a cost of approximately $10,000. When completed, the building will have 5,000 square feet of floor space.

CONCRETE.—W. M. Hempsmyer has purchased the interest of his partner, J. E. Amsberry, in the Everready Garage.

OMAK.—V. Middleton has sold the Middleton Garage to B. E. Gregory of the Ford Garage, Okanogan, who has installed L. J. Jones as branch manager.

SPOKANE.—E. Brandt has sold his interest in the United Tire Co. to H. E. Green.—S. Bleiweiss has opened the Spokane Tire Co. at W1226 First avenue. He will handle Jack tires at his new location.—Alemite Garage Co. has been opened at W1229 Sprague avenue, by D. McQuillan. A general automobile repairing business will be conducted.

CALIFORNIA — ALHAMBRA.—A garage to cost approximately $45,000 will be erected for the Teter Motor Car Co. at Curtis and Main streets.—A branch of the Western Auto Supply Co. has been opened at 123 West Main street.

BELL.—An automobile accessory store has been opened at 541 Baker avenue by Moore & Lowder.

BELLFLOWER.—Roy E. Moore and C. A. Conrad have opened the new Somerset Avenue Garage, next to the Bellflower Garage.

BOYES SPRINGS.—E. Blomgren, of Boyes Springs Garage, has been appointed subdealer for Oakland, Chalmers and Cadillac cars, by Sparks & Murphy, of Petaluma.

EUREKA.—George Bartlett, located in the Ways Garage at Seventh and D streets, has been named Gardner dealer for Humboldt county.

GARDENA.—C. W. Clossen has sold the Boulevard Garage to D. Jenkins and Paul Cramer.—Simms & Moffett have leased the King's Garage, Walnut and Vermont streets.

HAWTHORNE.—Jensen's Garage has been opened at Willow and Hawthorne streets by J. A. Jensen.

KELSEYVILLE.—M. H. Dunbar has contracted with the Chevrolet Motor Co. for the distribution of its car in Kelseyville.

LA MESA.—L. M. Washburn and H. H. McCleary have contracted for the distribution of the Ford car and Fordson tractors.

LONG BEACH.—K. & K. Auto Electric Co., located at 41 American avenue and operated by G. W. and J. D. Kopsho, has secured the agency for Prest-O-Lite batteries.—An agency handling Pierce-Arrow and Peerless cars has been opened by Bodum Brothers at 1511 American avenue.—Kimball trucks will be distributed by Robert and Paul Graham from the Long Beach Kimball agency, located at 14th and Obispo streets.

LOS ANGELES.—A $50,000 building is being erected for the Classic Motor Co., Oakland distributer, at North Western and La Mirada avenues.—D. R. Hatton and Edward Alexander have opened a repair shop at 7300 Sunset boulevard.—Management of the El Centro Avenue Garage, at 1649 El Centro avenue, has been taken over by J. E. Bates.

Removal from 1680 North Western avenue to 5850 Hollywood boulevard has been completed by the Munro-Harrison Motor Co., Gardner agents.

MIDDLETOWN.—B. Levy has secured the franchise for the distribution of the Chevrolet.

NATIONAL CITY.—R. C. Smeltzer has sold a half-interest in the Boulevard Garage, located at Division and First streets, to W. R. Nichols.

NEWPORT BEACH.—A. H. Willson has sold the East Newport Garage Machine and Repair Shop to T. Bouchy.

OCEANSIDE.—W. L. Carter and F. Barnard have secured the Service Garage.

PASADENA.—Sayers Auto Supply Co. has been opened at 55 West Colorado street by C. M. Sayers.—C. A. Fulton has sold his interest in the Blair and Fulton Garage, located at 35-37 West Green street, to R. O. Blair.

SANTA MARIA.—H. Mendell has taken over the Los Alamos Garage, formerly conducted by F. P. Wood.

VENTURA.—L. A. Dixon, former Ford assistant manager in British Columbia, has secured the Studebaker agency for southwestern Ventura county. W. J. Booth, of Oxnard, who formerly distributed Studebakers in Dixon's newly acquired territory, will continue as Oxnard dealer.

WATSONVILLE.—Globe Auto Supply Co., located at Oakland, has opened a branch here and has placed James Wall in charge.

N. A. D. A. ADDS MORE MEMBERS

DEALERS who have passed the rigid investigation of the National Automobile Dealers' Association and are, therefore, qualified under the new membership requirements, are listed herewith. Many applications are pending and further names will be published after release. Names of members recently qualifying follow:

CALIFORNIA — EUREKA. — Bairs Garage.—Charles Green Co.—Harvey M. Harper.—A. E. Hermanson Sales & Service.—Lundblade & Jewett.

GLENDALE.—Harry E. White, Inc.

LOS ANGELES.—Walter M. Murphy Motors Co.

OAKLAND.—Bell & Boyd.—P. K. Webster Co., Inc.

SANTA ANA.—Edgar & Hays.—Orange County Garage Co.

COLORADO — DENVER. — James-Nash Motors Co.—Colorado Motor Sales Co.

CONNECTICUT—BRIDGEPORT.—Arthur L. Clark Co., Inc.

GREENWICH.—New England Motor Sales Co.

ILLINOIS — CHICAGO.—Charles Lange & Bros. Co.—Reo Motor Car Company of Chicago.

DECATUR.—Guy C. Ferre.

MISSOURI — KANSAS CITY.—Nash Motor Sales Co.

SEDALIA.—Le Grande Garage.

PENNSYLVANIA — JOHNSTOWN.—Johnstown Automobile Co.

PHILADELPHIA.—Harper & Harper.

PITTSBURGH.—Steel City Automobile Co.—Studebaker Sales Company of Pittsburgh.

WASHINGTON — SEATTLE.—Central Agency.—W. L. Eaton.—Franklin Wicks Co.—Great Western Motors, Inc.—William L. Hughson Co.—Nute Motor Co.

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"Knowing That Your Owners will Be Future Friends"

By C. A. Earl

More than any other man in the automobile trade, the dealer must be certain that the motor car he handles is **right** in every way. The success of his business depends on the practical value, quality and performance of the car he sells. His personal success, also, since his standing with his friends, his neighbors and the whole community turns on the kind of judgment he uses in choosing the line he is going to market.

Mr. M. W. Watson, General Manager of the Dayton Earl Motor Company, Dayton, Ohio, brought out this point in a letter to a prospective Earl distributor the other day as one of the reasons why he is glad to distribute the Earl. The satisfaction of owners, he declares, is the essential thing on which the present and future success of all of us depends.

"It is impossible for any factory to be successful without the distributor," he writes. "The distributor is dependent on the dealer. And we all are dependent on the owner and his experience and attitude toward his car.

"Since only satisfied owners will build our business, it is necessary to handle a car of merit and quality, backed up by a factory organization of such integrity and clear vision that they are actually building a car up to a standard and not down to a fluctuating price.

"We feel that as distributors of the Earl line, we not only have a car of the highest quality, beauty, value and economy, but also one that satisfies its owners.

"It is gratifying, therefore, to be able to pass on to you the satisfaction value and pleasure we take in having the Earl franchise. Not only are the profits to be considered, but also the advantage of marketing a quality product and knowing that your owners will be future friends. You will be backed by a factory organization that stops at nothing to assist distributors and dealers to success."

To make money and make friends at the same time is about the happiest combination any business man can hope for. If there is no Earl dealer in your city, let me send you the facts about our contract and the quality Earl line. Wire or write today.

President and General Manager

EARL MOTORS, INC

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Mogul Finance Corp., Manhattan, N. Y. Capital $500,000. Incorporators: E. J. Bernheimer, B. L. Hollander, J. S. Kane.

2225 Webster Avenue Garage, Bronx, N. Y. Capital $24,000. Incorporators: B. Nelson, A. Loitz, J. Stein.—Fisto Spring Cover Corp., Bronx, New York. To manufacture spring cases. Capital $100,000. Incorporators: E. W. Waterson, E. W. Fischer, J. C. Stoek.—Gerkhardt Trucking Corp., Bronx, New York. Capital $10,000. Incorporators: F. Cohn, A. J. Gerkhardt, G. B. Reimel.

River Avenue Garage, Bronx, N. Y. Capital $10,000. Incorporators: H. Gehn, A. R. Adams.

Bevoort Service and Sales Corp., Brooklyn, N. Y. Capital $24,000. Incorporators: J. Greenspun, R. Herman, C. B. Schonhaus.—Emmett's Garage, Brooklyn, N. Y. Capital $10,000. Incorporators: J. G. and C. and H. E. Emmett.—L. B. L. Commercial Body Builders, Brooklyn, N. Y. Capital $10,000. Incorporators: L. Brief, S. Levine, M. Lubarsky.

N. W. Thomas, Brooklyn, N. Y. To deal in automobiles. Capital $100,000. Incorporators: N. W. and K. Thomas.

The Spartan Motor Corp., Albany, N. Y. To deal in automobiles. Capital $100,000. Incorporator: S. H. Keating.

Oliver Motors, Buffalo, N. Y. Capital $50,000. Incorporators: T. H. Oliver, R. T. Dailey, F. T. Gannon.

Homer C. Kuhlmann, Ellenville, N. Y. To deal in automobiles. Capital $15,000. Incorporators: H. C. and J. A. and W. L. Kuhlmann.

Lynbrook Black and White Auto Corp., Lynbrook, N. Y. Capital $35,000. Incorporators: L. and M. Maffucci, A. Petrillo.—Lynbrook Taxicab Co., Lynbrook, N. Y. Capital $5,000. Incorporators: L. and M. Maffucci, A. Petrillo.

Motor Owners Service, Inc., Plattsburgh, N. Y. To operate automobiles, hotels, garages, and service stations. Capital $100,000. Incorporators: S. Kelley, I. Boule, L. J. Pfohl.

Flatiron Auto Service, Poughkeepsie, N. Y. Capital $10,000. Incorporators: G. A. Murmann, C. H. Shively, W. H. Preston.

NEW JERSEY.—Aetna Tire & Rubber Company, Newark, New Jersey. To manufacture, purchase and exchange automobile tires, tubes, etc. Capital $2,000. Incorporators: C. J. Downing, C. M. Downing, R. D. Downing.

Century-Plainfield Rubber Company, Plainfield, New Jersey. To manufacture and sell rubber tires, tubes, etc. Capital $2,000. Incorporators: N. Saks, L. J. Franzblau, J. M. Saunders, H. C. Schleicher.

Weiner Tire Company, Inc., Irvington, New Jersey. To manufacture tires. Capital $100,000. Incorporators: L. Weiner, W. R. Ecker, J. Weiner, H. Silverman, M. Weiner.

PENNSYLVANIA.—The Standard Motor Car Co., Pittsburgh, Pa. Capital $244,778. Incorporators: W. A. Morrow, J. L. Atwell.

DELAWARE.—C. H. A. Allyn Rubber Corp., Wilmington, Delaware. Capital $100,000.—H. H. Dissinger Bro. Corp., Wilmington, Delaware. To deal in automobiles, etc. Capital $125,000.—Pacific Wheel & Rim Corp., Wilmington, Delaware. To manufacture automobile rims. Capital $600,000. Incorporators: J. G. Richardson, H. K. Hoch, M. E. Hotersall, C. I. Hoch.

Thompson Spring Company, Wilmington, Delaware. To manufacture the Thompson shock absorber.

NORTH CAROLINA.—The Union Motor Company, Monroe, N. C. To handle Studebaker and Dodge cars.

GEORGIA.—Thrope & Knight, Atlanta, Georgia. To distribute for the Gray Motor Corporation.

OHIO.—Benyon Motor Sales Company, Akron, Ohio. Capital $10,000. Incorporators: W. E. Benyon, John Benyon.

The Timken Roller Bearing Service and Sales Company, Canton, Ohio. To deal in roller bearings and other accessories. Capital $25,000. Incorporators: H. H. Timken, Herman Ely, J. G. Obermien, J. F. Strought, Austin Lynch.

G. E. Olenburg Motor Sales Company, Cleveland, Ohio. Capital $10,000. Incorporators: J. M. Williams, M. Junke.—Maderite Rubber Products Company, Cleveland, Ohio. To manufacture tires and other rubber products. Capital $300,000. Incorporators: R. W. John, F. W. Kelsey, W. Eberly, J. J. Sloan.—The Thomas Motor Sales Company, Cleveland, Ohio. Capital $10,000. Incorporators: Aaron L. Pratt, Eliza J. Pratt, Lee C. Robinson, F. Porter, Joseph C. Parch.

Master Tire & Rubber Company, Dayton, Ohio. To manufacture tires and rubber goods. Capital $200,000. Incorporators: C. L. Caffel, C. H. Stultz, R. S. Shuen, F. Coats, H. A. Estabrook.

ILLINOIS.—The Thomas Joyce Motor Company, Batavia, Illinois. To conduct a sales agency and accessory store. Capital $10,000. Incorporators: Thomas Joyce, D. R. Joyce, W. B. Joyce.

Automobile Lock Company, Chicago, Illinois. To manufacture and deal in automobile locks and accessories.—Bremer-Tully Manufacturing Company, Chicago, Illinois. To manufacture and deal in radio and automotive supplies.—Diamond Cab Company, Chicago, Ill. To manufacture and deal in motor vehicles, appliances, tools, etc. Capital $1,000,000. Incorporators: M. J. Dempsey, John J. Callahan, Thomas H. Kirkland.

Falls Rubber Products Company, Chicago, Illinois. To deal in automobile accessories. Capital $50,000. Incorporators: Charles W. Stiefel, Rudolph B. Salmon, James K. Ennis.—Greer Manufacturing Company, Chicago, Illinois. To manufacture and deal in automobile bodies and parts.—Landers Motor Sales Corp., Chicago, Illinois. Capital $20,000. Incorporators: Samuel A. Landers, William Openheim, Leonard H. Berenson.

Stalnaker & Johnson Company, Chicago, Illinois. To manufacture and deal in automobiles and vehicles. Capital $30,000. Incorporators: William E. Stalnaker, Arthur S. Johnson, Frederick L. Goff.—Universal Auto Sales Company, Chicago, Illinois, has increased its capital from $16,000 to $20,000.—Wilson Motor Supply Company, Chicago, Illinois. To manufacture and deal in automobile trucks, accessories, etc. Capital $25,000. Incorporators: M. V. Minahan, Bessie Wilson, Earl Wilson.

Hamilton Motor Inn, Peoria, Illinois. To conduct a general garage business. Capital $25,000. Incorporators: N. Kirk, Arthur G. Heidrich, Carl H. Feltman.

MICHIGAN.—Clark & Hayden, Inc., Gassopilia, Michigan. Capital $30,000.

WISCONSIN.—Dunham McCumber Motor Company, Fond du Lac, Wisconsin. Capital $50,000. Incorporators: H. E. Dunham, B. E. McCumber, Adelle L. Dunham.

Random Lake Comet Oil Company, Inc., Random Lake, Wisconsin. Capital $20,000. Incorporators: H. T. Beger, H. E. Schwalbach, Emil O. Theil.

Nichols Auto Repair & Paint Shop, Rhinelander, Wisconsin, has changed its name to Nichols Regrinding Company.

MISSOURI.—Alton Buick Company, Alton, Missouri. To manufacture and deal in automobiles, vehicles, machines, etc. Capital $10,000. Incorporators: U. A. Jestes, Ben Melcher, Nellie Jeste.

Turner Machine & Manufacturing Company, Kansas City, Missouri, has increased its capital from $100,000 to $200,000.

OKLAHOMA.—Oklahoma Fabric and Rubber Company, Muskogee, Oklahoma. Capital $2,500,000.

Campbell Battery Company, Oklahoma City, Oklahoma. Capital $3,000. Incorporators: Bert C. Campbell, E. E. Riley, Bertha Campbell.

The Carson Auto Specialty Company, Tulsa, Oklahoma. Capital $10,000. Incorporators: J. A. Carson, S. C. French, Ray S. Fellows.—The Oklahoma Dusenburg Motors Corp., Tulsa, Oklahoma. Capital $100,000. Incorporators: A. H. Ward, L. C. Barrett, E. E. Goodrich.

TEXAS.—Knapp Motor Company, Donna, Texas. Capital $5,000. Incorporators: E. E. Knapp, J. C. Powell, P. H. Lengoria.

CALIFORNIA.—Acme Tire Company, San Francisco, Cal. Capital $100,000.

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General Motors Trucks

There is a message for every motor truck dealer in the fact that many of the largest motor truck users such as Standard Oil, Morris & Company, Armour & Company and national merchants of the same character are big buyers of GMC trucks.

It is an endorsement of the quality and performance of GMC trucks such as could be obtained in no other way than by the actual sale of these trucks to firms having every facility for selecting the best motor truck.

To the retailer of motor trucks this should be proof of GMC quality and of the possibilities that a GMC franchise offers.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 ***2 Ton $2375*** ***3½ Ton $3600*** ***5 Ton $3950***

Chassis Only—At the Factory—Tax to be Added

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CALENDAR

Buenos Aires, Argentina, November.—Annual Show, Automovil Club Argentino.

London, England, Nov. 3-11.—Olympia Automobile Show., auspices of the Society of Motor Manufacturers and Traders.

Pittsburgh, Pa., Nov. 4-9.—Electric Show, auspices of the Electric League of Pittsburgh, Motor Square Garden; Paul D. Lockard, manager.

Chicago, Ill., Nov. 6.—Society of Automotive Engineers, meeting of Engine Division, Standards Committee.

Chicago, Ill., Nov. 7.—Society of Automotive Engineers, joint meeting of Agricultural Power and Stationary Engine Divisions, Standards Committee.

Houston, Tex., Nov. 8-18.—South Texas Fair.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Cotati, Cal., Nov. 11.—50- and 100-Mile Races.

San Carlos, Cal., Nov. 11.—500-Mile Armistice Day Race.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory; Fred W. Payne, manager.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Philadelphia, Pa., Nov. 13.—Pennsylvania Section of the American Institute of Electrical Engineers; Meeting on Motor Buses.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Chicago, Ill., Nov. 14-15.—Semi-Annual Convention, Factory Service Managers, auspices of the National Automobile Chamber of Commerce, La Salle Hotel.

Harrisburg, Pa., Nov. 20-21—Annual Convention of the Pennsylvania Automotive Assn.; L. H. Hagerling, secretary-manager.

Louisville, Ky., Nov. 20-25.—Closed Car Week, auspices of the Louisville Automobile Dealers' Assn.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Tower, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

St. Louis, Mo., December.—Third Annual Meeting of the American Petroleum Institute, Statler Hotel.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Hotel Commodore.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

New York, N. Y., Dec. 7-13.—National Exposition of Power and Mechanical Engineers, Grand Central Palace.

Paris, France, Dec. 15-Jan. 2.—Aeronautical Salon, Grand Palace, auspices of the Chambre Syndicale des Industries Aeronautiques, 9 Rue Anatole de la Forge.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

New York, N. Y., Jan. 9-12.—Society of Automotive Engineers, Annual Meeting.

Chicago, Ill., Jan. 15-19.—Thirteenth American Good Roads Congress and Fourteenth National Good Roads Show.

Cleveland, O., Jan. 20-27.—Cleveland Automobile Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn., New Public Auditorium; Herbert Buckman, manager.

THE BIG SHOWS

NEW YORK, N. Y., JAN. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

CHICAGO, ILL., JAN. 27-FEB. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, Drake Hotel.

Chicago, Ill., Jan. 29-31.—Annual Meeting of the Automobile Electric Assn., Congress Hotel.

Ann Arbor, Mich., Jan. 29-Feb. 3.—Automobile Show, auspices of the Washtenaw County Auto Dealers' Assn.; Jos. Thompson, secretary.

***Charlotte, N. C., February.**—Carolina Automobile Show, auspices of the Charlotte Automotive Trade Assn.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; M. L. Garlock, manager.

Cincinnati, O., Feb. 7-14.—Annual Automobile Show, auspices of the Cincinnati Automobile Dealers' Assn.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12.—Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn.; Frank R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19. — Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

Louisville, Ky., Feb. 19-24.—Fifteenth Annual Show, auspices of the Louisville Automobile Dealers' Assn.

New York, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the Saginaw Auto Dealers' Assn.; Guy S. Garbet, manager.

HOUSE ORGAN KEYNOTES

Keep a tight rein on your mouth and spurs to your ambition if you would ride the road to success.—*Cadillac Cheer.*

There's little difference in men—so far as their bodies are concerned. The real difference is in men's minds.

Intellectual giants are, physically, very much like those who are content to sit and marvel at their feet.

If you want to be "different" from the workers around you, make your mind "different."

If you want to achieve greater success than they have, make your mind greater than theirs.

If you want your work to be more profitable, make your mind more profitable.

Give the same serious attention to building up your mind that the athlete gives to making his body strong and fit for the race.

The athlete goes on a training diet for months before each contest. Put your mind on a diet, and it will be fit.

The prize fighter doesn't train on a meal of cream puffs.

Give your mind solid food—good, wholesome reading, thinking and study.

The mind grows on what it feeds upon. If it is fed flabby food, it will grow flabby.

A few minutes a day spent in training your *mind* will give you more energy for your *body.*

And an active mind and body are your most valuable assets.—*Durant Success.*

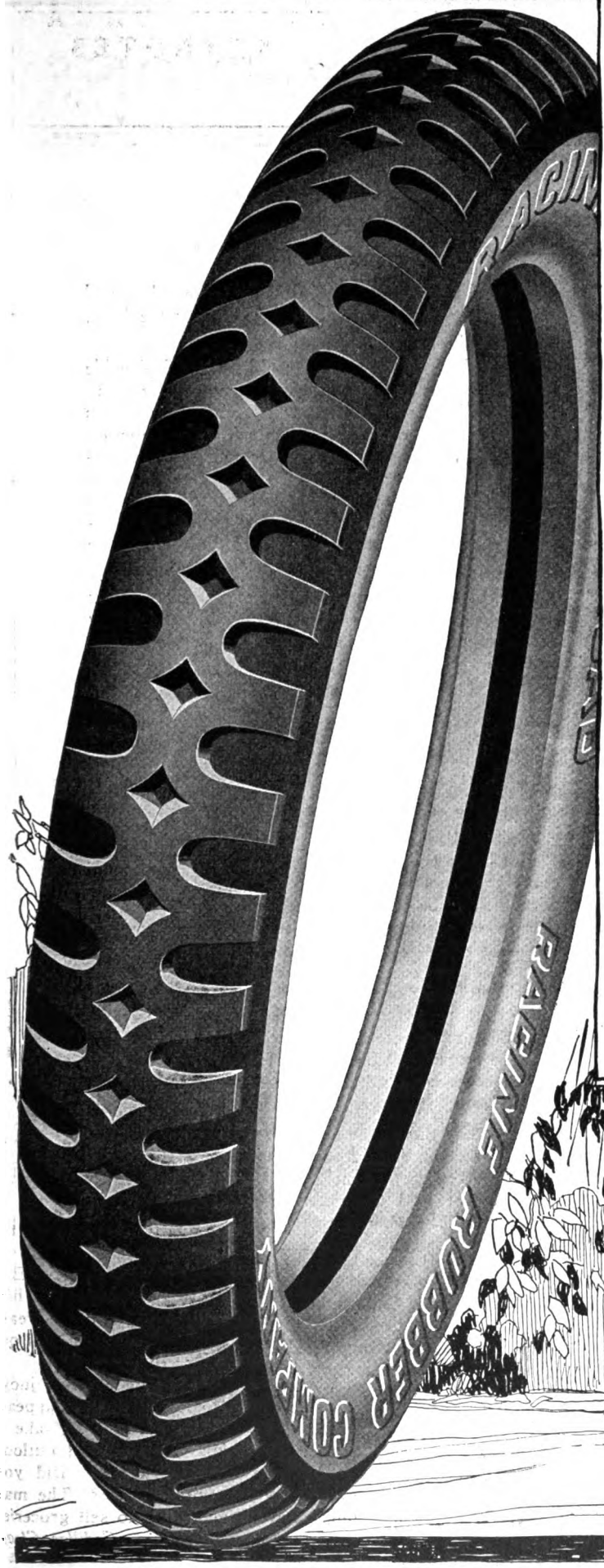
The man who spends much time looking for an easy way to success will not have to go any farther than his looking-glass to find a failure.—*Between Us.*

The other morning we came along the crowded street, whistling and feeling just as if pay-day was only a few hours hence. We were just about to enter a little news emporium to buy a morning paper, when—say, that face nearly ruined the day for us.

Sitting on a box in the doorway of the little news emporium was a man, no doubt the proprietor of the place. Evidently his breakfast had not pleased him or, worse still, he had not had his breakfast. One thing sure he had climbed out of the wrong side of the bed.

We may have been mistaken in judging this man's disposition by his appearance. But we were afraid to take a chance with him. His outward outlook on life had lost him a sale. Did you ever know of a similar case? The man might have been trying to sell groceries or pianos or automobiles.—*Cadillac Clearing House.*

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For substantial profit in the tire business, look to *volume* sales. Offer the tire that sells readily —the tire for which there is steady demand.

Racine Tires, with the black treads and other improvements, are even greater in demand than ever.

The full Racine line—the Multi-Mile Cord, the famous Country Road fabric and the fabric Trusty —offers the dealer a profit opportunity of unusual strength.

Write

RACINE RUBBER COMPANY
RACINE, WISC.

Distributors in Principal Cities

RACINE
Absorbing
ShockStrip

It welds the Tread and Carcass—Inseparably

RACINE
FABRIC TIRES
COUNTRY ROAD



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PUBLISHER'S OBSERVATIONS

BEING ABLE TO STOP

A GENTLEMAN had his car specially equipped with an adaptation of the braking system widely used on railroads, but after some experimentation he discovered that the outfit had one serious defect. This, after due thought, he remedied by a device whose simplicity recommends it to others who may be similarly situated. This was the device:

On the rear of the car he caused to be affixed a sign, reading, "Westinghouse air brakes. Beware quick stop!"

¶ For it has come to this, that a man whose brakes are better than most, needs a bumper on the back. The reason is that so few cars having poor brakes have bumpers on the front. No law says that they should, while the almost universal injunction of the statutes demanding that brakes shall be "adequate," falls of its own weight unless—as it rarely does—it also stipulates in enforcible terms that brakes be maintained at all times in adequate condition.

Hence the experienced motorist, while insisting that his brakes be tuned right up to concert pitch, prays that he may not have occasion to make full use of them. Nothing more disgusts a careful driver than to be rammed for his very pains to keep out of trouble.

¶ Nearly every car now being built may be said to have adequate brakes in the sense that at the time it leaves the factory it is possible to slam on either set hard enough to lock the wheels. This, however, is not to say that the brakes of every new car work properly, as that would not be true. Some grab too quickly, while others require the application of more force than should be required.

Furthermore, if every new car, before leaving the factory, were to be tested by an imaginary rigging, which, when tripped, would apply a stated number of pounds pull at pedal or lever, while moving through a stated distance, it would be found that in but few instances would the theoretical minimum of space be traversed before the machine came to rest. Let it be admitted, then, that while in one sense nearly all cars have adequate brakes when they leave the factory, no standard governs their application as to force required or movement of the controls in order to make them work. When that has been said the most has been made of a very grave condition.

¶ It is an undisputable fact that a little while after they leave the factory many cars, unless their owners keep right after them, have disgracefully poor brakes. Strange as it may seem, this charge lies against products of both low and high degree, for the cheapest cars of all can be made to stop as abruptly as they can be made to execute any other manœuvre.

One who doubts this is advised to open her wide and then—suddenly—pull up the emergency, tread on low speed and bridge the right foot between low and reverse pedals. The result will be, to say the least, a revelation.

¶ This phase of the matter would be less deplorable had the average owner the slightest compunctions about letting his brakes run down; which apparently he has not. Were he compelled to submit to periodic inspections by the police, as has sometimes been proposed, service stations would be making a lot more money. But it is evident that this remedy would be imperfect. Some are always evading statutory injunctions and a post mortem verdict of "defective brakes," is small consolation to the bereaved.

¶ And if the legal aspects of the matter are complex its physical aspects are even more so. The technology of the subject might be subdivided as follows:

I. The equipment—(a) Brakes, (b) Lining, (c) Means of application.
II. Its condition—(a) Wear, (b) Lubrication, (c) Adjustment.
III. Its operation—(a) the Knowhow, (b) the will or ability to learn proper operation, (c) Psychology, i.e., "time reaction" of the individual operator in relation to traffic density and speed.

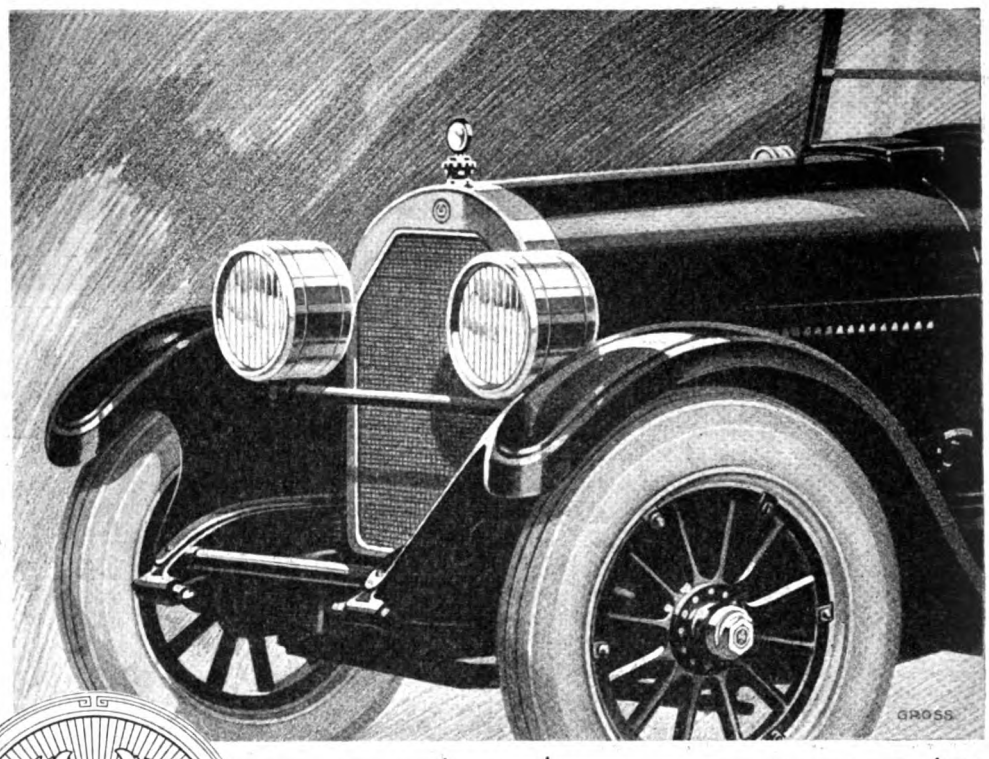
Quite a lot of room for argument there!

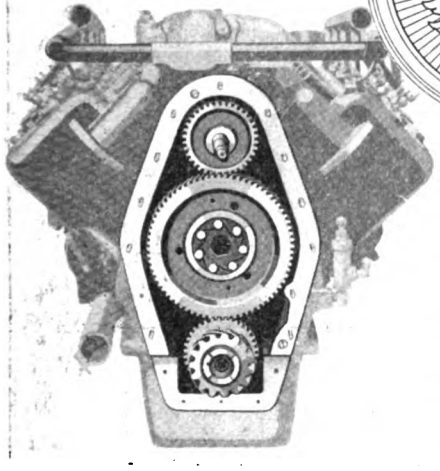
But let no one be beguiled by sophistries. Just because the Fool might throw the Vamp through the windshield if he pulled up quickly with all his might, there is no excuse for brakes that seemingly have no retarding effect at all. There should be a rational, median course of reasoning and practical result. Harsh brakes are not wanted, nor brakes that are here today but gone tomorrow, nor brakes that require constant adjustment. In other words, a compromise must be sought, but it must be a compromise in engineering specifications, not a compromise with the public conscience.

¶ For today there is an apparent, a very strange, and it might be almost said an alarming anomaly, which faces the average automobile owner, the dealer who sold his car and the manufacturer who made it; which faces the motoring public, the automobile industry and finally the American people—to such importance has the automobile traffic problem grown. That anomaly is that it is perilous to be without good brakes, but often perilous to use them in those cases where they are to be found.

It is no exaggeration to say this question is important. Railroad experience has proved that the limiting factor in handling freight traffic on heavy grades is not motive power, but braking power. Similarly it may come around to the point where being able to stop will be regarded as the most important consideration with regard to an automobile, or an automobile driver, or both.

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Timing Gears

Peerless timing mechanism excels in two cardinal virtues:—It is silent. It requires no adjustment.

The gears are of the helical spur type with wide face. Housed in the front gear case, they run in a constant spray of oil, delivered under pressure.

Silence is insured by the fibre insert in the camshaft gear [the large one in the illustration], which operates between the crankshaft and the fanshaft gears.

Things in Which Peerless Excels

The new eight-cylinder Peerless does not ask you to rest content with results *merely equal* to the best you have hitherto known.

On the contrary—we hope that you will approach the car with your expectations keyed to a higher pitch than ever before.

The things in which the Peerless excels bespeak an unmistakable superiority, and that superiority *swiftly makes itself known.*

The Peerless *begins* to excel from the very first moment—that delightful moment when you learn that its equipoise is so perfect that it almost *guides itself* under your directing hand.

From that time forward one thrill of deep satisfaction follows fast on the heels of another, until you have run the full gamut of greater motoring enjoyment.

The culmination of it all is the proud satisfaction of knowing that *the road is yours* —that Peerless will never ask you to lower your colors in any call for speed or power which you may make.

On the way to that realization you will have other deep gratifications—the realization, for instance, that Peerless power is not a thing to be laboriously "built up" when you see a hill, or an emergency, approaching, but a prodigal source of energy which releases itself *instantaneously and at the full flood.*

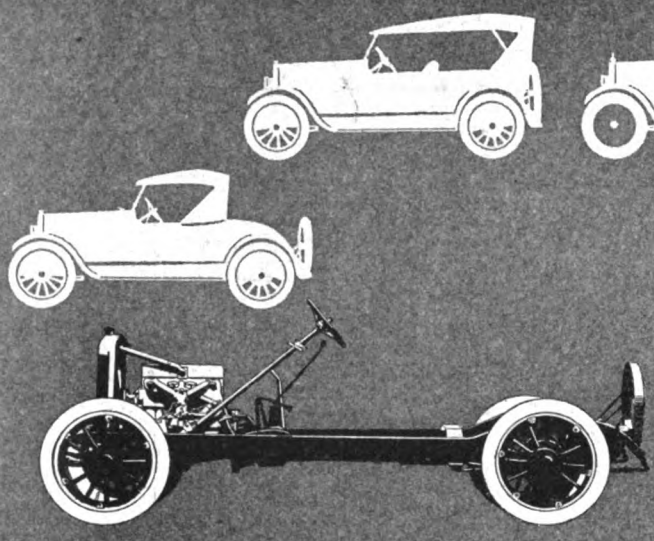
From time to time we shall try to point out in these announcements some of the practices which contribute to the *greater* things in which Peerless excels—but you will get more in half an hour of Peerless demonstration than we could tell you in a year's time.

Peerless Eight Types—*Four Passenger Touring Phaeton; Seven Passenger Touring Phaeton; Two Passenger Roadster Coupe; Four Passenger Suburban Coupe; Five Passenger Town Sedan; Seven Passenger Suburban Sedan; Five Passenger Berline Limousine; Four Passenger Opera Brougham*

THE PEERLESS MOTOR CAR CO., CLEVELAND, OHIO

PEERLESS

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Easy to Sell
Easy to Service

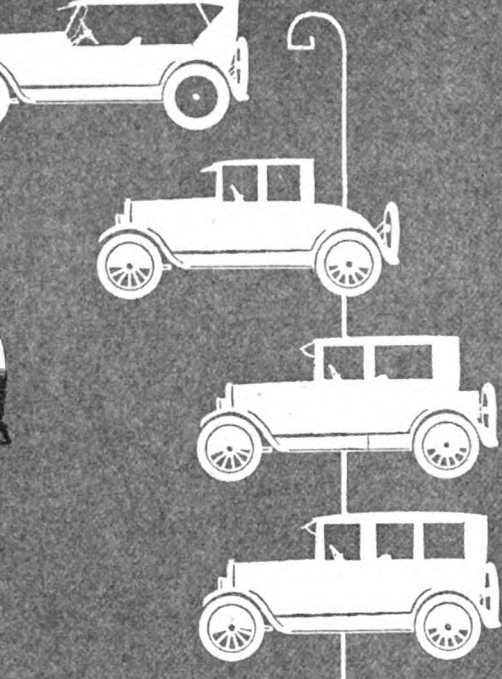
Oakland dealers are doubly advantaged: their business is good because their car is easy to sell; it is profitable because no car is easier to keep sold—or to service.

The New Oakland's field is one of the largest—the car an outstanding value in that field. Its highly-developed, six-cylinder, overhead-valve engine is the only engine guaranteed in writing for 15,000 miles. And with three open and three closed bodies it satisfies any prospective purchaser's need.

No less important an advantage follows Oakland's established policy of building a single chassis, because the dealer has fewer parts to stock and only one chassis to service.

Many old established dealers have recently sought the Oakland franchise. They appreciated the merit of the car itself, the permanency of the franchise and the unusual sales possibilities of the G. M. A. C. purchase plan. A wire secures the Oakland franchise for any responsible dealer whose territory is open.

Oakland Motor Car Co., Pontiac, Michigan
Division of General Motors Corporation



The New

Oakland Six

The 1923 Series

Roadster, 2-Passenger	$ 975
Touring Car, 5-Passenger	995
Sport Car, 4-Passenger	1165
Coupe, 2-Passenger	1185
Coupe, 5-Passenger	1445
Sedan, 5-Passenger	1545

All prices f. o. b. at factory

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Co'l'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 393	5	Starter—Dem. Rims	$ 364	2	Starter—Dem. Rims	$ 530	2	$ 595‡	5	Starter—Dem. Rims	3¾x4	Own	L	H	T		Hol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3⅛x4¼	Con	L	C	P		Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760‡	5		3⅝x4	Own	L	H	T		Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		850	4	860	5	C, V	3½x4	Own	H	H	P		Z-H	Rmy	R-AL	Own	Own	Own	Q	3.77	30x3½	103	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5	N	3⅝x4	Own	L	H	T		Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dort	865	5	P	865	2	P	1,020§	2	1,070§	5	C, P, V	3½x5	Lyc	L	H	T		Car	Con	Bos	Dlf	Own	Fln	F	4.66	31x4	108	Dort
Dodge Brothers	880	5	C, P	850	2	C, P	980	2	1,195§	5	C, N, P, V	3⅞x4½	Own	L	H	P		Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, C, D, N, P, V	3⅝x4¾	Own	H	H	P		Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Maxwell	885	5	C, K, P	885	2	C, K, P	935	2	1,335	5	C, D, K, P, T	3⅝x4½	Own	L	H	T		Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V, Z	3⅞x4¼	Own	H	H	P		Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, H, P	895	2	C, H, P	1,095§	2	1,345	5	C, H, N, P, T, V, a	3½x5	Lyc	L	H	T		Car	Wes	Wes	B&B	Mec	Fln	S	4.8	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5	V	3⅜x5	Own	H	H	P		Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T		Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5	C, D, P	1,075	4	C, D, K, P, Z	1,375‡	5	1,595	5	C, D, N, P, V	3¾x5¼	Own	H	H	P		Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T		Sco	Bos	Own	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T		Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, H, O	1,095	4	D, E, G, H, J, L, O, Q	1,395	3	1,395	5	D, G, H, J, L, N, O, V	3½x5	H-S	L	H	T		Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, H				1,245§	5				3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T		Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, L, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3⅞x5¼	Own	L	H	T		Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, Z, b	1,095	2	C, D, H, O, P, Z, b	1,345	3				3½x5	Lyc	L	H	T		Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T		Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335§	2	1,785	5	C, N, O, P, V	3¼x5½	Own	L	C	T		Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5	D, P, Z	1,295	5	C, K, P, W, Z	1,795	4	1,795	5	C, P, U, V, Z	3½x5	Gry	H	C	T		Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B, C, O	1,235	2	B, C, O	1,795	4	1,950	5	B, C, G, N, O, U, V	3½x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B, C, O						2,195	7	B, C, G, N, O, U, V	3½x4½	Own	S	C	T		Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5	A, H				2,385	4	2,475	5	A, H, N	3¾x5	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3⅜x5½	Own	H	C	P		Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T			Del	Del		Own	Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5	C, H, I	2,250	2	C, H, I	3,150	4	3,450	5	C, H, I, V	3½x5⅝	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	B C H 2J K¹ L O Q Zb	2,475	2	B CDH2JK¹LOQYb	3,250	4	3,475	5	B C H 2J K¹ LOUVZb	3¾x5½	Wei	H	H	P		Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	H, J, L, O, Q, b	2,790	4	H, J, L, O, Q, b	3,490	4	4,450	5	H, J, L, N, O, U, b	4¾x6	Own	T	H	P		Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stutz
Handley-Knight	2,650	7	C, D, G, H, J, K, P				3,450	4	3,450	7	C, G, H, J, K, N, O, P, U	4½x4½	Own	S	C	T		Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3½x5⅛	Own	L	H	P		Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, H, J, L, P, Z	3,785	2	A, D, G, H, J, L, P, Z			4,650	4	A G H J L N P U V Z	4½x6	Dus	R	C	P		Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer Four	3,950	6	G, 2I, O, P, Z, c	3,950	4	G, 2I, L, O, P, Z, c	4,850	4	5,250	7	G, 2I, N, O, P, T, U, Z	3¾x6¾	Own	L	C	P		B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer Four
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, C, D, b	975	2	B, C, D, b	1,225	3	1,550	5	B, C, D, G, N, b	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P		Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Dort	990	5	P	990	3	P	1,145§	3	1,195§	5	C, P, V	3½x4¼	Fal	H	H	T			Bos	Bos	Det	Own	Fln	L	4.66	31x4	115	Dort
Cleveland	995	5	D	1,260	5	CDEHJK¹LTWXZ	1,295§	5	1,495	5	C, D	3⅛x4½	Own	H	C	P		Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Hanson Light Six	995	5	H, J, K, P									3½x4¼	Con	L	C	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, C, V	3¼x5	Own	L	H	P		Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2¾x4¾	Own	H	C	P		Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Elgin "K-1"	1,125	5	C, D	1,165	4	C, D, H, K, M, Z	1,645	4	1,645	5	C, H, N	3½x4½	Fal	H	H	T		Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Chalmers	1,185	5	C, J, K, P, T, Z	1,185	2	C, J, K, P, T, Z	1,595	4				3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, D, H, O, P				1,450§	4				3½x4¼	Con	L	C	P		Zen	Wes	Wes	B&B	Dur	Sal	S	4.62	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B C D G N O P R T U V	3½x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3¼x5	Rut	L	H	P		Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Moon "6-40"	1,195	5	B	1,445	5	B, c	1,585	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Nash Six	1,240	5	D, R	1,645	4	D F H 2I 2J K Q R W Yb			2,040	5	C, D, N, R, T, U, V	3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, P, T, b	1,250	2	B, C, D, G, P, T, b	1,875	4	2,050	5	B, C, D, G, N, P, T, b	3½x5	Own	L	H	P		Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T		Str	A-K	Wes	Doo	Dur	Own	S	4.67	32x4	115	Velie "58"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Piedmont "6-40"	$1,285	5										3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z, c				$1,795	4	$1,795	5	E, J, K, N, O, S, V, Z	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Chalmers	1,345	7	C, J, K, P, T									3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3½x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7	D, R				1,890	4	2,190	7	C, D, N, R, T, U, V	3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	C, D, H, P, Z, b						1,850	5	C, D, H, P, V, Z, b	3½x4¼	Con	L	C	P		Str	Del	Del	B&B	Ful	Col	S	4.58	32x4	118	Barley
Courier	1,395	5	C, P, Z	1,495	4	C, D, H, K, P, T, Z, b	2,065	3	2,165	5	C, N, P, T, V, Z	3½x4¼	Own	H	H	T		Str	A-K	Wes	B&B	Mun	Col	S	4.6	32x4	116	Courier
Elcar	1,395	5	C, D, H, O, P, Z, b	1,395	2	C, D, H, O, P, Z, b	1,975	3	1,995	5	C D H N O P T U V Z b	3⅜x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, K, O, T, Z	1,695§	2	2,095	5	C, D, G, K, T, V	3½x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, O, P, R, T, V	1,675	4	B C D G K O P R V W Y Z	1,895	4	2,195	7	B C D G N O P R T U V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3⅜x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H	1,475	4	H, L	2,295	4	2,350	5	H	3½x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,985	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B, C, D, P, Z	1,645	5	B C D F G H K P U W Z b	1,835§	4	1,885§	5	B C D K N P S T V Z	3⅛x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, D, G, H, O, P, Z	1,945	4	A C F G H 2I 2J K O P Y	1,995	4	1,995	5	A, C, G, H, O, P, Z	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	C, D, H	1,745	4	L, 2J, X, H, W	1,995	4	2,375	7	B, D, H	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, H, K¹, O, P, R	1,545	2	D, H, K¹, O, P, R	2,095§	3	2,395	5	D G H K¹ N O P R U V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Paterson	1,550	5	H, Z				2,595	4	2,595	5	H, Z	3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, H	1,525	4	B, H	1,625§	5	2,295	7	B, H, T, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,850	5	A C D F H I K T V W b	2,050	4	2,275	5	A, G, N, U	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3½x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "66"	1,595	5	G, P, Z	1,695	4	G, P, Z	2,475	4	2,585	5	G, H, P, U, Z	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "66"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, D, G	1,645	2				2,645	5		3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, N, P, V, Z	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	Own	War	Tim	S	5.11	32x4½	123½	Durant Six
Studebaker Big Six	1,670	7	B, C, D, G, O, P, S, T, b	1,785	4	B C F G H 2I K O P T Y b	2,375	5	2,650	7	F G 2I 2J K N O P T V Y b	3¼x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
Kline Kar	1,690	5	B, H, P, Z	1,890	2	B, C, D, G, H, P, W, Z	2,750	4	2,790	5	B C G H N P T U V Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Mitchell	1,690	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J K¹ O P T X Z c			2,890	5	E 2I 2J K¹ N O P T U V X	3½x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Davis "63"	1,695	4	E, J, K, O, S, V, c				2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "63"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W Y Z	2,145§	5	2,545	5	U V	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B	1,885	5	B, D, X			2,485	7	B, N, U, V	3¾x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, O, P, Z, b	1,750	3	A, D, H, O, P, Z, b	2,480	4	2,575	5	A, D, H, N, O, P, V, Z, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, C, O, Z	2,150	4	B, C, F, O, Y, Z	2,485	5	2,485	5	B, C, G, O, T, U, V, Z	3¼x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, P	1,800	3	C, G, H, P	2,400	4	2,500	5	C, G, H, P, V	3¾x4¼	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3½x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K P R T V W Y b	1,895	2	F H 2I 2J K P R T V W Y b	2,195	3	2,695	5	F H 2I 2J K N P R V Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, O, P	1,900	2	A, B, D, G, O, P	2,750	3	2,850	5	A, B, D, G, O, P, T, V	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Case "W"	1,990	7	A, D, H, O, P, Z, b	1,950	4	A, D, H, O, P, Z, b	2,480	4	2,975	7	A, D, H, N, O, P, V, Z, b	3⅝x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Westcott "D-48"	1,990	7	H, O, P, Z, c	2,190	7	E H 2I 2J K¹ O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5	D, I, Z	2,150	2	D, I, Z	2,800	4	2,950	5	D, G, I, U, V, Z	3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O, P	2,245	4	A, B, C, D, G, O, P	3,100	5	3,155	7	A, B, C, G, O, P, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Roamer "6-54-E"	2,285	4	A, B, G, H, P, Z	2,750	4	A, B, G, H, J, L, P, Z	3,285	3	3,585	5	A B G H J L N P U V Z	3½x5¼	Con	L	H	P		Str	Spl	Wes	B&B	G-L	Tim	C	4.45	32x4½	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3¼x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3¼x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, P, R, Y	2,395	2	A C D H 2J K¹ L O P T W	3,095	5	3,395	7	A D G H K¹ N O U V Y a	3⅝x5¼	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	33x5	132	Haynes "75"
R & V Knight	2,475	7	A, C, G, H, Q, T, W, b, c	2,475	4	A, C, G, H, Q, T, W, b, c	3,000	4	3,105	5	A, C, G, H, N, Q, T, U, b	3½x4½	Own	S	C	T		Str	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	C, G, O, V	2,485	2	C, G, O, V	3,175	4	3,275	5	C, G, O, V	3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, O, V						3,525	7	C, G, O, V	3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5	C, D, H, I, Z	2,700	4	C, D, H, I, Z	3,350	4	3,700	7	C, D, H, I, V, Z	3⅝x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.9	34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ace "C"	$2,975	5		$2,975	2				$4,500	5		3⅝x5¼	Con	L	C	P	...	Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, C, G, P, R, T, e	3,435	4	A, B, G, H, P, R, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3¾x5⅛	Own	H	H	P	...	Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P	...	Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, P	3,300	4	A, B, C, D, G, P, Y	4,300	4	5,100	7	A, B, D, G, N, P, T, U	3¾x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, C, G, P, Z	3,600	4	A, B, C, G, H, 2I, P, X, Z	4,000	4	4,550	7	A B C G N P T U V Z	3¾x5¼	Own	L	C	P	...	Ray	Del	Del	War	War	Tim	S	4.58	33x5	132	Winton "40"
Mercer Six	3,750	6	G, H, O	3,750	4	G, H, J, L, O			5,000	6	G, H, O, T, U	3¾x5	Own	H	H	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.77	32x4½	132	Mercer Six
Ogren	3,750	5		3,750	4		4,500	4	4,800	5		3½x5¼	Con	L	C	P	...	Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	B C D E G I O S V W Y Z	3,800	4	B C D E G I O S V W Y Z	4,600	4	4,800	7	B C D E G I O S V W Y Z	3¾x5¼	Own	S	C	P	...	Ray	Scn	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H I J L O T Z b				4,900	3	4,900	5	A G H I J L N O T U V b	3½x5	Own	H	H	A	...	Zen	Scn	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, O, Z, b	3,950	4	A, G, O, Z, b	4,985	4	5,750	7	A, D, G, O, U, Z, b	4x5	Own	H	H	P	...	Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A E G H 2I 2J K O Q W Y Z	4,500	4	A E G H 2I 2J K O Q W Y			6,500	5	A E G H 2I 2J K N O Q Z	3½x5¼	Con	L	C	P	...	Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,500	5							5,500	5		3¾x5¼	Own	H	S	P	...	Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A C D E G H 2I J M O X Z	6,300	4	A C D E G H 2I J M O X Z	7,500	4	7,500	7	A E G H 2I J M O U V X Z	4½x6	Own	T	H	P	...	Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4⅞x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, E, G, 2I, Q, T, Z	7,600	4	A, B, E, G, 2I, Q, T, X, Z			11,000	7	A B E G 2I Q T U V Z	4½x5½	Own	T	H	P	...	B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	B, D, G, H, 2I, 2J, L, Z	10,900	2	B, D, G, H, 2I, 2J, L, Z			12,900	7	B D G H 2I 2J L U V Z	4½x4¾	Own	L	H	P	...	Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
EIGHT-CYLINDER PASSENGER CARS																												
Oldsmobile "47"	1,375	5	C, D, P, T	1,675	4	C F H K P Q T V W Z b	1,875	4	2,025	5	C, D, N, P, T, V, Z	2⅞x4½	Own	L	H	P	...	Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	C, D, G	1,735	4	C, D, G			2,635	7	C, D, G, N	2⅞x4¾	Own	L	H	P	...	B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	7	A, B, G, H, P, R, b	1,795	2	A B G H I L O P R W b	2,400	4	2,550	7	A B C D G H N O P R V b	3x5	Own	L	C	T	...	B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G, O, P	2,395	4	A, D, G, O, P	2,750	4	3,200	7	A, D, G, N, O, P, V, a	3¼x5	Own	L	H	P	...	Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P, Z	2,575	4	B, C, J, K, O, P, Z	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TD	Zen	Del	Del	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, D, E, G, H, O	2,620	4	A, D, E, G, H, O	3,625	4	3,695	7	A C D E G H N O T V	3¼x5	Own	L	H	T	...	Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A B G H 2I 2J M N O X	2,685	4	A B G H 2I 2J M N O X	3,385	4	3,685	7	A B G H 2I 2J M N O U X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G H O P T V Z b c	2,990	4	A B C G H O P T V Z b c	3,400	4	3,900	5	A B G H O P T U V Y Z b	3½x5	Own	L	H	P	...	B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3,150	4	A, B, C, D, G, P, T, X	3,925	5	4,100	5	A, B, C, D, G, P, T, V	3½x5⅛	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, P, T, Z, a	3,800	4	A B C D G O P T Y Z a	4,400	5	4,900	7	A B C D G O P T U V Z a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A B C D G H I O T V Z	4,090	4	A B C D G H I O T V Z	5,500‖	4	5,500	7	A B C D G H I O T U V Z	3½x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, D, G, I, O, P, R, Z, a	4,350	2	A, D, G, I, O, P, R, Z, a	5,350	...	6,000	...	A D G I O P R U V Z a	3½x5¼	Own	L	H	P	...	Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A B E G H J M O U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	B F G H I J L O 2Q S Z b	6,500	4	B F G H I J L O 2Q S Z b	7,800‖	4	7,800	7	B F G H I J L N O R V Y b	2⅞x5	Own	H	V	P	T	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
TWELVE-CYLINDER PASSENGER CARS																												
Packard Twin-Six	3,850	7	A, D, G, O, Z	3,850	2	A, D, G, O, Z	5,240	4	5,400	7	A, D, G, O, U, V, Z	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K¹**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk and rack; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

†**CLOSED MODELS:** Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §. ‡ **Two-Door.** ‖ **Four-Door.**

ENGINE: **Ans**—Ansted; **Con**—Continental; **Dus**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith; **Z-H**—Zenith or Holley.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse; **R—AL**—Remy or Auto-Lite.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

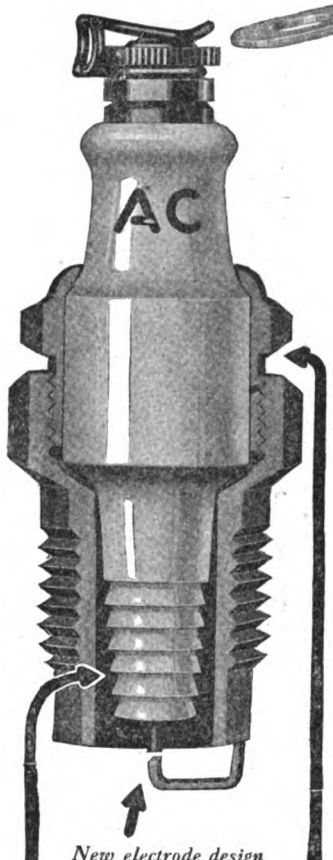
REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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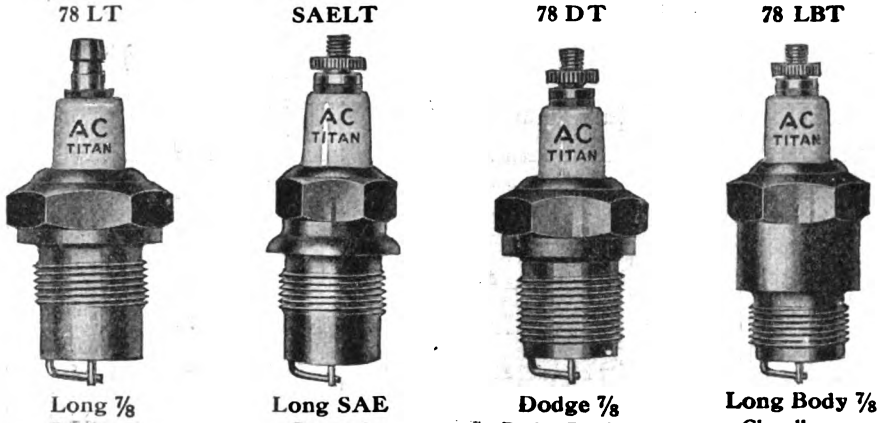
Spring terminal clip permits wire to be instantly detached and reconnected while motor is running. Facilitates testing spark plug and coil. No nut to be unscrewed or lost



New electrode design forms a natural drain so that no oil can lodge in spark gap

Unscrew this bushing and plug comes apart. Notice compact porcelain to withstand hard service

Patented CARBON PROOF porcelain with its high temperature fins attains sufficient heat to burn oil deposits, thus offering effective resistance to carbon



Long 7/8
Buick
Chevrolet
Haynes 75
Kissel

Long SAE
Durant 4
Oakland
Olds
Saxon

Dodge 7/8
Dodge Brothers
G. M. C. Truck
Hanson

Long Body 7/8
Chandler
Willys-Knight

Here Is the Way to Make Real Money Out of Plugs

Just a little attention to your spark plug business will enable you to make real money out of plugs. You can easily prove this truth for yourself. Follow the plan that money-making dealers have already adopted and see how your plug sales are multiplied.

You'll find that few motorists realize that hard starting, spluttering, backfiring, and other motor troubles usually are caused by old, worn-out, or incorrectly designed spark plugs.

THAT'S YOUR CHANCE! Sell new sets of AC's.

When you provide a car owner with a new set of AC's you sell him properly designed plugs that will certainly give him snappy, efficient service.

Make it a practice to look at the plugs in every customer's car. When you find a mixed assortment of plugs remind the owner that he needs a set of AC's.

Sell AC's when you find old, worn-out plugs.

Sell a few spare plugs to owners of old cars or new ones. Spare plugs are as important as spare tires.

In no time, you'll find that the car owners are looking upon you as the spark plug expert of your community. Pleased motorists will tell others, and in every instance the quality of AC Plugs make it certain that all your customers will be satisfied.

AC 1075

Special for Fords

The Best Spark Plug Ever Made for Fords

The AC 1075 is AC's answer to the need for better plugs for Ford engines—cars, trucks, and tractors.

In addition to many other efficient features, it has the famous AC Carbon Proof Porcelain with its high temperature fins that facilitate starting and avoid short circuiting.

Every Ford owner who comes into your store is a prospect for a set of AC 1075 Plugs.

Think of it—this plug gives you first place in the biggest plug market. And when you build up an AC trade among Ford owners of your vicinity you are not taking any chances of losing this good business overnight. AC quality will keep you the friends this fine plug makes.

Sell AC Spark Plugs

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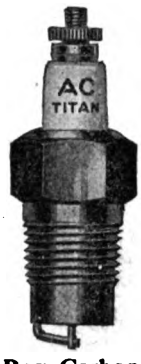
The Standard Spark Plug of the World



18 MT

Reg. Metric

Duesenberg
Essex
Hudson



12 CPT

Reg. Carbon Proof ½

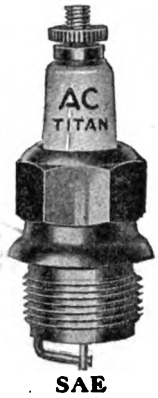
Overland 4



SAENT

Extra Long SAE

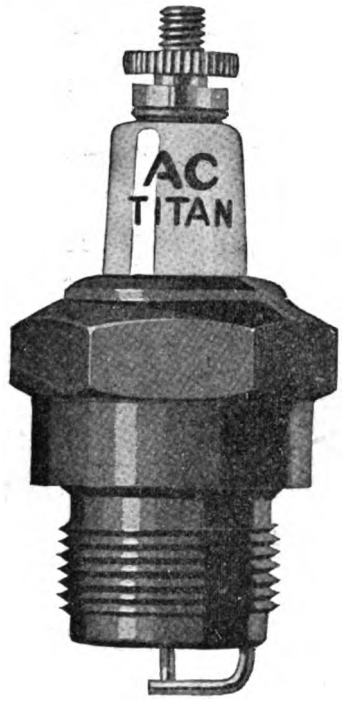
Elgin
McFarlan
Nash



SAET

SAE

Apperson
Durant 6
Mitchell
Marmon
Standard 8



Reg. ⅞ T

Cadillac
Chalmers
Cleveland
Cole
Daniels
Davis
Dort
Hupp
LaFayette
Liberty
Maxwell
National
Paige
Westcott
Winton

and 170 other makers of cars, trucks and tractors

Why You Should Sell AC's —and AC's *Only*

The successful merchant is the one who increases turnover and simplifies his inventory by cutting down his lines of competitive goods to a minimum.

A line of AC Spark Plugs will enable you to put your plug stock on that profitable basis. You need only one line of plugs—AC's—for there are AC's for every make and model engine.

Millions of car owners must have the AC Plugs shown on these pages. The fact that their cars were factory-equipped with AC's makes them AC buyers. This alone creates a tremendous market, and also is an outstanding proof of AC quality.

DODGE BROTHERS cars have been AC-equipped since the company was founded.

BUICK cars have been AC-equipped for fourteen years.

NASH cars, both Sixes and Fours, have always been equipped with AC's.

OAKLANDS for the past fourteen years have been AC-equipped.

CHEVROLET cars have always had AC Plugs in their engines.

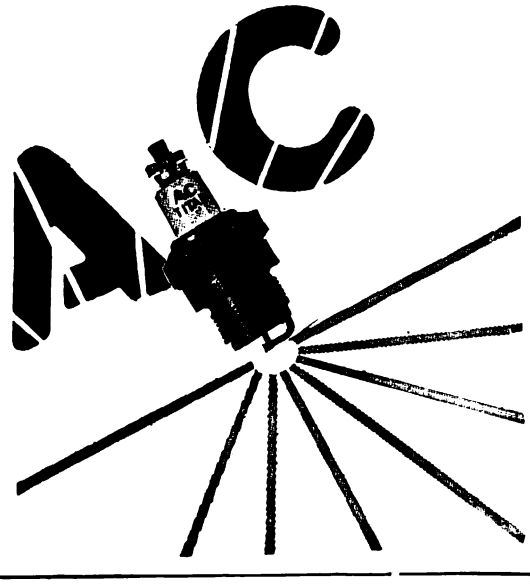
CADILLAC, CHANDLER, CLEVELAND, DORT, DURANT, ESSEX, HUDSON, HUPMOBILE, LAFAYETTE, MAXWELL, OLDSMOBILE, OVERLAND, PAIGE, WILLYS-KNIGHT and many others are all standard AC-equipped.

The leading racing men use only AC's. The first, second and third place winners at Indianapolis last May used AC Plugs.

Car Owners Everywhere Know "AC" Means Quality

You can sell AC Plugs to all motorists, for there are specially designed AC's for all engines, whether originally AC-equipped or not. And when you sell AC's you need waste no time on long-winded "introductions" or "explanations." AC's are the established plugs, the plugs that motorists everywhere know through experience and AC's strong advertising.

All you have to do is say "AC"! Don't overlook the opportunity to create new AC users!



AC Spark Plug Company, FLINT, *Michigan*

U. S. Pat. No. 1,135,727, April 13, 1915, U. S. Pat. No. 1,216,139, Feb. 13, 1917. Other Patents Pending

by the Set

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An End to Your Enameling Troubles

Think of it! You can end pitting, sagging, silking, and wrinkling. You can stop the pulling away from seams and bolt heads. You can get these desirable results and at the same time have all the free and quick-flowing, quick-setting qualities you could desire with good fullness and lustre too.

You can accomplish these results on fenders, hoods, shields, radiator shells, etc., with Bombay Black Baking Enamel—Rubber First Coater and Finishing Enamel.

"Can't be done", you may say. But we can prove it. Give us an opportunity. Write today.

THE GLIDDEN COMPANY

***National Headquarters,* Cleveland, Ohio**

Manufacturers of Endurance Body Varnishes, Rubbing Varnishes, Color Varnishes, Enamels, Undercoaters, Primers, etc.

Factories from Coast to Coast. Branches in Principal Cities



BOMBAY BLACK

Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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VELIE



$1795
AT FACTORY

WITH THE EVIDENCE ALL IN—

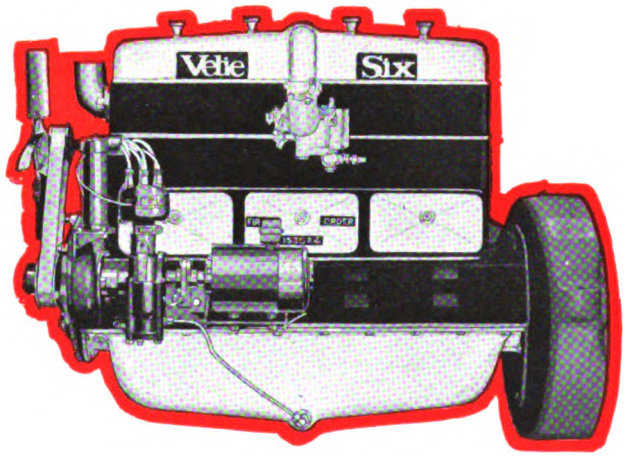
with the finest sixes America has ever produced, for comparison—Velie 58, equipped with the remarkable Velie-built motor, is the outstanding value.

Its power, economy, endurance and freedom from vibration are matched by the distinction of its long, graceful lines, its richness of upholstery and finish, its wealth of equipment. A car that you yourself would price hundreds higher. Five beautiful models, open and closed, to choose from. Fully illustrated descriptive literature will be sent on request.

VELIE MOTORS CORPORATION
MOLINE, ILLINOIS

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In Every Point, the Remarkable VELIE-BUILT MOTOR Surpasses All Records



Power "Velie 58 lowers record for difficult Mt. Wilson climb by over 11 minutes." "Velie 58 takes Ligonier Mountain in high gear." "Velie 58 loaded with passengers climbs Shelburne Mountain *five times* in high gear." News of some new feat of Velie power is constantly appearing.

Economy "Just finished 72 hour non-stop run with Velie-built motor. 1,818 miles with 87 gallons of gasoline, 2 quarts of oil, no water added." Aurora Auto Co. —Nearly 21 miles per gallon of gasoline, over 900 miles per quart of oil, running continually 3 days and 3 nights, averaging 25 miles an hour. L. D. Eldrige, Trenton, N. J., recently completed a 2,600 mile trip in Velie 58, crossing 350 miles of mountains, averaging 24 miles per gallon.

Endurance G. S. Bannan drove 3,011 miles, Indianapolis to Portland, Ore., his Velie 58 averaging over 300 miles per day. Snow 3 feet deep and 40% grades were conquered. Mrs. A. T. Wallis in Velie 58 drove 336 miles in one day. Trip from Baltimore to Birmingham, 1,637 miles, made in 50 hours.

Freedom from Vibration In a severe technical test of four leading makes for vibration, Velie 58 alone showed *no vibration* at 25 and 50 miles an hour. All the others showed vibration at 25 and increased vibration at 50. [Full report in Statistical Bulletin No. 17, The Manufacturer.]

If you are in territory that now happens to be open for the Velie line of splendid cars equipped with Velie-built motors, we suggest that you get in touch with us.

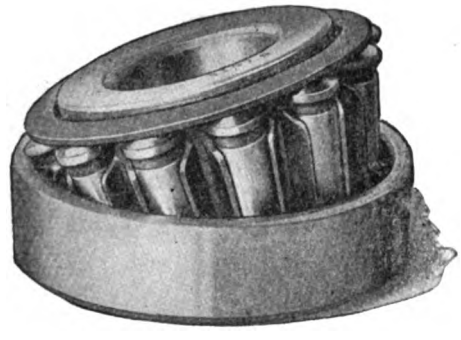
VELIE MOTORS CORPORATION, MOLINE, ILLINOIS

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"Have required no attention"

Says Service Manager

C. G. Snider, Factory Service Manager of the F. B. Stearns Company, Cleveland, manufacturers of the Stearns Car, in a letter dated September 20th, 1922, writes:



"I can say from a service standpoint that Bock Bearings are all that we can ask for. In the years that we have used them as wheel bearings we have had practically no replacements, and I might say they have required no attention at all.

"Considering the hard service wheel bearings perform, we think this is a fine record for Bock."

And the Service Manager ought to know.

THE BOCK BEARING COMPANY
TOLEDO, OHIO

BOCK

Quality TAPER ROLLER
BEARINGS

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Announcing Authorized Factory Service on

HYATT

Roller Bearings

NEW DEPARTURE

Ball Bearings

ON October 1, 1922, United Motors Service became the official field service organization for Hyatt Roller and New Departure Ball Bearings. This seasoned organization adds the servicing of these two products to its established authorized service representation for that impressive group of essential automotive products whose trade names are shown on the opposite page.

Authorized factory service can now be obtained at 6,357 branch, distributor and dealer points of service throughout the United States and Canada. This nation-wide organization has created for United Motors a confidence among car dealers and repairmen that is causing them to depend upon the authorized representatives of this organization whenever in need of genuine parts for any of these well-known products.

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KLAXON
Warning Signals

NEW DEPARTURE
Ball Bearings

Delco
Starting—Lighting—Ignition Systems

DEALERS, garages and repairmen can insure customer satisfaction, materially increase their business and build a growing asset of good will by using—*always and only*—the standard parts for the equipment listed on this page.

REMY
Starting—Lighting—Ignition Systems

Good business judgment will suggest the wisdom of using only genuine repair and replacement parts.

HYATT
Roller Bearings

And it is more convenient and profitable to use genuine parts! From twenty-one branches and thousands of distributors and service stations, these parts or equipments can quickly and easily be obtained by any dealer.

AC
Speedometers

JAXON
Rims and Rim Parts

HARRISON
Radiators

UNITED MOTORS SERVICE

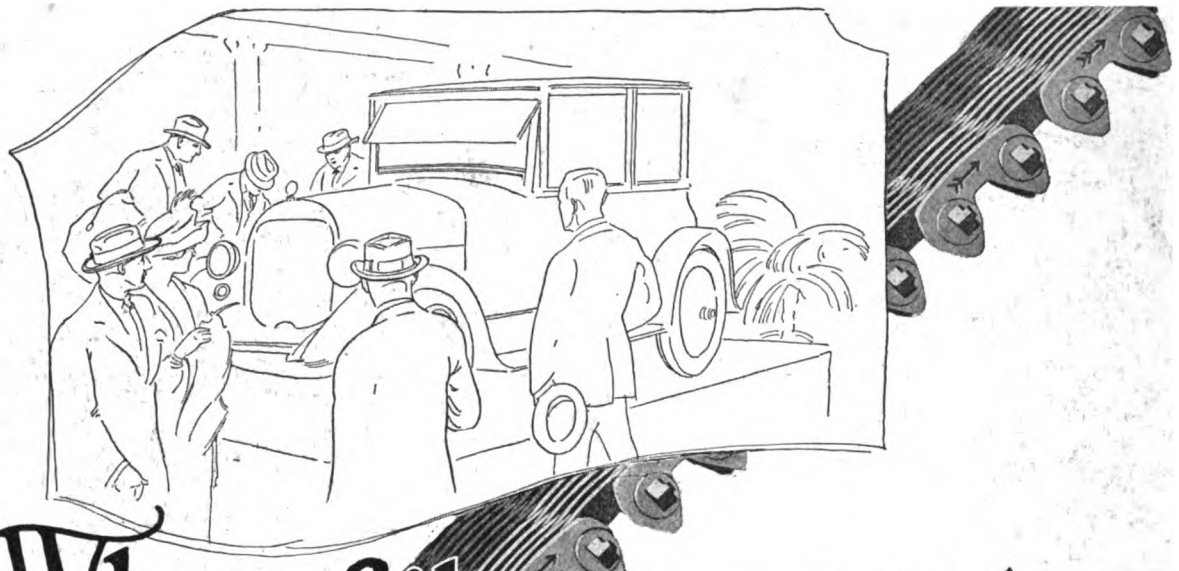
General Offices:
Detroit, Michigan

INCORPORATED

Branches in
Principal Cities

UNITED MOTORS
TRADE MARK

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When Silence counts

When your group of distributors gather for the first demonstration of the new model—when they reveal it to their eager salesmen—and when the salesmen present it to the discriminating public—

It is then that the silent smoothness of a genuine Morse Front End Drive counts.

Morse Silent Chain functions properly then and all the time because of its **distinctive design and because high standards of quality and accuracy are rigidly maintained in making it.**

MORSE CHAIN COMPANY

Main Office and Works
ITHACA, NEW YORK

Sales and Engineering Office
DETROIT, MICHIGAN

MORSE

GENUINE SILENT CHAINS

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Announcing a

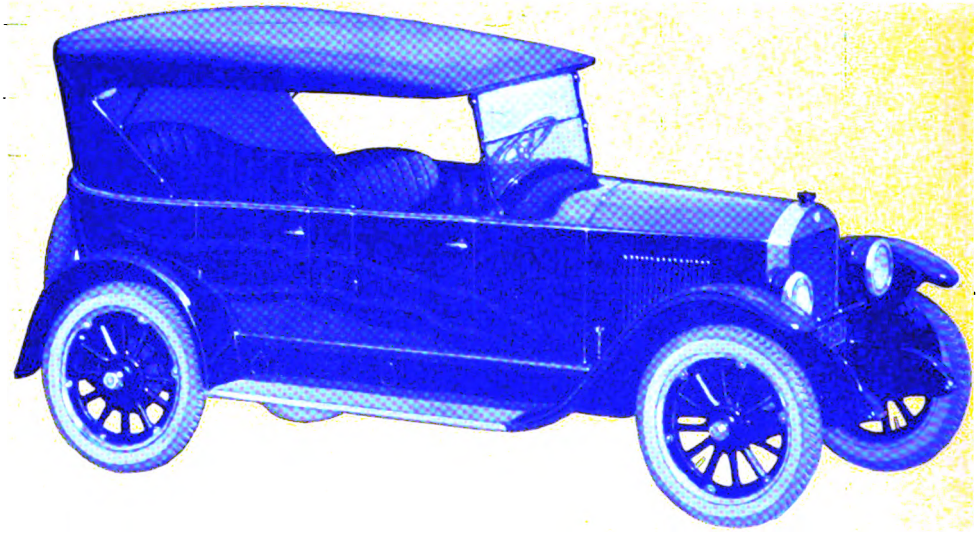
DORT SIX

A *new* car with *new* beautiful body lines and a *new* powerful motor. Also new reduced prices on Dort Four line

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DORT

DORT SIX



The Dort Six Touring Car

The new Dort Six is a worthy companion to the famous Dort Four. Wheel base, 115 inches; semi-elliptical front springs; cantilever rear springs with bronze bushings throughout; sturdy 5-inch deep channel steel frame; 31 x 4 cord tires; barrel-type headlamps; spiral bevel-geared rear axle; artillery-type wheels; disc wheels optional, but extra; spare tire extra; Timken and Hyatt bearings; Bosch ignition; multiple-disc clutch; slanting windshield; nickeled radiator; full crown fenders; nickeled door handles; and foot rest. Price, $990, f. o. b. Flint. The Dort Four Touring car reduced from $885 to $865 and other Four models accordingly.

$990

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A Car That Is Destined to Break All Dort Records for Sales—*and Profits*

With this announcement of a new Dort car—*a Six*—tremendous possibilities are immediately opened up for dealers who are quick to realize what a great demand this amazing car will create.

All four-cylinder Dort cars having been substantially reduced in price, there is added dealer advantage.

The Dort Six sets up a new standard of value for six-cylinder cars. It embodies far-reaching advances in design and engineering skill that till now have never been purchasable save in cars nearly twice the Dort price.

When placed in comparison with cars that rival it in price, it establishes for itself a unique and exclusive class of its own.

It is an aristocrat in appearance; it has power in abundance; it picks up nimbly; rides smoothly; grips the road tenaciously at high speed, and travels thriftily.

Impressive are the long, graceful body lines, indicative of the fine running balance of the car; the handsome finish, sparkling nickeled radiator and door handles, and the smartly tailored top that accentuates the beauty of the body.

A closer inspection reveals a wonderfully staunch chassis, long, flexible cantilever rear springs, and deep-cushioned upholstery that assure the utmost in riding comfort and traveling ease.

This new car, with its 45-horsepower motor, gives a new conception of power and flexibility—2 to 60 miles an hour on high gear; pick-up from 5 to 25 miles in less than 9 seconds.

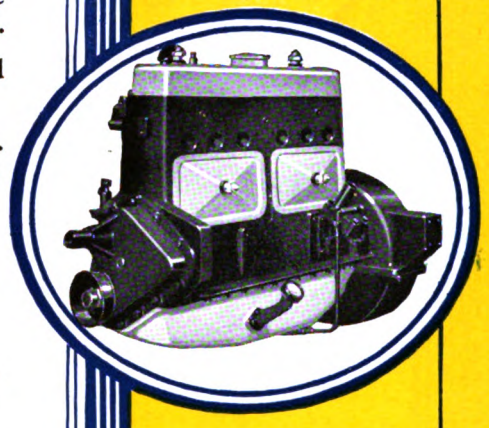
Dort engineers have produced here a motor that develops its greatest power where power is needed most—at practical speeds. In hill climbing, hard pulling, and for quick acceleration in traffic, full power is available instantly.

The perfection of the Dort Six valve mechanism with its full pressure oiling system—the most perfect to be found anywhere—is one of the finest pieces of motor design ever conceived. All reciprocating parts have been lightened; the crank shaft and its bearings made unusually large, and both so liberally supplied with force-fed lubrication as to produce smoothness and quietness never before attained.

Dort Four Touring Car	$ 865	*Dort Six Touring Car*	$ 990
Dort Four Roadster	865	*Dort Six Roadster*	990
Dort Four Yale Sedan	1070	*Dort Six Yale Sedan*	1195
Dort Four Yale Coupe	1020	*Dort Six Yale Coupe*	1145
Dort Four Harvard Sedan	1370	*Dort Six Harvard Sedan*	1495
Dort Four Harvard Coupe	1240	*Dort Six Harvard Coupe*	1365

Disc wheels regular equipment on Harvard models; extra on other models

DORT MOTOR CAR COMPANY, Flint, Michigan



The New Dort Six Motor

Remarkable fuel economy. Twenty-four miles to the gallon at a speed of thirty miles an hour.

45 horsepower; removable head motor.

All moving parts lubricated by combination force feed and splash system, the most perfect ever employed in motor design to this time.

Crank shaft extra large and in perfect static and dynamic balance. Both crank shaft and connecting rod bearings unusually large.

Extraordinary speed and acceleration. Two to sixty miles an hour on high gear. Five to twenty-five miles an hour acceleration in less than nine seconds.

Cylinder bore, 3⅛ inches. Stroke, 4¼ inches. Displacement, 195 cubic inches.

Thermo Syphon Cooling.

Digitized by Google

High Spots of the Dort Dealer Franchise

To know why Dort dealers are making money and why the Dort franchise is becoming more and more difficult to obtain you have only to glance over the high spots of the Dort dealer franchise. Here is one of the few real contracts in the industry. It backs up the dealer to the fullest extent and permits him to make a greater profit than he could on most other lines. It will help him to meet successfully the keen competition that will exist through all of 1923.

1. A Complete Line.

With the introduction of the Dort Six the Dort line is complete. There is every indication that the motoring public is gradually turning to quality six-cylinder cars and low-priced closed cars—Dort has both. A complete line of sixteen Dort models, excluding the Dort Delivery Car, means a greater volume of business. It simplifies financing, and lessens advertising and sales expense.

2. Liberal Dealer Profit.

Next to the quick turnover of Dort cars is the fact that the dealer makes a liberal profit on each car. This is true not only because the percentage of profit per car is good but because the selling expense per car is low.

3. Established Reputation.

For thirty-seven years, dating back to the time when the present Dort organization was engaged in the carriage business, the name Dort has always stood for the highest quality, and for fair and square business principles. Since 1914, when Dort started to manufacture motor cars, this reputation has been faithfully maintained and broadened until now respect for the Dort name is held in almost every village, town, and city in the country.

4. High Value and Quality of Product.

Dort has always been known as a car of highest quality. "Quality Goes Clear Through" is more than a slogan; it is the creed of every man who plays a part in the building of Dort cars. We can confidently say that the great value of Dort cars has never been equaled by any car in its price class—and Dort owners the country over vouch for the truth of this statement.

5. Broad Market.

The entire line of Dort cars falls in the popular price class, the Fours since the reduction being unusually low. This class of cars, as you know, makes more prosperous dealers than higher priced cars. It affords an opportunity to work your market intensively and to build a great business on volume sales.

6. Manufacturing Facilities of the Company.

With a Dort body factory in Kalamazoo, Michigan, and with a huge factory in Flint, Michigan, Dort cars can be said to be almost wholly Dort made. Indeed, Dort's remarkable manufacturing facilities is one of the prime reasons why Dort is able to build such a high quality car at such a low price.

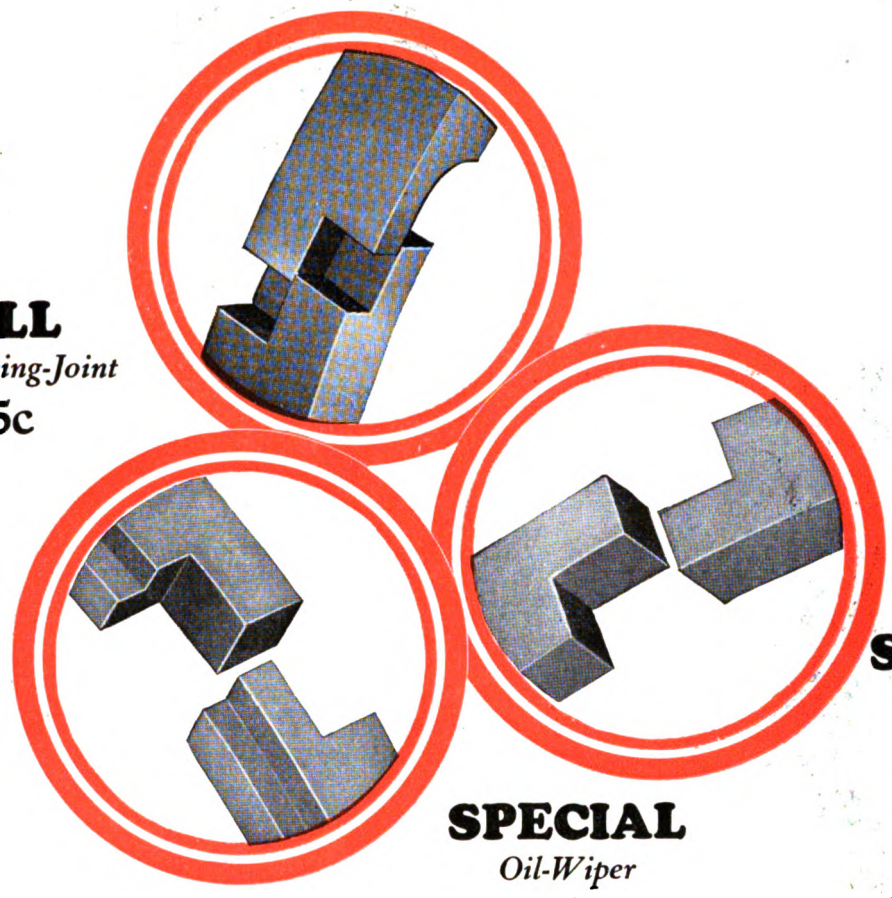
7. Extensive Advertising.

Dort's advertising for the balance of 1922 and for the whole of 1923 will be more than double that of any previous advertising campaign in point of space used. Large space will be used in The Saturday Evening Post, automobile papers, trade papers, and newspapers, in addition to a great direct-by-mail campaign and painted boards.

Dort Motor Car Company

Flint, Michigan

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GILL
Interlocking-Joint
75c

SERVUS
Step-Cut
40c

SPECIAL
Oil-Wiper
50c

For every need

Rings certified by the quality reputation of the Gill Manufacturing Company are now available to meet every piston ring requirement on the most economical basis.

Individually cast of special grey iron, their fine, close texture and elastic strength resist destructive heat and vibration, for unbelievably long mileage—holding *in* full compression—keeping excess oil *out*. Quick, perfect seating is assured by the lathe turned face on all three rings.



Twenty-four hour service on any type or style of ring is assured by adequate assortments in the hands of dealers and jobbers, supported by 36 branch offices in principal cities.

Gill Manufacturing Company

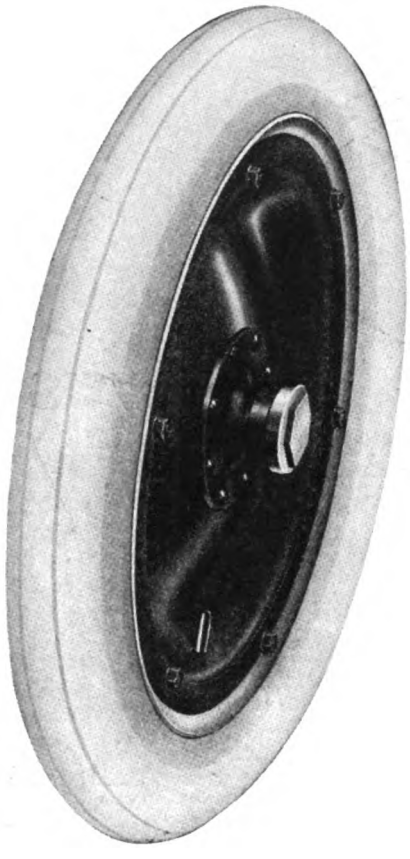
8300 South Chicago Avenue, Chicago

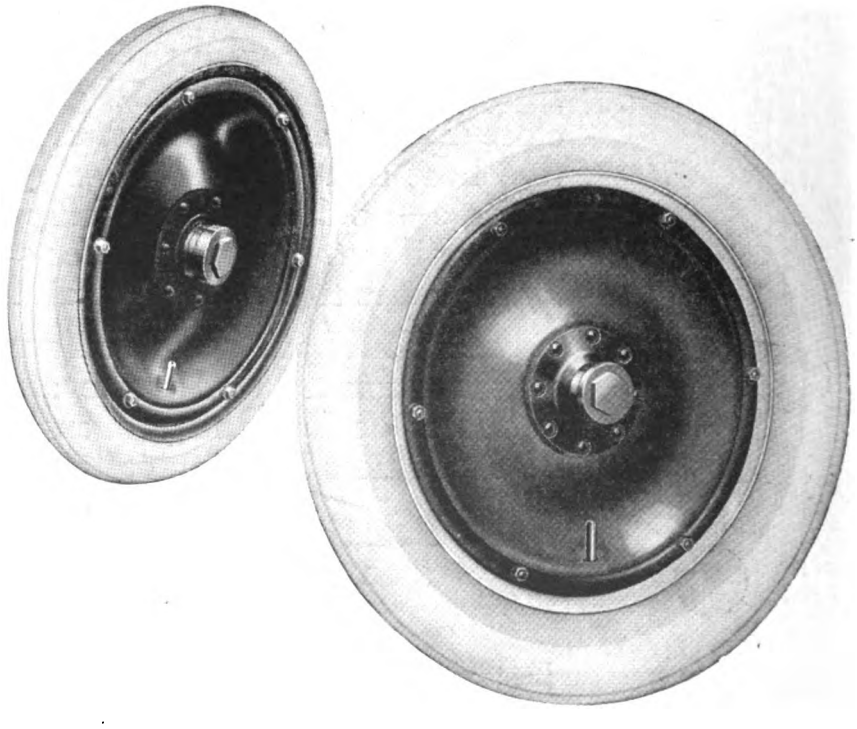
Eastern Headquarters—10 Central Park, West—New York City
Canadian Factory—415 King St. W. (Brown Engineering Co.), Toronto
Sole Canadian Distributor—Canadian General Electric Co., Ltd.
Export Connection—American Steel Export Co., 29th Floor, Woolworth Bldg., New York, N. Y.

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Motor Wheel PRODUCTS

T U





Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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arc

Every Wheel Advantage

LIFTING *rims alone* is work enough for most people. With Tuarcs they need never lift *whole wheels*, because standard demountable rims are used on Tuarc wheels.

This is but one of the inestimable advantages in selling Tuarc wheels, and Tuarc equipped cars.

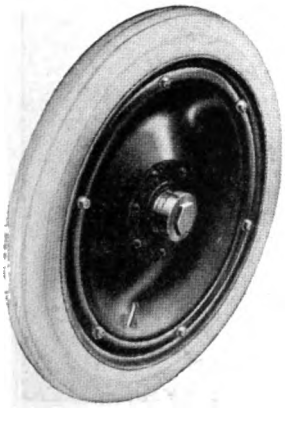
The Tuarc user pays for no special carrier for spares; and carrying spares involves no costly excess weight. The need for only four wheels intensifies Tuarc economy.

The Tuarc user pays for no special parts for hub or axle—Tuarc wheels fit just as does any standard wheel. Tuarc construction also first made possible the use of standard, fully accessible, direct outside valve stems on steel wheels.

These are the definite superiorities which underly the present undoubted preference for Tuarc wheels.

In mounting numbers car makers and car owners are adopting strong, beautiful, *practical* Tuarc wheels.





MOTOR WHEEL CORPORATION - LANSING, MICHIGAN

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

601 Capitol Theatre Bldg., 120 Madison Ave., Detroit
509 Fisk Bldg., B'dw'y at 57, New York — Bigelow Blvd. & Craig, Pittsburgh
584 Commonwealth Ave., Boston — 520 Van Ness Ave., San Francisco
10 South 18th St., Philadelphia — 1341 So. Hope St., Los Angeles

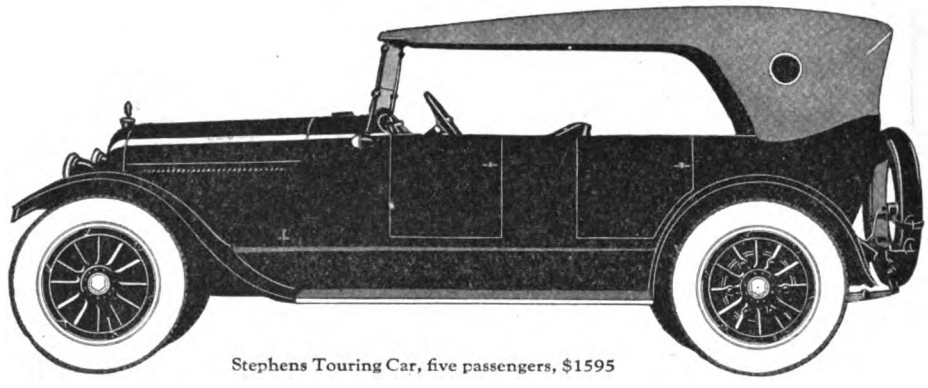
Gier

Tuarc

STEEL WHEELS

—a Motor Wheel Product

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Stephens Touring Car, five passengers, $1595

Now is the time to plan for 1923

If I could tell you half the facts about the new Stephens line and our selling plans for 1923, you would get on the long distance 'phone or telegraph this minute for a reservation on the nearest Stephens territory. And you'd ask us to put special delivery stamps on our catalogue and the letter giving you our generous contract terms. Some of the livest and most successful distributors and dealers in the United States have taken on the Stephens franchise after seeing what we have to show them. Why not you?

R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Don't miss this chance
Wire or write today

Digitized by Google



Keep Up Going Sales

The story of the General Cord Tire in 1922 is an inspiration to every tire dealer who seeks bigger sales and more profits. Each month, each week and almost every day of the year has witnessed a succession of shattered sales records.

To General's dealers there is nothing unexpected in its 1922 success. They know that there has never been a year in this tire's history that hasn't shown its dealers great sales increases. Even in the very bad times of 1922, General's sales kept right on increasing—with never a let-up.

General doesn't seek new dealers with the attitude of throwing a life preserver to a drowning man. Its main attraction is to successful merchants who want a tire that they can stay with and grow with—a tire that is not necessarily cheaper for a car owner to buy, but one that is cheaper for him to use.

Because we were tire merchants before we were manufacturers, our understanding of dealer problems has not only served to secure the best representation, but has been an important factor in the remarkable growth of General's sales.

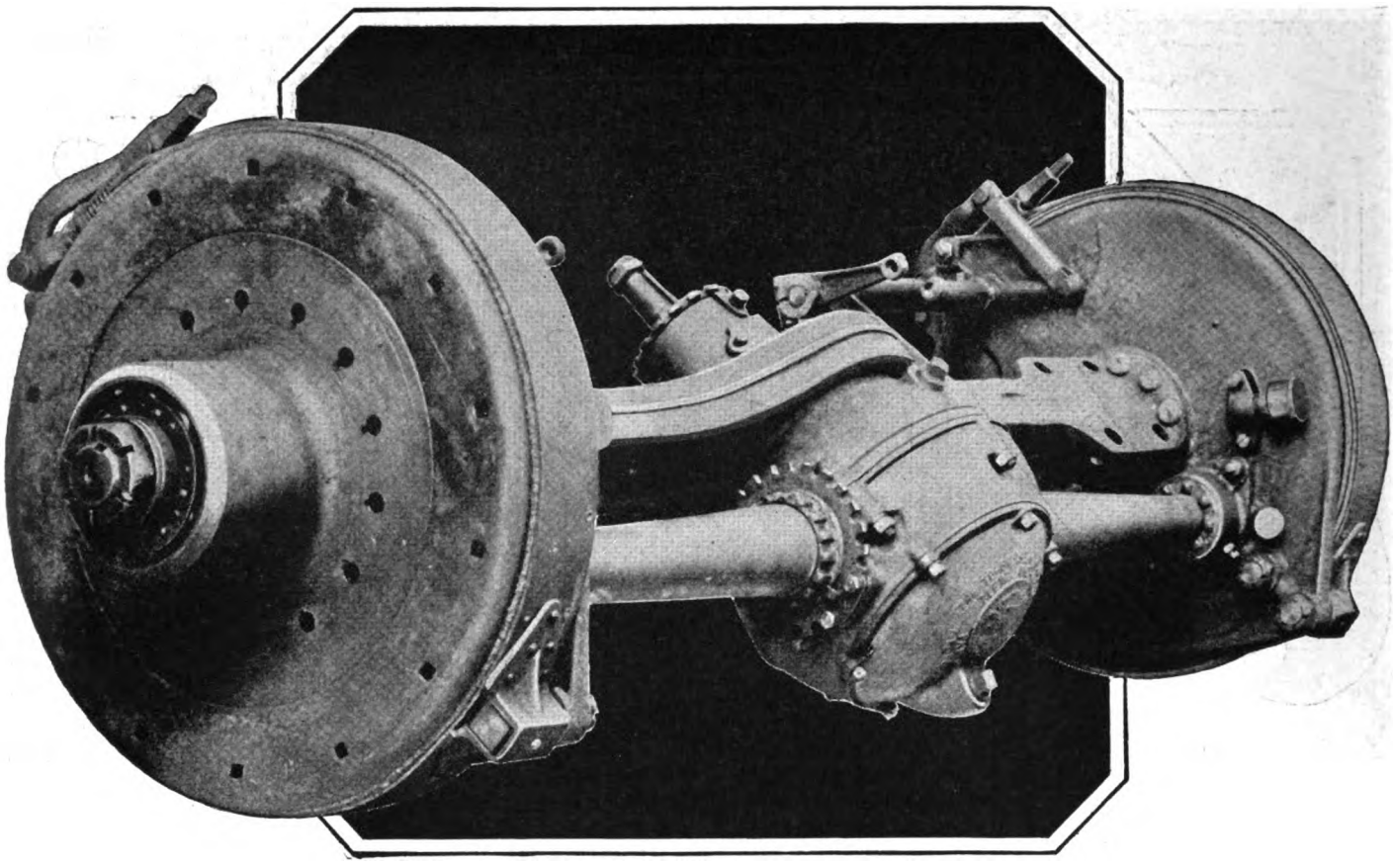
If you want factory loyalty and a tire that has set new standards of success, write for the details of our Class "A" exclusive dealer arrangement. *Double your sales with us in 1923.*

THE GENERAL CORD TIRE

—goes a long way to make friends

THE GENERAL TIRE AND RUBBER COMPANY
Dept. F-11
AKRON, OHIO, U. S. A.

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Torbensen holds high place with truck manufacturers, and engineers, and users, today, because actual service has proved it a better axle in point of strength, in point of durability, and in point of performance. It is the lightest weight, yet the strongest axle for a given capacity. It delivers a larger percentage of the motor's power to the driving wheels. It is fully enclosed, and protected from dust, grit and dirt.

TORBENSEN AXLES

CLEVELAND, OHIO

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The New Lincoln Memorial, Washington, D. C.
See America First Through Ainsworth Windshields

PHOTO BY UNDERWOOD & UNDERWOOD

VISION

Without the windshield motoring would be impractical, for through it, protected by the sun visor, the driver views the highway upon which he travels.

Ainsworth windshields and visors, blended with the other units in motor car and truck, are not only a cornerstone of construction, but deal with man's most precious faculty—Vision.

Millions of motor vehicles throughout the land are a fitting tribute to the quality of these products. In their fabrication we have contributed to the world's greatest industry of which we are a part.

The Ainsworth
WINDSHIELD AND VISOR

AINSWORTH MANUFACTURING COMPANY
DETROIT, MICHIGAN

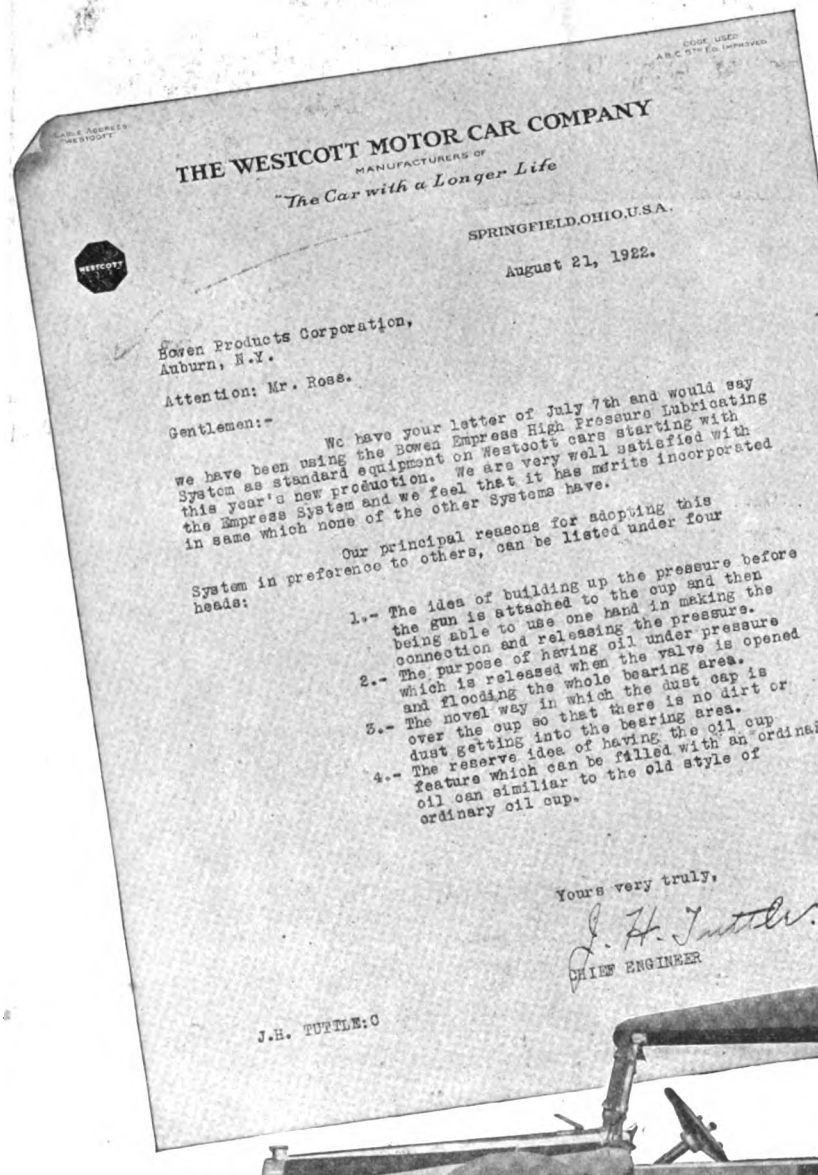
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Bowen-Empress

HIGH PRESSURE LUBRICATING SYSTEM

FOR ALL MOTOR CARS AND TRUCKS

Standard Equipment On THE WESTCOTT CAR



THE WESTCOTT MOTOR CAR COMPANY
MANUFACTURERS OF
"The Car with a Longer Life"

SPRINGFIELD, OHIO, U.S.A.

August 21, 1922.

Bowen Products Corporation,
Auburn, N.Y.

Attention: Mr. Ross.

Gentlemen:-

We have your letter of July 7th and would say we have been using the Bowen Empress High Pressure Lubricating System as standard equipment on Westcott cars starting with this year's new production. We are very well satisfied with the Empress System and we feel that it has merits incorporated in same which none of the other Systems have.

Our principal reasons for adopting this System in preference to others, can be listed under four heads:

1.- The idea of building up the pressure before the gun is attached to the cup and then being able to use one hand in making the connection and releasing the pressure.

2.- The purpose of having oil under pressure which is released when the valve is opened and flooding the whole bearing area.

3.- The novel way in which the dust cap is over the cup so that there is no dirt or dust getting into the bearing area.

4.- The reserve idea of having the oil cup feature which can be filled with an ordinary oil can similiar to the old style of ordinary oil cup.

Yours very truly,
J. H. Tuttle
CHIEF ENGINEER

J.H. TUTTLE:C

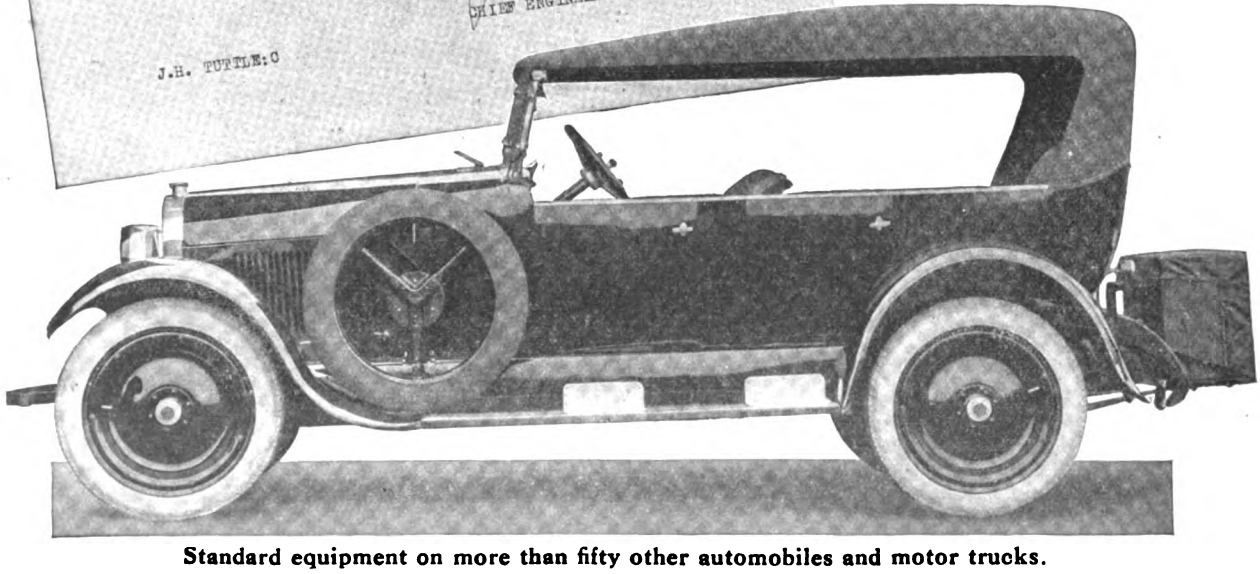


One hand operates it. Cleans and lubricates. Clean and convenient to use. Pressure or gravity system. For use with either oil or grease.

Write for Descriptive Folder No. W

Bowen Products Corporation

Auburn Division, Auburn, N.Y.



Standard equipment on more than fifty other automobiles and motor trucks.

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ELCAR

A WELL BUILT CAR

Completeness of the Elcar line—Fours and Sixes—gives dealers a wide range of profit opportunity. Elcar is thoroughly engineered—***a well built car.*** It is the lowest priced car using the 8-R Continental Red Seal Motor and other units of equal worth. Every unit of Elcar construction is tested, proved and selected on the basis of service to owners. As a dealer, you know that the car that satisfies is the car to sell. Elcar bodies reflect an experience of 49 years' fine coach building.

An Unexcelled Dealer Proposition

The Elcar dealer plan is liberal. It was written by men who know your end of the business. If you want to become permanently established on a profitable basis learn about the Elcar dealer plan—NOW.

Elcar Taxicabs offer a ready source of profit. We are the largest builders of 6-cylinder taxicabs in the world. This is a real winner—get the facts.

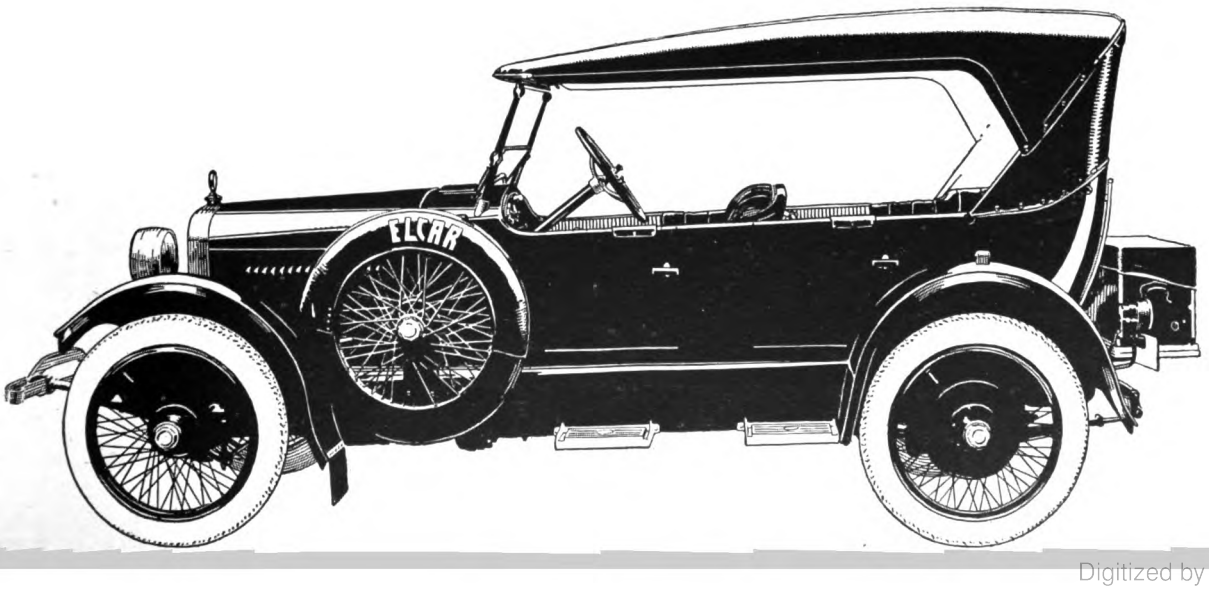
Write or Wire Today

ELKHART CARRIAGE AND MOTOR CAR CO., Elkhart, Indiana

Builders of Fine Vehicles Since 1873

SIXES
$1395 and up
f. o. b. factory

FOURS
at correspondingly low prices



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ELCAR

A WELL BUILT ORGANIZATION

F. B. Sears and Associates, A. M. Graffis, W. H. Denison and G. W. Bundy, bring to Elcar a new pledge of quality product and dealer service. Dealer connections can be profitable only when the factory is financially sound and its organization efficient and well built.

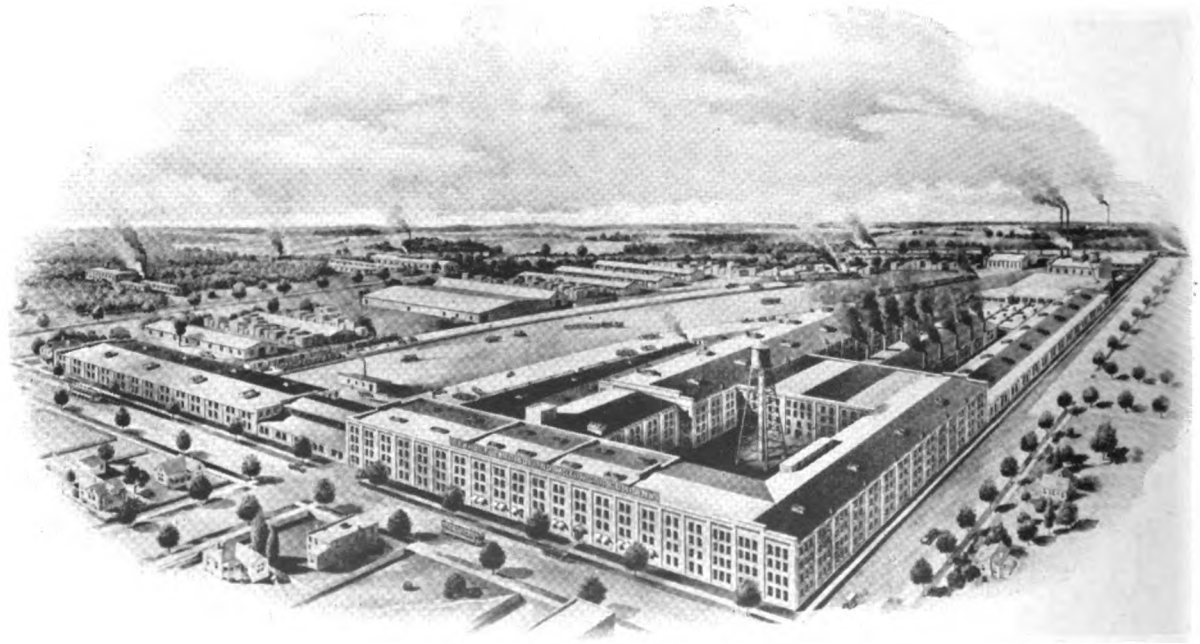
Elcar dealers are assured a product of honest merit, honestly priced and honestly merchandised. Dealer profits have been analyzed from every angle by Mr. Sears and associates and their belief that Elcar is the outstanding dealer opportunity in its price field today has been impressively confirmed.

The Elcar dealer plan is a surety of constructive help. It recognizes the hazards of your business and enables you best to cash in on the opportunities. It is a charted course to dealer success. It is a business-like program insuring permanence and profits. This is *the* dealer plan you have been looking for. Don't delay.

Get the Money-Making Facts—Write or Wire

ELKHART CARRIAGE AND MOTOR CAR CO., Elkhart, Indiana

Builders of Fine Vehicles Since 1873



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More Mileage *at* Less Fuel Cost





For Any Car Any Size~Old *or* New

THE foremost item to consider in the upkeep of your car, is fuel consumption. Are you getting every ounce of energy from the gas you buy? There is a way—the New Stromberg Carburetor makes a slave of the gas—gets a "full days' work" from every drop—makes a gallon go farther. It means actual economy through the saving of fuel.

THE make of your car—its age or condition cannot alter the fact that a substantial saving, a noticeable increase in efficiency of operation and additional power is evident where the Stromberg is installed.

WRITE for literature. State name, year and model of your car.

STROMBERG MOTOR DEVICES CO.
64 East 25th Street, Dept. 1119
Chicago, Ill.

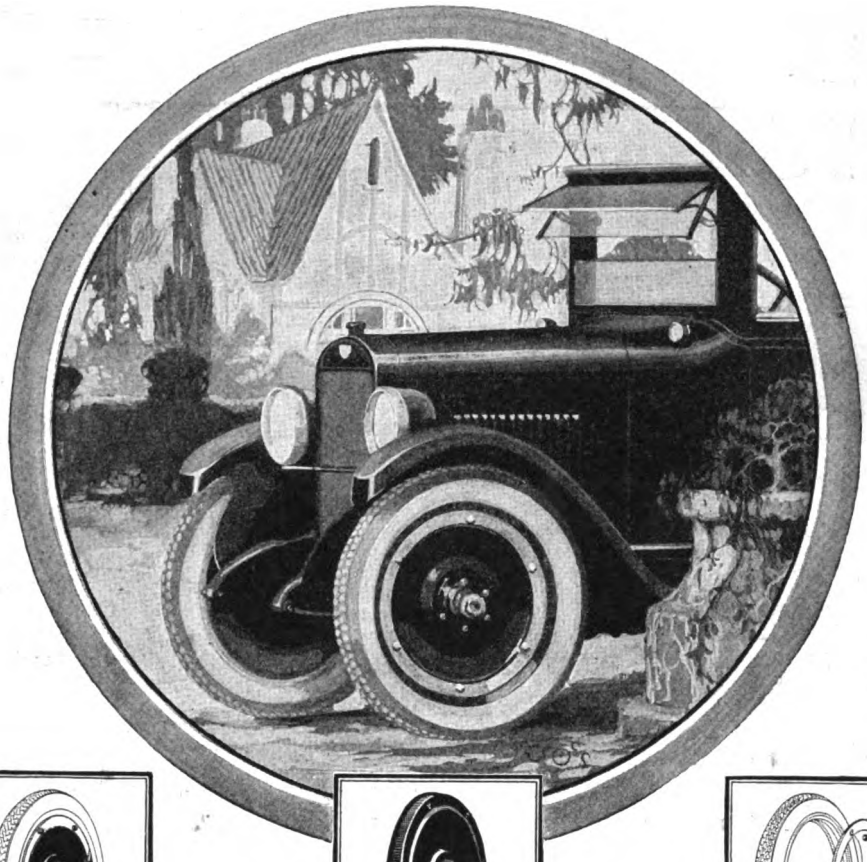


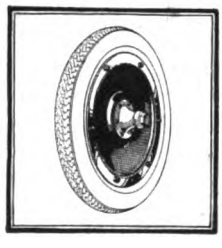
New STROMBERG Does it!
CARBURETOR

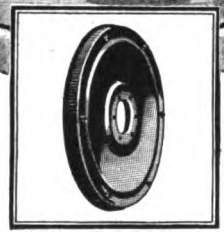


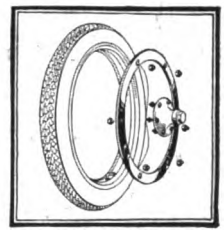
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No Extra Wheel Necessary









FORSYTH BROTHERS COMPANY is building the strongest, simplest, most practical Steel Wheel on the road, and already automobile manufacturers are beginning to look to FORSYTH for their future Steel Wheel Equipment.

This fact stands out, in a maze of half-truths about Steel Disc Wheels, like a burst of sun after a storm.

In design—Single Disc demountable at the rim and quickly interchangeable with present wood hubs, FORSYTH Wheels have attained an unapproachable Standard of Beauty and practicability.

In simplicity of construction, FORSYTH has shown a real accomplishment. Loosen the six acorn nuts, take off the Retaining Rim and the tire is OFF. Reverse this simple method and the tire is ON.

FORSYTH Demountable Rim Steel Disc Wheels are the embodiment of all the traditions of Forsyth Brothers Company—25 years of building fine Pressed Metal Products for the Automotive Industry.

Because we know they are the finest wheel equipment in the world, we are confident they are the Steel Disc Wheel you will ultimately ride on and recommend.

Made at Harvey, (Chicago Suburb) Illinois, *by* FORSYTH BROS. COMPANY

FORSYTH

DEMOUNTABLE RIM STEEL DISC WHEEL

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The Sales Value of Facts

Where many dealers can only *claim* "exceptional value", the Columbia dealer can *prove* it. He is fortified with facts which show that the standard, specialized units included in the Columbia Light Six can be found elsewhere only in touring cars averaging $2000 in price—sedans averaging $2900.

The Columbia Light Six Touring at $985 and Sedan at $1395 are the only cars on the market that combine *all* these impressive features—yet they are the lowest priced specialized six-cylinder cars of their respective types available.

And it will not take you long to find that the Columbia is more than a collection of names. It is a car of proved economy, power and dependability.

Figure out for yourself what profit and satisfaction there is in handling a line with such obvious advantages and with such an individual appeal to every buyer—a sales story that cannot be duplicated by any other dealer.

Write today to see if your territory is open.

Touring Car -	$ 985	Sport Roadster -	$ 995
Five Passenger Sedan	$1395	Business Coupe -	$1235
Special Six Phaeton	$1095	Special Six Sport -	$1395

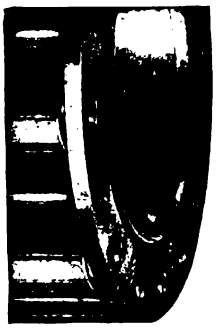
All Prices F. O. B. Detroit

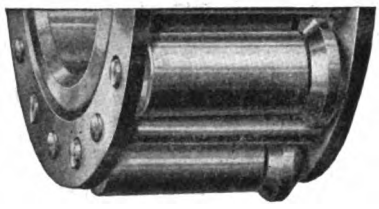
COLUMBIA MOTORS COMPANY, DETROIT, U. S. A.

Columbia Light Six

CONTINENTAL RED SEAL MOTOR — TIMKEN AXLES

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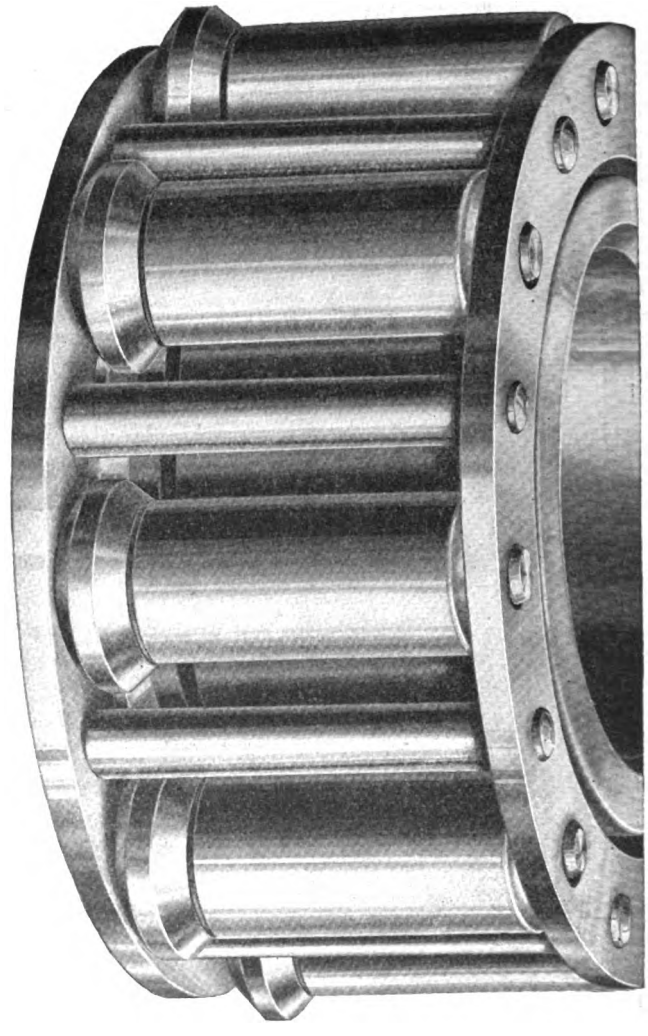


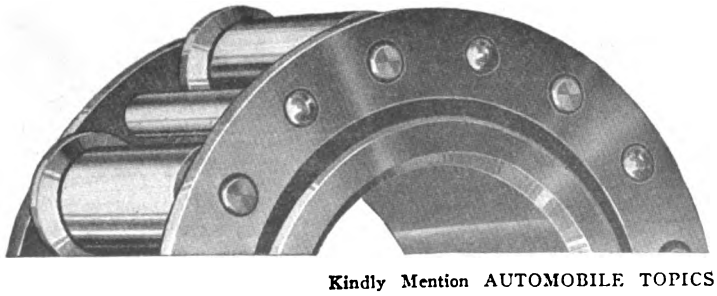
If Bower roller bearings are found in a car it is a pretty good indication that everything about that car is first class in every respect.

Exclusive Bower Features

Separate bearing surfaces for load and thrust. Parallel raceways. Self-aligning. Never need adjusting. Does not develop end thrust under loads. Will not bind or end-slip.

BOWER
ROLLER BEARING CO.
Detroit Michigan







Important Patent Notice

The Bower bearing is patented in the United States and several foreign countries and any infringement of the exclusive right to make, sell, use and vend same will be duly prosecuted.

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HAYES

THE WORLD'S BEST — THEY STAND THE TEST

Trade HAYES Mark

WOOD, WIRE & STEEL WHEELS



The *Standardized* Wheel

From the infancy of the automotive industry the Hayes Wheel Company has been making the best wheels possible to produce.

No matter what type of wheel is required, wood, wire or steel, Hayes builds it and builds it as fine as long specialization can accomplish. The industry has not only standardized on Hayes wheels, but Hayes wheels have been standardized for the industry—the rims, the lugs, the bolts, the hubs, are interchangeable for different types of Hayes wheels.

To manufacturers or motorists it is a satisfaction to have the advantage of a wheel that is not only made better, but that has the additional advantage of interchangeability of a standardized line, which materially reduces manufacturing costs. These savings are passed on to the ultimate consumer.

HAYES WHEEL COMPANY *of New York*, JACKSON, MICHIGAN

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried in Principal Cities

(62)

WHEELS

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FISHER BODIES



You may be sure that the body which bears the emblem—Body by Fisher—will outlive the most satisfactory chassis.

FISHER BODY CORPORATION
DETROIT CLEVELAND ST. LOUIS
WALKERVILLE, ONT.



BODY by FISHER

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A FINER CAR

COLE

EIGHT NINETY

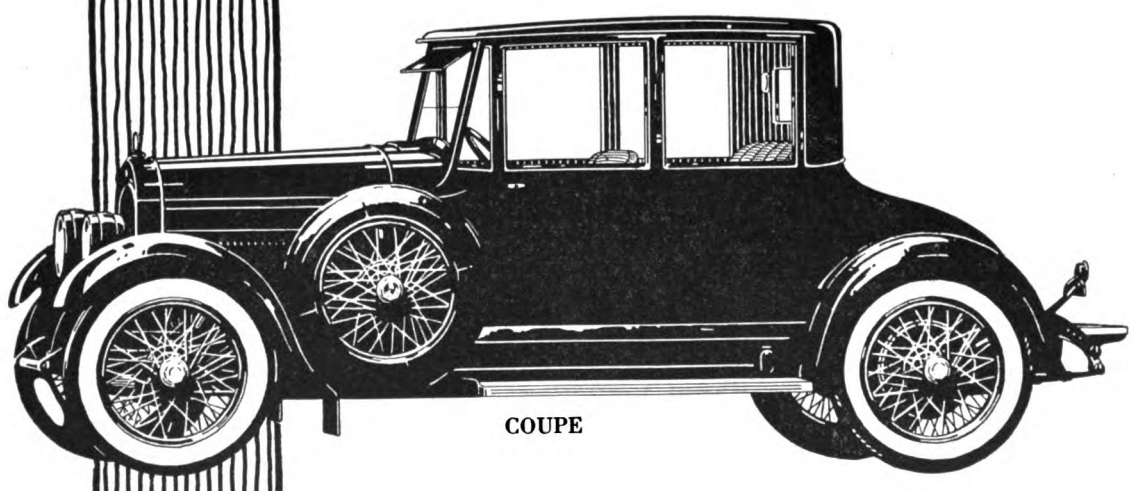
The builders of the Cole have successfully accomplished that which they set out to do—*To build a motor car that, not only fulfills the requirements of today, but also anticipates those of tomorrow.* Each day brings in an added list of satisfied owners of the new Cole Eight Ninety.

Complete in every detail, this car offers the dealer an opportunity to present to the public, an automobile worthy of the name "A Finer Car."

Built in the Following Models

TOURSTER
SPORTSTER
ROADSTER
SUBURBAN
COUPE
SEDAN
TOURSEDAN
BERLINE

COLE MOTOR CAR COMPANY
INDIANAPOLIS



COUPE

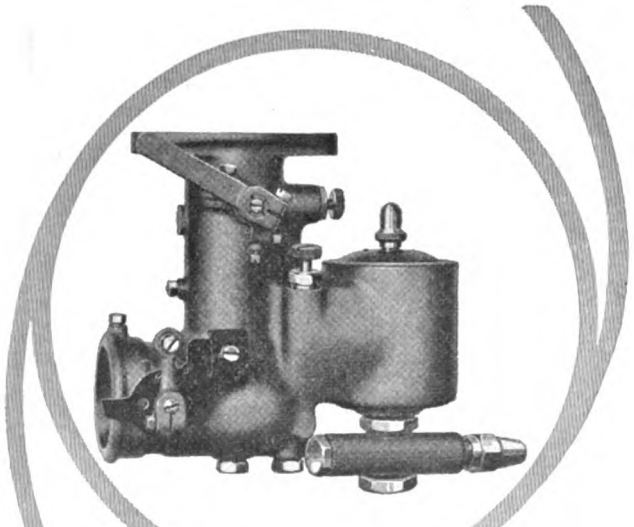
Kindly Mention AUTOMOBILE TOPICS When Writing to Advertisers

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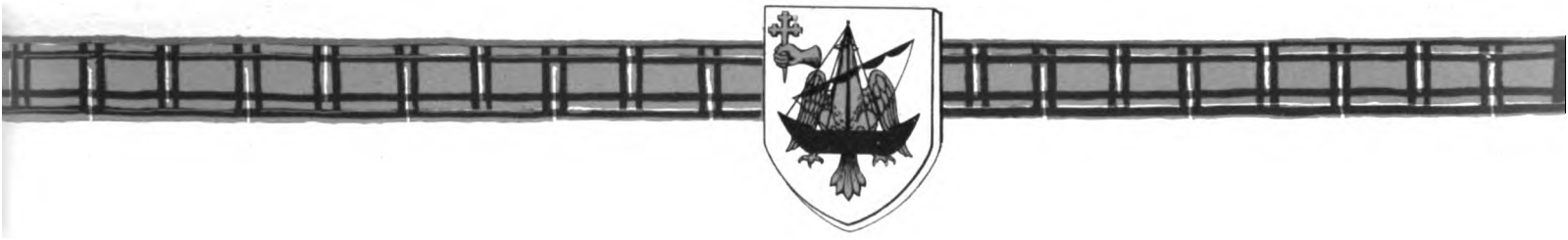
Each year since its completion in 1919, the new Holley factory has increased in size. Today additions are in progress which will almost double its 1921 size and capacity. Such growth is consistent with the Holley policy of maintaining producing facilities that never fail to meet the most pressing demands of *all* its customers.

HOLLEY CARBURETOR COMPANY, DETROIT



The new HOLLEY CARBURETOR

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To Dealers Who Want the Moon Franchise

Even with our increased production there is a limit to the number of additional dealer connections which we can establish at this time. To increase too fast simply means that some of our dealers cannot be supplied to the full extent of their own sales possibilities.

Demand for Moon cars holds up in a most remarkable way. Sales reports from distributors all over the country show most remarkable increases for the past several months, ranging from 100% to 900% greater than for the same period of last year.

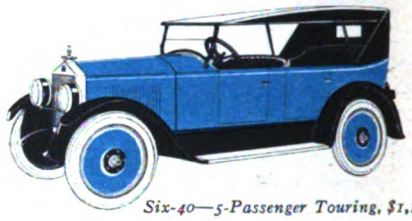
In enlarging our factory facilities we have not only provided for this increase through established dealers, but have anticipated the demands of the new dealers now being added to our organization.

It might be worth your while to write.

Stewart McDonald
President Moon Motor Car Co., St. Louis

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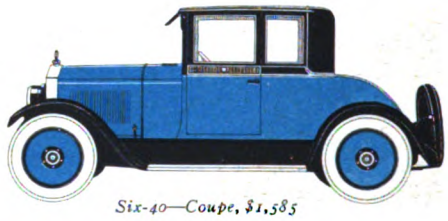
The Line of Cars that has Captivated the Country



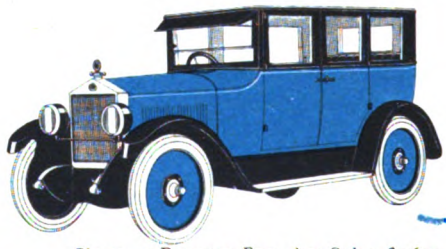
Six-40—5-Passenger Touring, $1,195



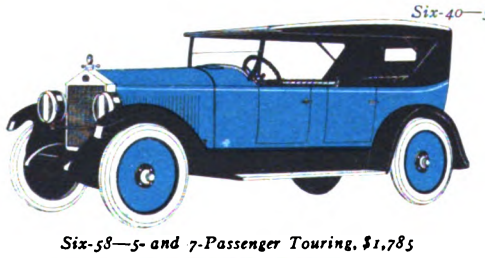
Six-40—Touriux, $1,445



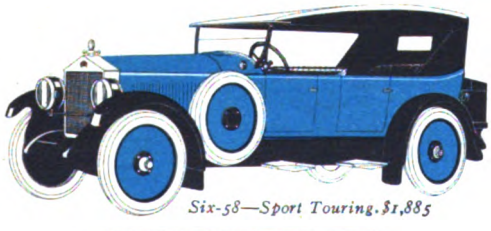
Six-40—Coupe, $1,585



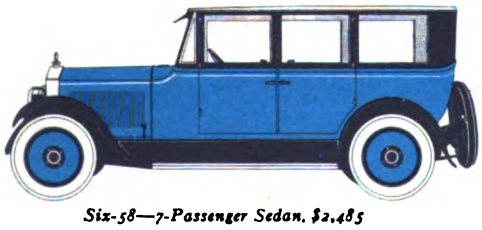
Six-40—5-Passenger Four-door Sedan, $1,695



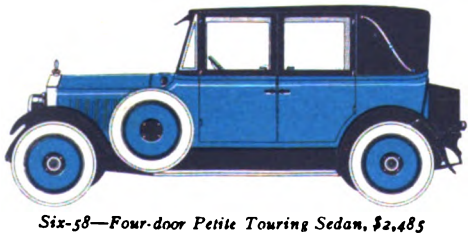
Six-58—5- and 7-Passenger Touring, $1,785



Six-58—Sport Touring, $1,885



Six-58—7-Passenger Sedan, $2,485



Six-58—Four-door Petite Touring Sedan, $2,485

THE three factors that have had most to do in producing the tremendous demand for Moon cars are *design*, *performance* and *price*.

The Moon design appeals to the eye—it meets that keen desire for outward beauty and distinction. In performance the Moon has that power and responsiveness that gives complete satisfaction. And, whichever model is chosen, the price is within reason.

Because of these three factors the Moon has achieved unprecedented success.

The Moon franchise is being eagerly sought. Only a very limited number of new dealers can be accommodated.

If you want to sell Moon cars we urge quick action.

Write, telegraph or telephone today.

MOON MOTOR CAR COMPANY, ST. LOUIS, U. S. A.

Founded 1907 by Joseph W. Moon

The MOON

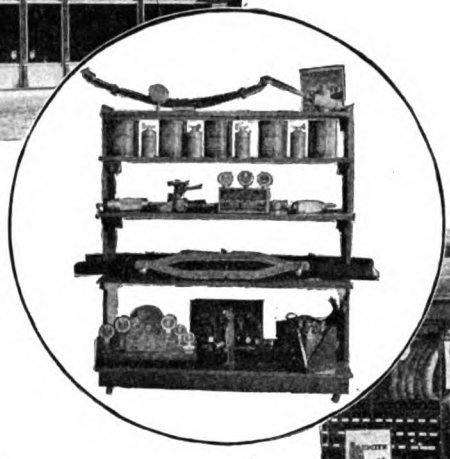
(Prices f. o. b. St. Louis)

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R. H. Allen





M. R. Richards



How's this for turnover?

In Elkader, Iowa, Allen Brothers are operating a garage and store that would be a credit to communities many times its size, because—

Allen Bros. know that it pays to sell high grade, nationally advertised products. Although Elkader has a population of only 1,500, they have sold $3,000 worth of Alemite there this year.

At no time have they had more than $350 invested. And they write that they are turning over their Alemite stock about once a month.

Wouldn't you, too, like to benefit by the fast turnover and big profits that thousands of up-and-going dealers are getting with Alemite Products? Write or wire today for the Alemite Dealer Proposition!

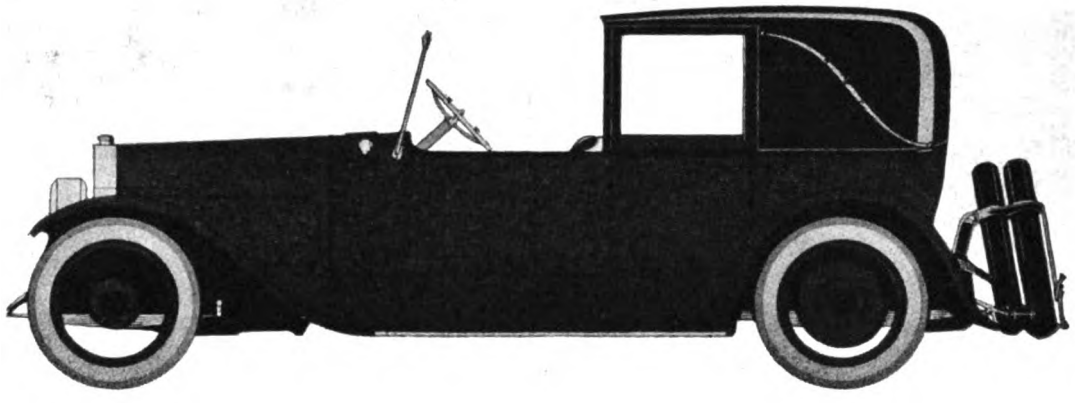
A Product of

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Alemite Products Co. of Canada, Ltd., Belleville, Ont.

ALEMITE

High pressure lubricating system

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Cabriolet $8900

There is no better motor car than Stevens-Duryea

Stevens-Duryea

STEVENS-DURYEA, *Inc.*, CHICOPEE FALLS, MASSACHUSETTS

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WESTINGHOUSE ELECTRIC

A list of Westinghouse Service Representatives, from whom you can obtain Genuine Parts, will be supplied at your request.

Opportunity—for the Garage Man

It is not difficult for you to find men for your employ who are capable motor mechanics, who may even have a smattering knowledge of Automotive Electrical Equipment. But how often have you found that smattering knowledge insufficient to care for the electrical equipment on the cars of your customers, as it should?

You Invest Heavily in Men—

but when their experience fails you, where can you turn? If a car that is Westinghouse equipped is brought to your garage, you know where to go. At least one of the 290 Westinghouse Field Service Stations which are established throughout the country is within easy reach of your garage.

The Opportunity to Serve

And not content with providing you with this excellent system of service, Westinghouse is giving you the opportunity to serve the Westinghouse way within your own Garage, to supplement the work of the Westinghouse Service Stations by learning the correct methods of making usual adjustments and parts replacements.

Increase Your Profits

The Westinghouse Automotive Service Encyclopedia and Parts Data has been prepared to show you how to do these things. It is a handy reference instruction book on automotive electrical equipment written for the garage man and his employees. Electrical apparatus of every kind, voltmeters, current regulators, cutout switches, ignition apparatus, generators, starting motors, etc., all are described in simple terms; how they're made, what their functions are and how they should be cared for. Internal diagrams of all types of Westinghouse automotive equipment, wiring diagrams of every car or truck that is Westinghouse equipped, how to locate trouble and exactly what to do to eliminate it after you have found it, are some of the things you will find in Volume I, the Service Manual.

In Volume II, the Parts Data, all Genuine Westinghouse Parts, on all cars and trucks that are Westinghouse equipped, and order numbers and price given. Volume II also gives the name and address of the authorized Westinghouse Service Representative nearest you, who carries a full stock of genuine Westinghouse parts and units and is equipped to care for major adjustments on Westinghouse apparatus who will supply you with such replacement parts as you may need.

A Service Manual In Every Garage

Filled with information that you will find more valuable every day in your garage, the Westinghouse Service Encyclopedia and Parts Data, in two well bound volumes, of from 700 to 800 pages each, will be mailed to you, postage paid, on the receipt of your order and your check (or money order) for $24.00, the cost of publishing the Manual. If you desire to purchase one volume at a time, you may do so at the price of $12.50 a volume. Supplementary sheets of information will be sent you free until January 1st, 1923. A nominal charge of $2.50 a year per volume will be made to cover the printing and mailing costs of these quarterly supplements, should you desire this service.

If you recognize Opportunity when it means increased profits for your garage, you will fill out the coupon below and send for a Westinghouse Service Encyclopedia and Parts Data.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
Automotive Equipment Department
Sales and Service Headquarters: 82 Worthington St., Springfield, Mass.

Westinghouse
STARTING, LIGHTING & IGNITION SERVICE

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Please send me more information about the Westinghouse Service Encyclopedia and Parts Data.

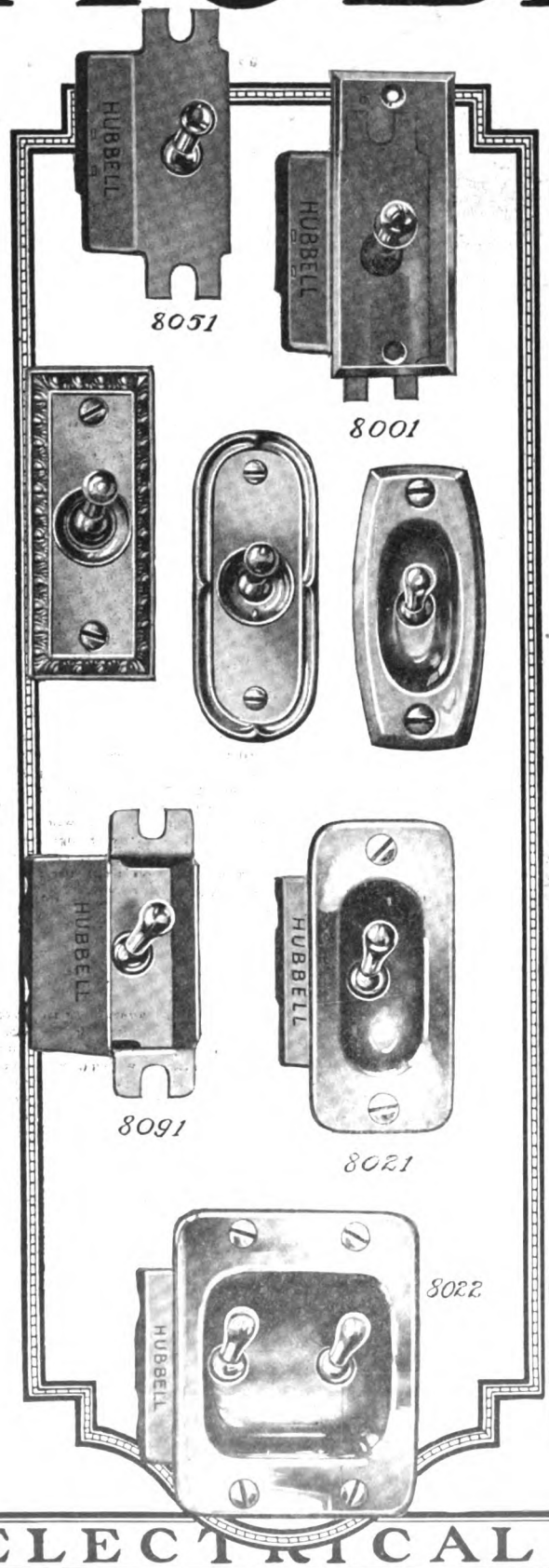
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Add character to enclosed automobile Lighting Equipment.

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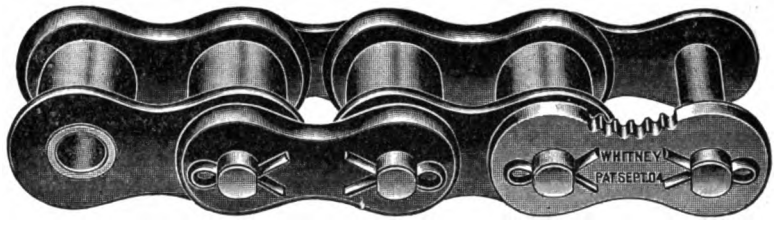
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"WHITNEY"

HIGH EFFICIENCY
ROLLER AND SILENT TYPE

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also *Low* Cost per *Thousand Miles* of Service



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SOLID ROLLS AND OTHER IMPORTANT IMPROVEMENTS

Front End Motor Chain Drives



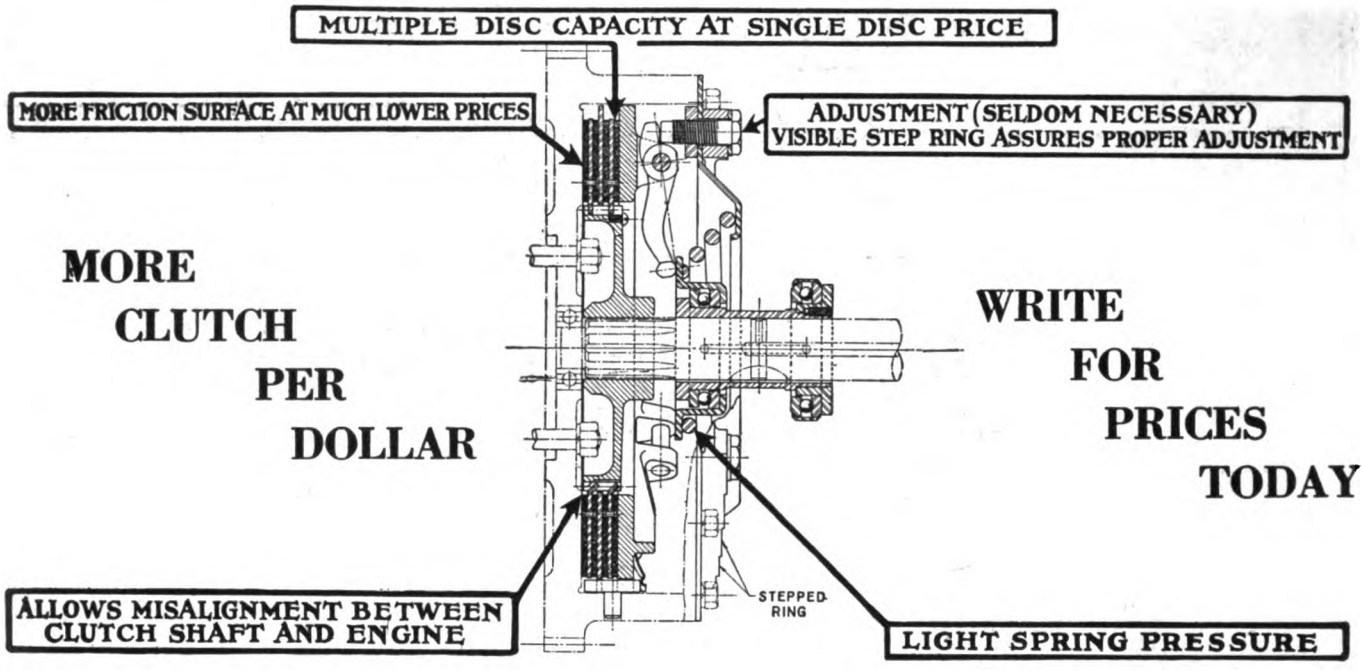
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Unit Power Plant—Open Fly-Wheel—Independent BELL HOUSING TYPES

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Cold Drawn Shafting and Screw Stock in all sizes of Round, Flats, Squares and Hexagons

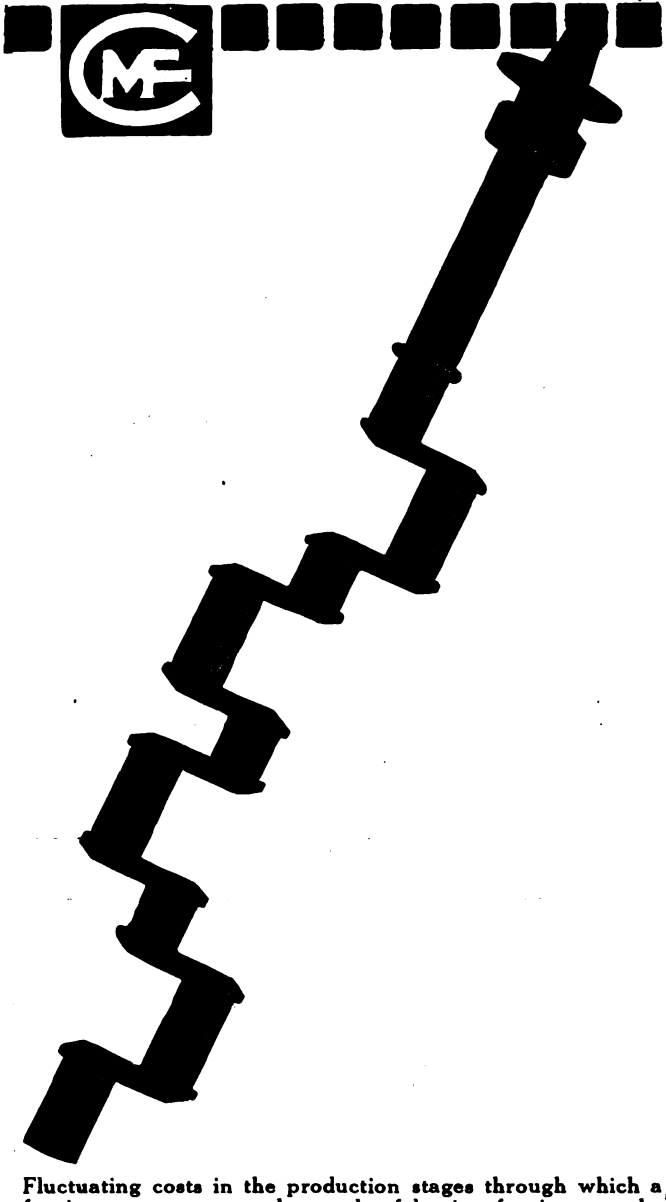
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CHAMPION



Fluctuating costs in the production stages through which a forging must pass are the result of buying forgings on the basis that all forgings are alike, that a forging is just a forging. Reducing costs to a uniform basis where they can be rigidly controlled is simply a matter of ordering forging of unvarying accuracy, to blue print specifications, uniformity of metal and perfect alignment. Possessing these essential qualities Champion Drop Forgings are proving to many engineers and production executives that they work through the processes of production with a minimum of machine adjustment, supervision and tool breakage.

Time waste, labor waste, material waste—these are eliminated. Operating schedules are maintained. Costs are rigidly controlled. Order Champion Drop Forgings instead of merely buying a lot of forgings and you win those valuable qualities that a price buyer loses.

The Champion Machine & Forging Co.

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New York Office—30 Church St.
Philadelphia Office—Bourse Bldg.
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DROP FORGINGS

Walker JACKS

"Dependable in Emergencies"

A MILLION A YEAR

Twelve years ago the first Walker Jacks were manufactured. Although limited in quantity they were of the very highest quality that could be produced.

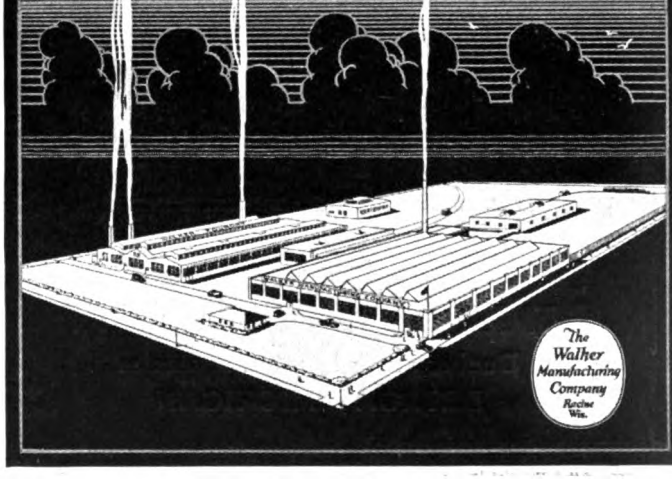
A rigid adherence to this fundamental principle—quality above all else—throughout these twelve years has gained a reputation for Walker Jacks that is nation-wide. Coupled with sound, mature business management this recognition has opened a market that makes possible the present six-acre plant in which Walker Jacks are fabricated at the rate of over a Million a Year.

Today most jobbers, dealers, salesmen, and motorists have learned to place their faith in Walker Jacks for they know them to be "dependable in emergencies"—while costing no more than ordinary jacks.

Walker Manufacturing Company

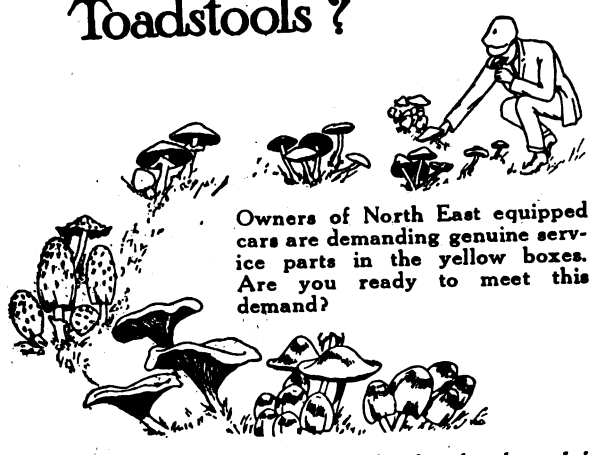
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Genuine North East Service Parts are distributed to the trade by

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Interstate

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merits the earnest consideration of manufacturers of springs for automobiles and motor trucks.

This applies equally to firms making springs for the industry and to automobile builders who make their own springs.

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CHROME—VANADIUM
CHROME—SILICO—MANGANESE
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Interstate Iron & Steel Co.
104 South Michigan Avenue
Chicago

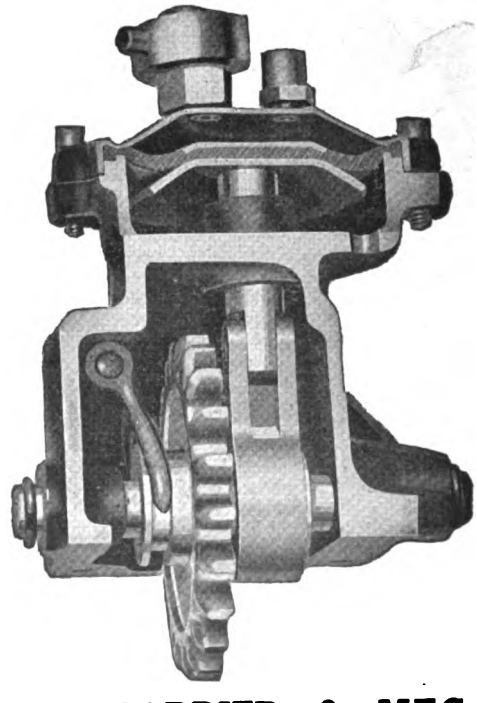
Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

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DETROIT CARRIER & MFG. CO.
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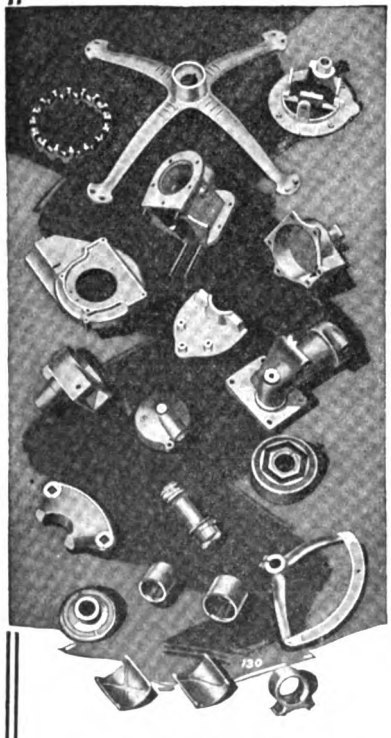
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Success in the largest sense can come only to the manufacturer who understands not his own business alone but also the needs of the various businesses he serves. Only out of such knowledge can come the full measure of the service a buyer has a right to expect. An experience of 14 years in the production and use of die-castings—daily contact with hundreds of industries where die-castings are used—unceasing research, experiment and development—the constant operation of the largest plants in the industry—these are some of the factors contributing to the mastery of the art which has made Doehler the world's largest producer of die-castings. Every Doehler Die-Casting is a master casting.

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Let Your Nearest Ahlberg Branch Be Your Stock Room For Ball Bearings

We have all types of the highest grade ball and roller bearings in stock ready for immediate delivery.

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you need every week

Highest Quality—Correct Finish
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This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
"THURITE" Deep Drawing Stock—remarkable for its drawing qualities and behavior under dies. Write us for full information on Deep Drawing Stock, Enameling and Japanning Stock, Black Sheets of every description, Galvanized Sheets, Formed Roofing and Siding Products, Tin and Terne Plates, Black Plate, etc.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

QUESTIONS and ANSWERS
relating to modern
AUTOMOBILE DESIGN
CONSTRUCTION AND REPAIR
By VICTOR W. PAGE, M. E.
(Author of The Modern Gasoline Automobile)

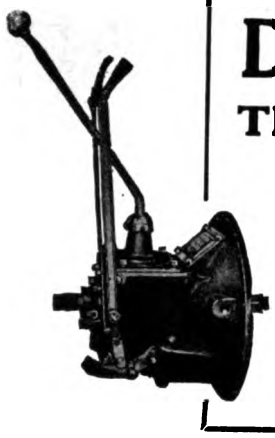
This is the latest and best automobile instruction book in the catechism form. It answers every question that can be asked about the modern car, being so complete as to include even electric gear shifting, starting and lighting, four-wheel drive, wire and cast metal wheels, and many other points of recent development.

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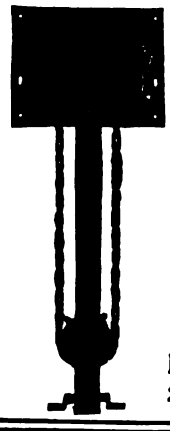
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For trucks up to one-ton capacity, and Passenger Cars.

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13 Maltbie St. Syracuse, N. Y.



PERFECT REGULATOR

Standard Equipment for America's Leading Automobiles

PERFECT WINDOW REGULATOR CO.
20 Exchange Place New York City



four ounces of rubber —tons of silence

that's another one of the features that has put 170,000

Jorgensen SILENCERS

on 42,000 Buick, Dodge, Chandlers, Chalmers and other cars.

Dealers making nice profit. We will be pleased to add YOU to our list.

M. B.—See consumer copy—American Motorist.

Jorgensen Hood Silencer Co.
Hampton Road, Erie, Pa.

Mr. Dealer

When our representative calls on you, listen to his story. It is based on sound business practice and is backed by an old reliable manufacturer. It paves the way to results and profits for you.

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Detroit Michigan

GURNEY BALL BEARINGS

Have Greatest Load Capacity



Gurney Engineering Service is available at your request.

Gurney Ball Bearing Co.
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Six body types, from $1,395 to $2,165

COURIER SANDUSKY, OHIO

Dealers — Write for "Courier" literature

A GOOD HUSKY SIX

COURIER

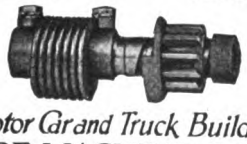
"The Most Completely and Conveniently Lubricated Car in America"

THE COURIER MOTORS CO., Sandusky, Ohio

BENDIX

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for ELECTRIC STARTERS DRIVE AUTOMATIC ENGAGING & DISENGAGING



194 Motor Car and Truck Builders Use It

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WARNER GEAR COMPANY MUNCIE, INDIANA

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CLUTCHES, TRANSMISSIONS, CONTROLS, DIFFERENTIALS

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The Park Drop Forge Co.
Cleveland, Ohio

SHEET METAL STAMPINGS
From Steel, Brass, Bronze, Copper and Aluminum.
We also specialize in Case Hardening and Tool Tempering.
THE CROSBY COMPANY
Buffalo, N. Y.
New York Office: 30 Church St.
Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building

LET US ESTIMATE
On Your Retouching and Plate-Work.
Our Artists Are Specially Skilled on
Automobile Work
HALF-TONES—PROCESS PLATES—BENDAY—WAX
DAY AND NIGHT SERVICE
THE STERLING ENGRAVING CO.
10TH AVE. AND 36TH ST. 3900 GREELY
200 WILLIAM STREET 2900 BEEKMAN

Advice
Ask the Book Department to recommend the best books on the various subjects connected with the automobile.
AUTOMOBILE TOPICS
The Trade Authority
1790 Broadway New York City

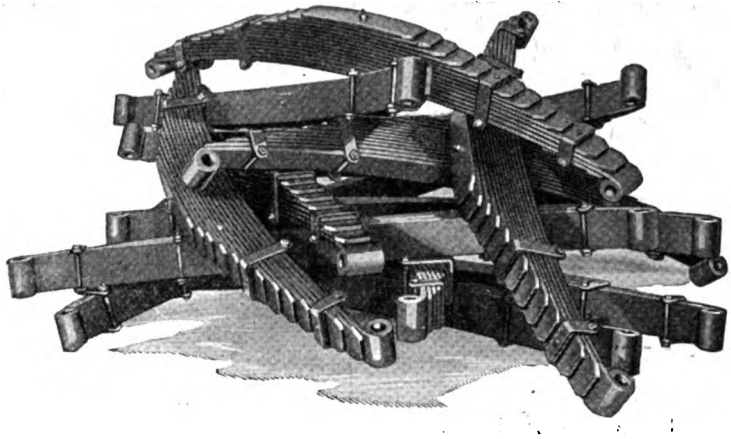
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The vital nerve system of a motor car. Nowhere is recognized merit of greater importance.
The Packard Electric Company
WARREN, OHIO

TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS
NATIONAL
TWIST DRILL & TOOL CO.
DETROIT, U.S.A.


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MATHER SPRINGS

Standard of the World



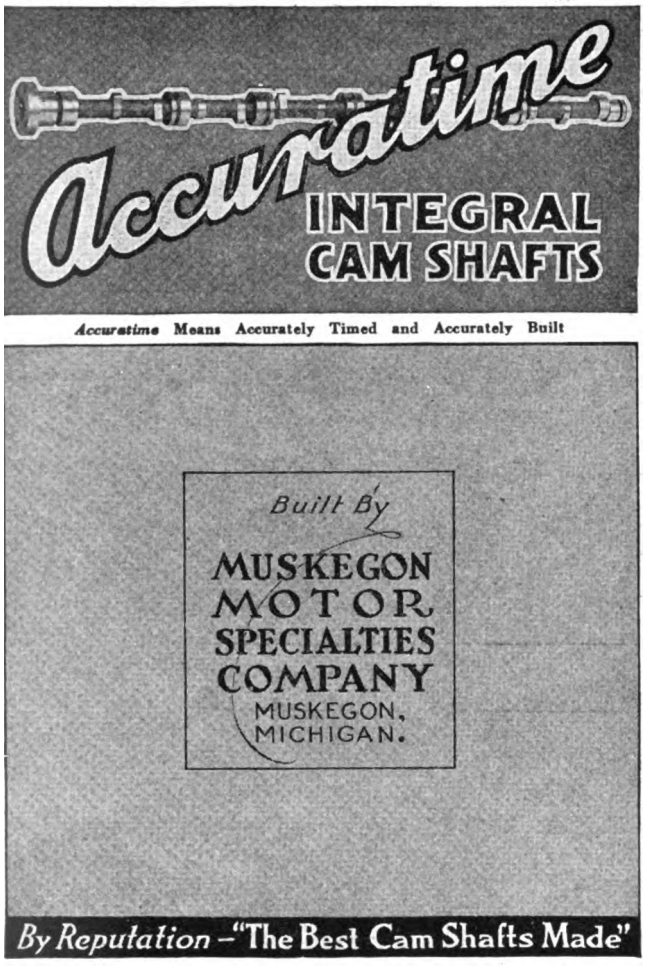
The shortest cut to getting your full money's worth in the things you buy is—quality.

Genuine Made Only By

The MATHER SPRING CO.

TOLEDO, OHIO, U.S.A.

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We make a specialty of

FORMED TUBULAR

STEEL PARTS

such as

TORQUE TUBES, AXLE HOUSINGS, RADIUS RODS, EXHAUST TUBES, TAIL PIPES, IGNITION WIRING TUBES, STEERING COLUMN POSTS LAMP TIE RODS, RADIATOR OUTLET PIPES

The STANDARD STEEL TUBE Co.

TOLEDO, OHIO

General Sales Office:
General Motors Bldg. DETROIT, MICH.

INDEX TO ADVERTISEMENTS

A

AC Spark Plug Co. . 1178, 1179
Ahlberg Bearing Co. 1209
Ainsworth Manufacturing Co. 1191
American Sheet & Tin Plate Co. 1210

B

Bassick Manufacturing Co. 1201
Bearings Co. of America 1210
Bock Bearing Co. 1181
Bowen Products Corp. ... 1192
Bower Roller Bearing Co. 1196
Brown-Lipe Chapin Co. .. 1124
Brown-Lipe Gear Co. 1124
Buick Motor Co. 1125

C

Champion Machine & Forging Co. 1207
Cole Motor Car Co. 1199
Columbia Motors Co. 1195
Courier Motors Co. 1211
Crosby Co. 1212

D

Detroit Carrier & Manufacturing Co. 1208
Dodge Brothers 1126
Doehler Die-Casting Co. .. 1209
Dort Motor Car Co. 1184a
Durston Gear Corp. 1211

E

Earl Motors, Inc. 1167
Eclipse Machine Co. 1211
Edmunds & Jones Corp. .. 1208
Elkhart Carriage and Motor Car Co. 1192a

F

Fisher Body Corp. 1198
Fisk Tire Co. 1121
Forsyth Bros. Company .. 1194

G

Gabriel Manufacturing Co. 1120
General Motors Truck Co. 1169
General Tire & Rubber Co. 1189
Gill Manufacturing Co. .. 1185
Glidden Co. 1180
Goodrich Rubber Co., B. F. 1127
Gurney Ball Bearing Co. . 1211

H

Hayes Wheel Co. 1197
Holley Carburetor Co. 1200
Hubbell, Inc., Harvey ... 1204
Hudson Motor Car Co., Back Cover

I

Interstate Iron & Steel Co. 1208

J

Johns-Manville, Inc. 1210
Jorgensen Hood Silencer Co. 1211

K

Kelly-Springfield Tire Co. 1216

L

Laidlaw Co., Inc., Inside Front Cover
Link-Belt Co. 1118

M

Mather Spring Co. 1213
Maxwell Motor Corp. 1119

Digitized by Google

INDEX TO ADVERTISEMENTS

Merchants & Evans Co. .. 1206

Moon Motor Car Co. ... 1200a

Morse Chain Co. 1184

Motor Wheel Corp. 1186, 1187

Muskegon Motor Specialties Co. 1214

N

Nash Motors Co. 1128

National Twist Drill & Tool Co. 1212

North East Electric Co. .. 1208

North East Service, Inc. . 1208

O

Oakland Motor Car Co. .. 1174

P

Packard Electric Co. 1212

Parish Manufacturing Corporation . Inside Back Cover

Park Drop Forge Co. ... 1212

Peerless Motor Car Co. .. 1173

Perfect Window Regulator Co. 1211

Plunkett & Co., Paul 1215

R

Racine Rubber Co. 1171

Republic Truck Sales Corp. 1114

S

Salisbury Axle Co., Inside Back Cover

Sharon Pressed Steel Co. . 1210

Sheldon Axle & Spring Co., Inside Back Cover

Signal Truck Corp. 1211

Smith Corporation, A. O. . 1212

Spicer Manufacturing Corp., Inside Back Cover

Standard Steel Tube Co. .. 1214

Stephens Motor Car Co., Inc. 1188

Sterling Engraving Co. ... 1212

Stevens-Duryea, Inc. 1202

Stewart-Warner Speedometer Corp. 1113

Stromberg Motor Devices Co. 1193

Studebaker Corp. 1117

Stutz Motor Car Co. of America, Inc. 1122, 1123

T

Ternstedt Manufacturing Co. 1144

Timken Roller Bearing Co., Front Cover

Torbensen Axle Co. 1190

U

Union Drawn Steel Co. . 1206

United Motors Service, Inc. 1182, 1183

United States Rubber Co. . 1165

V

Velie Motors Corp. 1180a

W

Walker Manufacturing Co. 1207

Warner Gear Co. 1211

Westinghouse Electric & Manufacturing Co. 1203

Whitney Manufacturing Co. 1205

Wyman-Gordon 1115

Z

Zenith Carburetor Co. 1116

Disappearing Bonds

A generation ago many first mortgage railroad and public utility bonds were offered to the public.

In the course of time the great bulk of these issues found their way into the strong boxes of institutions and estates, and it is only occasionally that a block of any size comes into the market.

Financing done in the last few years has been in the form of REFUNDING and GENERAL MORTGAGE issues, which are, of course, subject to the lien of the old underlying first mortgage bonds.

Well posted investors prefer the old first mortgage issues which in many instances can be purchased upon almost as attractive a basis as the newer and less well secured issues.

Our business is to help business men invest conservatively.

Particulars on request.

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

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KELLY KATS
TRADE MARK REG.
THE TIRES WITH NINE LIVES

There is no Caterpillar tire but the one that Kelly makes

THE consistently high mileage of the Caterpillar tire makes it the most economical tire a truck owner can buy, and its remarkable traction, exceptional resiliency and thorough dependability make it the most satisfactory he can use.

Naturally, there is a big demand for a tire of this kind. Is the demand being supplied in your locality? If not, why don't you supply it?

Kelly-Springfield Tire Company

GENERAL SALES DEPARTMENT 250 WEST 57th STREET, NEW YORK

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"WHO make the power-transmitting and load-carrying units?" is a question being asked with increasing frequency by buyers of motor cars and trucks. And it is noteworthy that salesmen who answer with the names of the manufacturers listed here are finding it comparatively easy to get the buyer's signature on the dotted line.

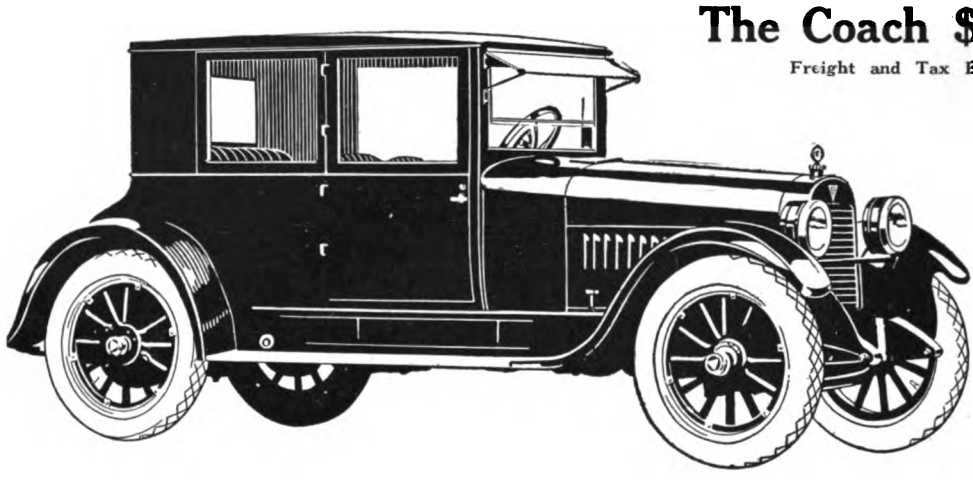
Parish Mfg. Corp. - Reading, Pa., and Detroit, Mich.
Sheldon Axle and Spring Co. - - Wilkes-Barre, Pa.
Salisbury Axle Company - - Jamestown, N. Y.
Spicer Mfg. Corporation - - South Plainfield, N. J.

C. A. DANA, *President*

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HUDSON

The Coach $1625
Freight and Tax Extra



An All-Year Seller Adds to Your Profits

Keeping sales at the peak through winter months is another big advantage the Coach gives dealers.

Its moderate price and closed car comforts give it wide appeal, at the very season when dealers in many lines find open car sales practically at a standstill, and costly closed cars moving slowly because of the limited number of buyers who can afford them.

The Hudson Sedan, too, is a favorite model which is scoring a wonderful success with those who demand the most luxurious in closed cars.

Overhead expense doesn't stop with cold weather. Wouldn't you rather handle a line you can sell instead of storing this winter? There are some good opportunities with Hudson, either as Dealer, Sub-Dealer or Resident Dealer. Write for details.

HUDSON SUPER SIX

Speedster $1525
7-Pass. Phaeton.. 1575
Coach 1625
Sedan 2295
Freight and Tax Extra

A Ride Tells All

HUDSON MOTOR CAR COMPANY DETROIT, MICHIGAN

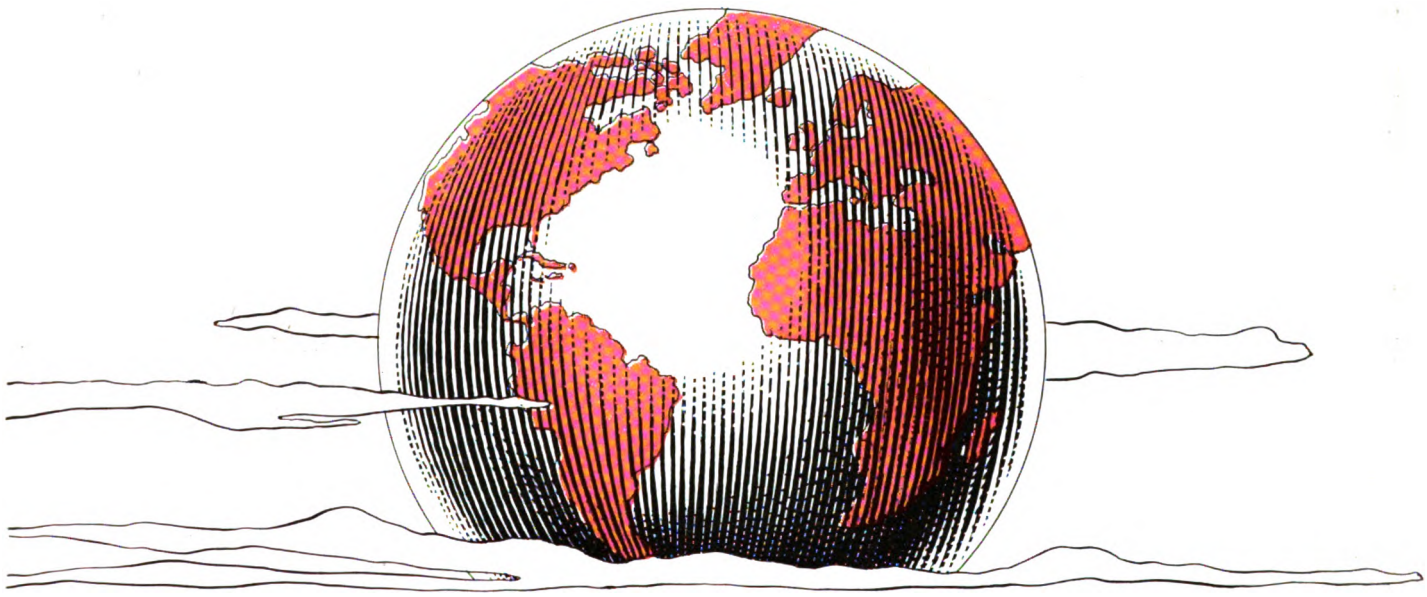
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Automobile Topics

THE TRADE AUTHORITY

Vol. LXVII. No. 13 | PUBLISHED WEEKLY NEW YORK, NOVEMBER 11, 1922 | FIFTEEN CENTS A COPY $3.00 A YEAR

Entered as second-class matter August 14, 1912, at the post office at New York, New York, under the act of March 3, 1879.



The bodies of practically all of the world's leading motor cars are now equipped with Ternstedt proved-in-service products.

TERNSTEDT

Largest Manufacturers of Automobile Body Hardware in the World

Division of Fisher Body Corporation

REG. U.S. PAT. OFF.

MAIN OFFICE AND PLANTS 6307 FORT STREET WEST, DETROIT, U. S. A

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Back of every perfected achievement of man

SPECIALIZATION



The modern sky-scraper is the development of the building progress of the last decade, a progress entirely due to comprehensive specialization in every field of construction.

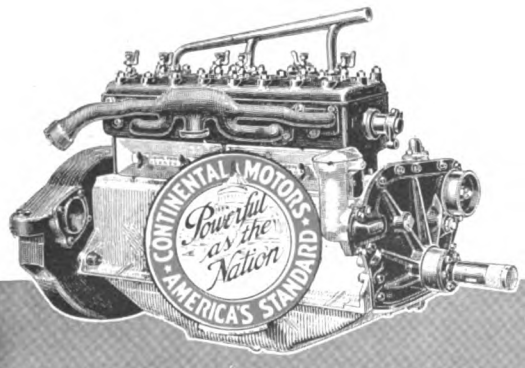
The SPECIALIZED car is recognized as standard

Just as the progress of the last decade has developed these cathedrals of commerce—the modern sky-scrapers—the automotive progress of the last twenty years has developed the SPECIALIZED vehicle.

Just as the skyscraper rises under the labors of scores of great specialist-organizations, the SPECIALIZED car is the result of the co-ordinated efforts of car builders and the leading manufacturers of specialized units—motor, transmission, universal joints, axles, clutch, etc.

SPECIALIZED cars are in constant demand and stay sold on the strength of the car's reputation and the added reputations of the manufacturers of their performing units; on their standing with the car-buying public; and on the uninterrupted performance assured by parts-distributing stations throughout the world.

See that your car is a SPECIALIZED car and that upon the crankcase of the motor is that sure sign of motor specialization—the Continental Red Seal.



CONTINENTAL MOTORS CORPORATION

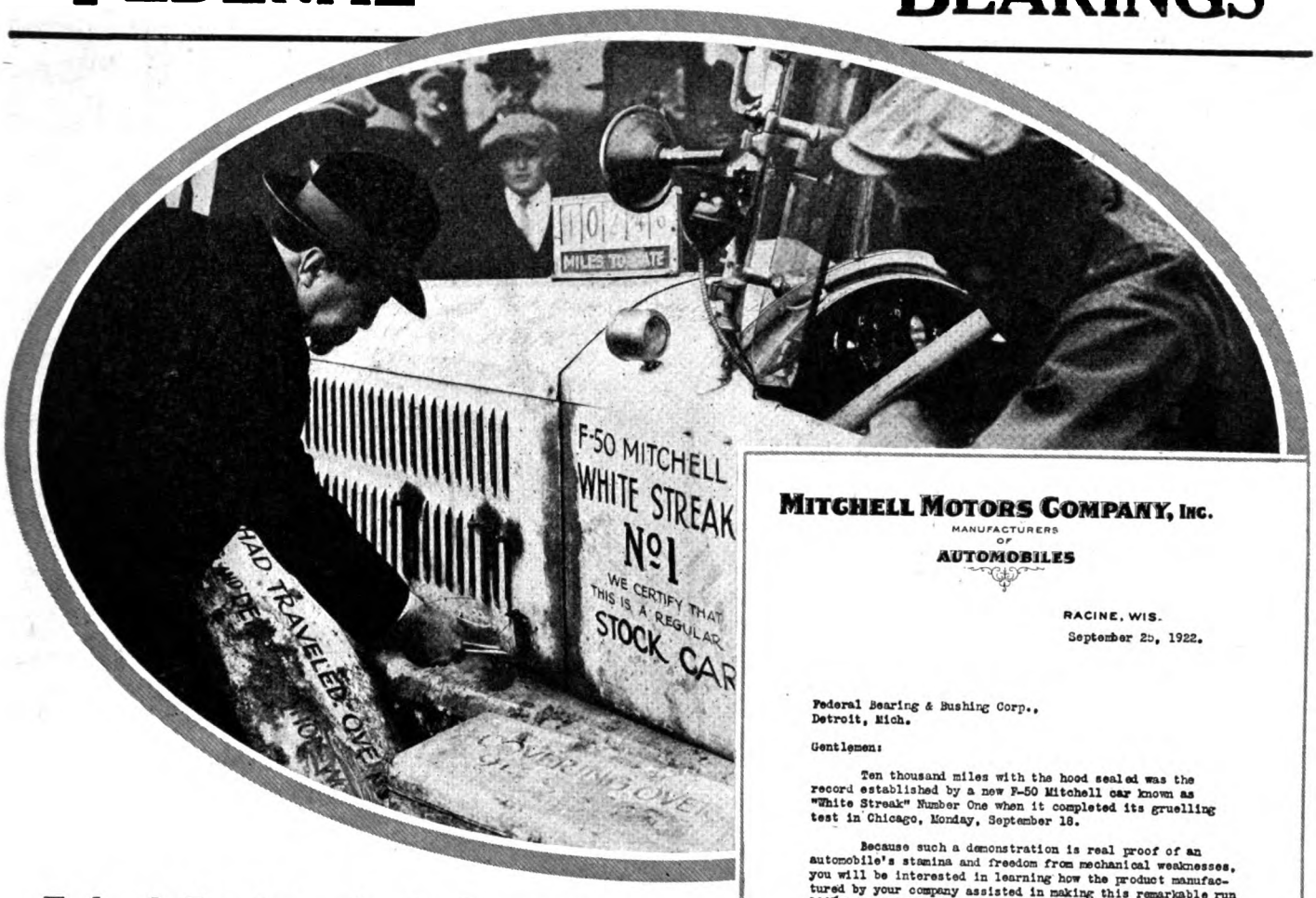
Offices: Detroit, U. S. A. *Factories: Detroit and Muskegon*

Largest Exclusive Motor Manufacturers in the World

Continental Motors

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FEDERAL BEARINGS



Federal Bearings Again Demonstrate Their Leadership

Performance Such as This Tells Why the Professional Opinion of Leading Engineers and Manufacturers So Strongly Favors These Famous Bearings

FOR years the most critical engineers and manufacturers have granted first position to Federal Bearings.

Within the industry it has been general knowledge that these famous bearings set the standard by which all bearings must be judged.

In themselves inconspicuous in that they do their work unseen, still every engineer and manufacturer knows that no single element in a motor is of more importance than the bearings.

The widespread confidence in Federal Bearings finds practical expression in the fact that these bearings are used by such successful and representative manufacturers as Rolls Royce, Packard, Hudson, Essex, Wills Sainte Claire, Paige, Maxwell, Chevrolet and a score of others.

MITCHELL MOTORS COMPANY, INC.
MANUFACTURERS OF
AUTOMOBILES

RACINE, WIS.
September 25, 1922.

Federal Bearing & Bushing Corp.,
Detroit, Mich.

Gentlemen:

Ten thousand miles with the hood sealed was the record established by a new F-50 Mitchell car known as "White Streak" Number One when it completed its gruelling test in Chicago, Monday, September 18.

Because such a demonstration is real proof of an automobile's stamina and freedom from mechanical weaknesses, you will be interested in learning how the product manufactured by your company assisted in making this remarkable run 100% successful.

When the hood was officially opened by Dr. John Dill Robertson, President of the Chicago Pageant of Progress, the motor was running as smoothly and powerfully as when this car left the factory June 4th.

We are proud of the record that the new Mitchell F-50 has made for itself in this and other demonstrations which have covered more than a million miles during the past four months, and we attribute a goodly share of the success of our car to the bronze-backed bearings made by the Federal Bearing and Bushing Corp. which we use as standard equipment for both crankshaft and camshaft.

When an examination of "Ten Thousand Mile Sealed Hood Car" Number One was made by our engineering department at the conclusion of the run, we found that the Federal bearings were as tight and sound as new.

Very truly yours,
MITCHELL MOTORS COMPANY, INC.
P. J. F. Batenburg
Chief Engineer.

PJB:MDJ

The Engineers of the Federal Bearing and Bushing Corporation are at your service with reference to your requirements. You are invited to write for any desired details.

YOUR GUARANTEE OF QUALITY — FEDERAL DETROIT

FEDERAL BEARING & BUSHING CORPORATION

BABBITT-LINED BRONZE-BACK BEARINGS_BRONZE BUSHINGS_BRONZE CASTINGS

DETROIT — MICHIGAN

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Demand
DISTEEL WHEELS

Be Sure You Get the Genuine

Accept No Substitute



Because Disteels always run true.
Because Disteels are supremely strong.
Because Disteels are so easily kept clean.
Because Disteels are always absolutely noiseless.
Because Disteels are light to lift when tire replacement is needed.
Because each Disteel is a simple piece of mechanism with only eight parts.
Because Disteels make possible easy outside tire inflation without special fittings of any kind.
Because the Disteel's concave and tapered disc absorbs and dissipates road shocks.
Because Disteels represent the ability and experience of the world's pioneer builder of steel-disc wheels.
Because, as every experienced motorist will tell you, "There is no adequate substitute for genuine Disteel Wheels."

Exclusive Manufacturer

DETROIT PRESSED STEEL COMPANY
6660 Mount Elliott Street Detroit, U. S. A.

DISTRIBUTORS:

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732 So. Michigan Avenue CHICAGO
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965 Post Street SAN FRANCISCO

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVI NEW YORK, NOV. 11, 1922 No. 13

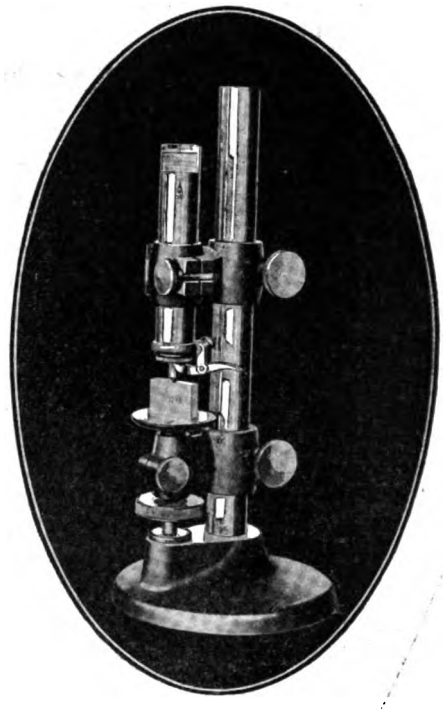
TABLE OF CONTENTS

Nash Warns Dealers of Rail Congestion 1233
Studebaker Boost in Price Impresses 1233
N. A. D. A. Charges Misuse of Rail Equipment 1233
France Honors Colonel Clifton 1234
Bitting Sales Chief of Standard Welding 1234
McCormick, Jr., at Harvester Helm 1234
Peerless Breaks All Production Records 1235
Driveaways Continue to Grow in Industry ... 1235
Executive Officers of Selden Now at Plant 1236
Hudson Offers New Plans to Its Dealers 1237
Buick Output Totals 17,666 for October 1237
Durant Lines Show Growing Activities 1238
Moon Fall Business Far Ahead of 1921 1238
N. Y. Bans Many Headlight Devices 1238
Chevrolet Speeds Zanesville Program 1239
New Locomobile Is Refined in Details 1239
Sale of New Process Gear to Durant Confirmed 1239
Nash to Close Year with Record Output 1240
Overland Statements Reveal Large Gains 1241
Jersey Association to Watch Road Cash 1242
A. A. A. to Aid Fight on War Excise Tax 1242
Traffic Body Studies Legislation 1242
North East Co. Adds Speedometer to Line ... 1243
Equipment People Convene in Chicago 1243
Shipments of Tires Less in September 1244
Mullins Body Shows Its Earning Power 1244
American Bosch Foresees Big Year for Itself.. 1244
Retaliatory Duties Ordered on Imports 1245
Half-Million Sets Remy's 1922 Record 1245
Retail Sales Spotty in Western States 1246
Big Business Again Buying Many Trucks 1246
Chicago Asks for a Car for Christmas 1247
Service Managers to Review Big Problems ... 1247
California Assn. Closes Successful Year 1247

FEATURES IN THIS ISSUE

Proving It Pays to "Ask 'em to Buy" 1251
Selling Goods at Retail 1253
Dissatisfied Customers Are Danger Signals 1254
Passenger Vehicles Newly Offered 1258
"Say It with Something for the Car" 1259
What's What in the Chicago Line-Up 1260
With the Wholesalers and Retailers 1269
Calendar 1276
Table of Passenger Car Selling Points (copyrighted) 1281
Alphabetical Index to Advertisers 1326

THE MINIMETER



A Precision Measuring Instrument

Combining Scientific Exactness With Commercial Adaptability

After once being set to a standard, it eliminates the personal error and permits precision measurements to be made with great rapidity. It brings to the measurement of ordinary bench and machine work the precision hitherto not available even by elaborate and costly methods.

Measures to 1/10,000 of an Inch.

The booklet will be sent on request.

THE NORMA COMPANY OF AMERICA
Anable Avenue
Long Island City New York
BALL, ROLLER AND THRUST BEARINGS

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Power

Transmitting full initial power to the point of usage is obviously a highly desirable thing, but friction is a devastating factor.

Engineers have given years of attention to the minimizing of friction at *bearing surfaces.* An outstanding achievement in their work has been the development of the ball bearing, and it is indisputable that ball bearings have the lowest coefficient of friction.

Strom Bearings have many highly essential attributes. Their fine quality of material, the expert workmanship in their construction; and finally, the rigid, painstaking inspection by experts of each unit and the complete bearing itself, make them unsurpassed as friction eliminators.

Made in radial (single and double row), angular contact and thrust types for any application.

U. S. BALL BEARING MFG. CO.
(Conrad Patent Licensee)
4538 Palmer Street Chicago, Ill.

Strom BEARINGS

"Wherever a Shaft Turns"

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WHICH— THIS *or* THIS?

Three different contracts	*or*	Only *one* contract—the Studebaker contract—with three separate models and 14 body types—each a Six and each a Studebaker.
Three deposits	*or*	Only *one* deposit.
Three stocks of parts	*or*	Only *one* parts stock.
Three conflicting sales appeals	*or*	Only *one* sales appeal—a consistent one, too.
Three advertising campaigns	or	Only *one* advertising campaign.
Three concerns with which to deal	*or*	Only *one* concern with which to deal—one that has a 70-year reputation for fair and square dealing and honest value.

Think this over. The first requisite of good merchandising is a variety of the right goods. The three Studebaker models open up to the Studebaker dealer *the best market of all*—everything above $500. Can you afford not to look into it?

MODELS AND PRICES—*f. o. b. factories*		
LIGHT-SIX *5-Passenger, 112" W. B., 40 H. P.*	SPECIAL-SIX *5-Passenger, 119" W. B., 50 H. P.*	BIG-SIX *7-Passenger, 126" W. B., 60 H. P.*
Touring ..... $ 975	Touring $1275	Touring $1750
Roadster (3-Pass.) 975	Roadster (2-Pass.) 1250	Speedster (4-Pass.) ... 1835
Coupe-Roadster (2-Pass.) 1225	Roadster (4-Pass.) 1275	Coupe (4-Pass.) 2400
Sedan 1550	Coupe (4-Pass.) 1875	Coupe (5-Pass.) 2550
	Sedan 2050	Sedan (Special) 2750

Non-Skid Cord Tires, Front and Rear, Standard Equipment

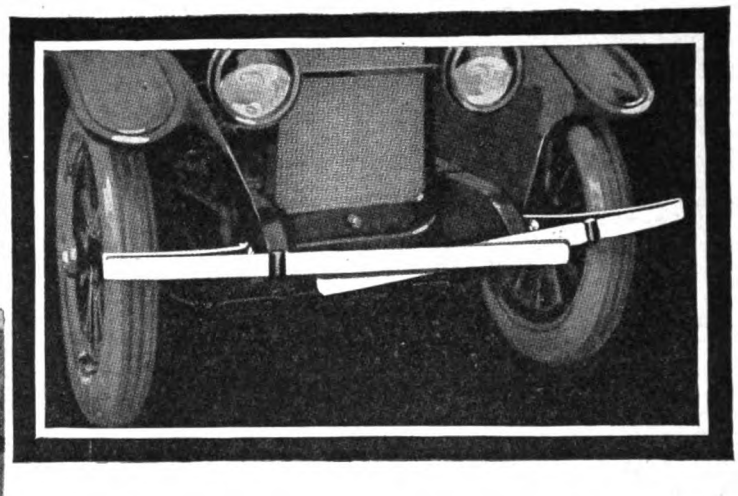
THE STUDEBAKER CORPORATION OF AMERICA
South Bend, Indiana

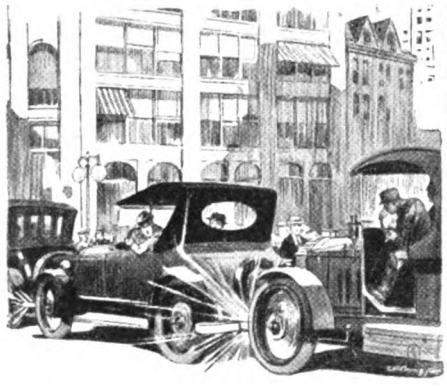
Studebaker

THIS IS A STUDEBAKER YEAR

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This shows how the two leaves overlap in the center, giving a double thickness of impact surface and increased flexibility. This is a Lyon-patented feature. Leaves are held tightly together by pressed steel clips.





AS an accessory, Lyon Spring Bumpers lead in sales, popularity, and satisfaction.

As protection against collision damage, Lyon Spring Bumpers are unequaled in resiliency, durability and strength.

As a product, Lyon Spring Bumpers are the original all-spring bumpers. Their construction is Lyon-patented and Lyon-designed. None can be like them.

Your jobber will tell you the Lyon proposition that has helped our dealers put more than a million Lyon Spring Bumpers in service.

Advantages That Help Sell Lyon Spring Bumpers

1. Open "looped-ends" absorb blow in place of passing it on to frame.
2. Lyon-patented two-piece overlapping front bar construction gives double thickness of impact surface.
3. The extraordinary resiliency that is due to the Lyon-patented construction and the high quality Spring Steel.
4. Ease of attachment. Lyon-patented device makes drilling and altering unnecessary.

Retail prices $10 to $25

Jobbers: *We make no sales direct. Profits go to our jobbers. Write for our proposition.*

METAL STAMPING CO., Long Island City, N. Y.



Lyon Straight Bar Bumper

LYON RESILIENT BUMPERS

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JAPAN *Colors*

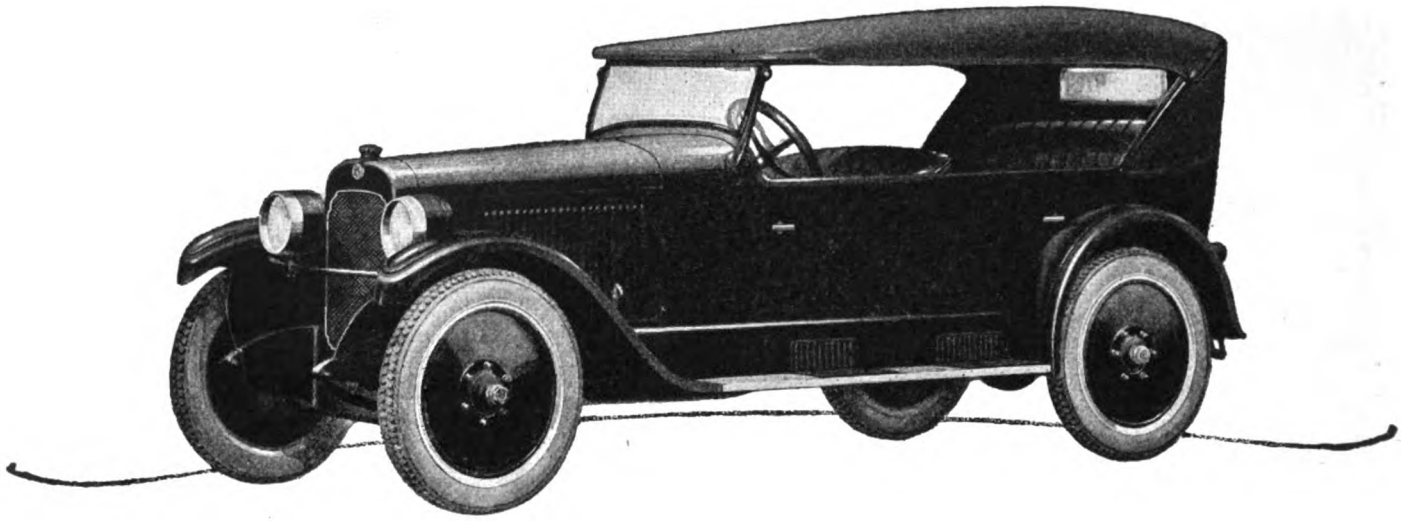
Our Japan Colors are ground impalpably fine. They work easily and are strictly uniform in tone.

FLINT

FLINT VARNISH & COLOR WORKS

FLINT, MICHIGAN

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The Chalmers Six owner enjoys the peculiar satisfaction that only comes when a possession is admired by everyone.

Back of the graceful lines and outstanding beauty of the Chalmers Six is a finer performance due to its advanced development of the six-cylinder engine.

Chalmers Six Prices

5-Pass. Touring Car - $1185 Roadster - - - - - $1185
7-Pass. Touring Car - 1345 Coupe - - - - - - 1595
Coach - - - - - - $1585

Prices f. o. b. Detroit—Revenue tax to be added

Chalmers Motor Car Company, Detroit, Michigan
Chalmers Motor Company of Canada, Limited, Windsor, Ontario

The CHALMERS SIX

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"Red-Tops Increased My Business 75% in Six Months."

The letter below emphasizes again in unmistakable terms the remarkable effect on a dealer's business when he stocks and pushes Red-Top Tires.

Greenville, S. C.,
October 17th, 1922.

The Fisk Tire Company, Inc.

Gentlemen:—

After having handled Fisk tires for considerable period of time, pushing Fisk Black Tops and selling Red-Tops occasionally, carrying only very small stock of 3 and 3½" Red-Tops. Through the persistency of Greenville, S. C., Branch, I decided last fall that I would stock Red-Tops in all sizes, going after Red-Tops just as hard as I had been going after Black Tops. The result is in six months' time my business increased 75%, and I have built up a high class trade. This trade by their boosting gives me the best advertising possible for a dealer to get.

Every sale on Red-Top tires secures for me a permanent customer and assurance of repeat business. To date I am yet to receive or hear of one single complaint against Fisk Red-Tops.

I expect to double my business for 1923.

Respectfully yours,
DETROIT TIRE REPAIR WORKS.

The Red-Top is alone in its class. It is the one tire on which a dealer can build up a high-class non-competitive business among owners who demand a strong, long-lived tire for hard work.

Its extra ply of fabric and its heavy, special red tread make good for a dealer with his customers—the only way possible to establish a permanently profitable business.

There's a Fisk Tire of extra value for every car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.



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Built With Number

Auto

Starting, Lighting

THE ELECTRIC AUTO-LITE COMPANY

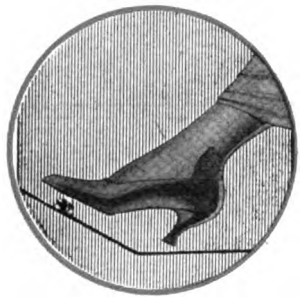
Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION

of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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Fewer Of Parts

-Lite

& Ignition

THE ELECTRIC AUTO-LITE COMPANY

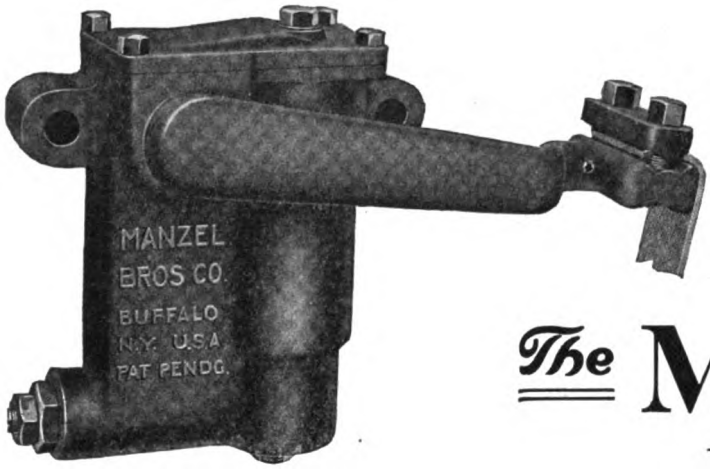
Offices and Works:
TOLEDO, OHIO

Detroit Sales Office:
1309 KRESGE BLDG.

WILLYS LIGHT DIVISION
of The Electric Auto-Lite Company, Manufacturers of Electric Light and Power Plants for Farms, etc.

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Manzel Brothers Company Announce a New Product



Made for both front and rear springs, and for all makes of cars.

Manzel Brothers Company, Manufacturers of the famous "Manzel" Engine Driven Tire Pump, standard for years on the Cadillac, Locomobile and other well known cars, and builders of "Manzel" lubricating devices, used by leading engine manufacturers both in this country and abroad, now announce to the trade

The MANZEL HYDRAULIC SHOCK ABSORBER

Carrying the same guarantee of reliability and with the same determination to meet the highest requirements of modern production and marketing methods, this new "Manzel" product, a Hydraulic Shock Absorber years in advance of all previous designs, is backed by a quarter of a century of experience in designing and manufacturing automobile specialties.

An outstanding advantage of this shock absorber is its automatic control—an exclusive "Manzel" feature—which marks one of the greatest forward strides toward the perfect riding automobile that has been made in many years.

The "Manzel" equipped car glides smoothly over holes, ridges and bumps, and the rebounds from the severest shocks are instantaneously and effectively absorbed.

Simple in construction. Durably built. Easily and neatly installed.

A quality accessory suitable for the highest quality cars, yet sold at a price to meet the purse of the average car owner.

An Extraordinary Opportunity for Distributors

Territorial distributors are now being appointed and we have an interesting and profitable proposition for high caliber men and concerns who can represent us to the best of advantage. Write us for full details.

MANZEL BROTHERS COMPANY

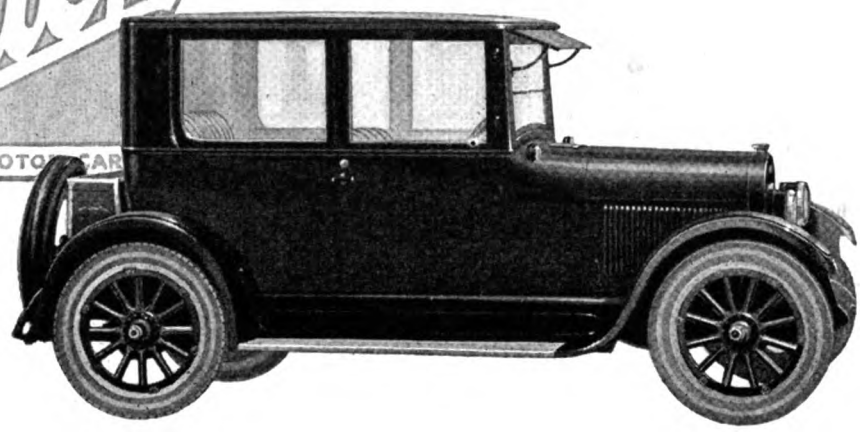
304 BABCOCK STREET BUFFALO, NEW YORK

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VANITY FAIR

VALVE-IN-HEAD Buick MOTOR CAR

The Standard of Comparison



Distinguished on Trail or Boulevard

The Four-Cylinder Five Passenger Touring Sedan $1325

In this strikingly handsome four-cylinder, five passenger touring sedan, Buick has provided a beauty, refinement and complete touring comfort, extraordinary at so modest a price.

It is a trim motor car; distinguishable at a glance for its ability to travel the longest trail or to fit perfectly in the smart company of the city boulevards.

With comfortable and finely upholstered seats for five full grown persons in its roomy and well-appointed interior, and with ample luggage space in the sturdy trunk carried on the rear, the Buick touring sedan makes city and country [illegible]

The Buick Line for 1923 Comprises Fourteen Models:

Fours—2 Pass. Roadster, $865; 5 Pass. Touring, $885; 3 Pass. Coupe, $1175; 5 Pass. Sedan, $1395; 5 Pass. Touring Sedan, $1325. Sixes—2 Pass. Roadster, $1175; 5 Pass. Touring, $1195; 5 Pass. Touring Sedan, $1935; 7 Pass. Sedan, $1985; 4 Pass. Coupe, $1895; 7 Pass. Touring, $1435; 7 Pass. Sedan, $2195; Sport Roadster, $1625; Sport Touring, $1675. Prices f. o. b. Buick factories; government tax to be added.

There's a Buick For Every Taste

Fourteen Buick models—a complete line of both fours and sixes—provide Buick dealers with a Buick to satisfy every taste and need. No matter what style of motor car a buyer wishes, there's a Buick to meet his want. Why not have your name on file?

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

VALVE-IN-HEAD Buick MOTOR CARS

Branches in All Principal Cities

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DODGE BROTHERS
BUSINESS COUPE

To know how the car is built is to recognize its exceptional fitness for years of hard work.

The body is rugged in a new and special sense. Every pillar and rib and panel is steel. All parts and sections are welded together into one sturdy unit.

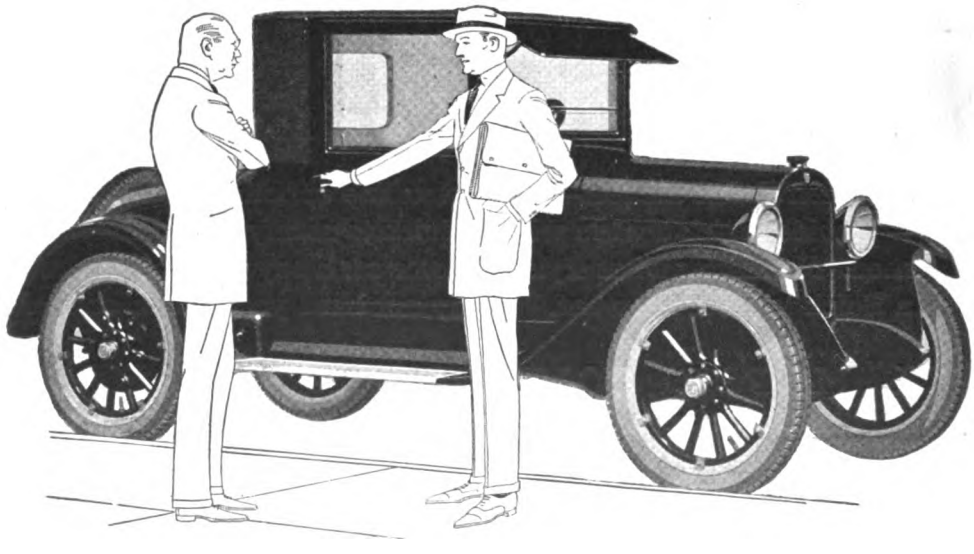
There are no bolts or screws to get loose—nothing to shrink or warp or rattle. The windows fit snugly in their steel frames. The doors snap neatly shut. Unvarying accuracy and precision are attained throughout.

Because there is no wood to char, the body is enameled in an oven under intense heat, resulting in a hard, durable finish that retains its lustre for years.

The non-rumble top and rear quarters are done in fabric after the current fashion, and heighten noticeably the smartness and grace of the body lines.

Cord tires were selected as standard equipment for the same reason that the seat is upholstered in genuine leather. Every detail has been determined on a basis of comfort and service.

The price is $980 f. o. b. Detroit



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GOODRICH

SELL THE TIRE BECAUSE IT BEARS THIS NAME. THE NAME OF GOODRICH ON A TIRE ANSWERS EVERY QUESTION YOUR CUSTOMERS CAN ASK. IT IS MORE THAN A BRAND—IT IS A CERTIFICATE OF QUALITY

For more than fifty years Goodrich has been the name that means full value in rubber products. It has always signified progress, improvement, quality —and good will of the user. That good will is the greatest asset Goodrich has. In these days, when everybody wants to be sure of getting full value for every dollar, the name that means something is the surest purchasing guide. Into the name of Goodrich goes everything that this institution has upheld through all its years. Back of the name is everything the organization stands for. It is your full assurance. Sell the tire because it bears the name of Goodrich.

THE B. F. GOODRICH RUBBER COMPANY, *Akron, Ohio*

ESTABLISHED 1870

"BEST IN THE LONG RUN"

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Nash Leads the World in Motor Car Value

Nash is Constantly Making the Line More Attractive

The whole great Nash organization is bending every effort constantly to make every model in the line even a finer value and a faster seller.

It is well worth the time of every thoughtful dealer to review the new developments that Nash has brought forward in the last sixty days or so.

Three new models have been added to the line and important new developments in design and construction have been brought out.

For instance, a new Sedan has been added to the Six series. It is a five-passenger, beautifully built job that is winning high favor everywhere.

A new Six Sport model that is the most completely equipped car of its type on the market has also just been introduced.

And a week or so ago the new Six Roadster was announced. It is a handsome model with body furnished in rich maroon and the top done in ecru silk mohair.

Then, in addition, such features in design and construction as a new-vogue cowl ventilator, new steering mechanism, a stalwart bar that locks rigidly the chassis side members at the front and prevents the frame distorting or weaving have been embodied.

Also oil kipp equipment is added. Just give the kipp a push and oil is force-fed to steering knuckle and steering tie rod.

Now the headlamps are of the barreled style, and they have an exclusive Nash device for quick adjustment of the light to any angle.

These and many other special features exclusive to various models are adding their appeal to the appeal of the fundamental value that Nash builds into every car, whether four or six, open or closed.

They are helping Nash dealers everywhere to get a bigger and bigger share of the business in their territories.

It is this kind of organization effort that builds a dealer's present and increases his future business.

Just a few very desirable Nash dealer franchises still open. But you'll have to make your application quickly.

FOURS *and* SIXES

Reduced Prices Range from $915 to $2190, f. o. b. Factory

NASH

THE NASH MOTORS COMPANY
KENOSHA, WISCONSIN

(765)

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Automobile Topics
THE TRADE AUTHORITY

Vol. LXVII NEW YORK, NOVEMBER 11, 1922 No. 13

NASH WARNS DEALERS OF RAIL CONGESTION

Urges Early Acceptance of Cars for Storage—Declares Lack of Shipping Facilities Is Grave—Offers Preference in Spring Allotments as Inducement.

Speaking before about one hundred dealers of the Warren-Nash Motor Corp., eastern distributer, October 8, Charles W. Nash, president of the company bearing his name, did the trade a real service in pointing out, among other things, the gravity of the railroad situation in its present and probable influence upon automobile deliveries, especially during the coming Winter.

Nash, who has the habit of keeping an ear to the ground, has studied the situation in all its bearings. He now tells his dealers that unless they take cars now it is highly uncertain when they can get them. Already eastern shipments have had to be made by boat from the Nash factory at Kenosha to Buffalo, and in some instances driven from there over the road even as far as some comparatively distant points on Long Island. This is due to no other reason than that the railroads are unable to return automobile cars to transfer points fast enough to take care of the demand.

With the closing of navigation on the Great Lakes within a few days, water shipments, which have been of very great assistance to the automobile manufacturers during the past Summer and Fall naturally will be suspended. Hence the entire burden will fall upon the rail carriers.

Nash makes it clear that he is working for the dealers' own interest in asking them to store for the Winter, as his policy has never been to load up his dealers. This is not a reversal of policy, therefore, but rather a timely warning to those whom he prefers to regard as partners, rather than merely sales agents.

In connection with the advice that dealers now lay away all the cars they can get hold of, the point is being made that those who do take cars now will have preference in allotments for Spring trade, instead of being penalized by having cars taken in during the next few months counted against the pro rata schedules.

Nash, than whom there may be few better qualified to speak with authority, predicts the biggest year, in 1923 the industry has ever had. He assures his dealers that the current models of the

(*Continued on page 1236, first column*)

N. A. D. A. CHARGES MISUSE OF RAILROAD EQUIPMENT

Urges Members to Ask Carriers to Stop Reloading Cars with Produce

Evidence of widespread misuse of automobile cars by railroads in the South, West and Southwest is reported by the National Automobile Dealers' Assn., in a bulletin sent its members this week. It is declared that thousands of these cars are being used, in the territories mentioned, in "reloading them with cotton, lumber, sand, cement, flour and other such commodities that could just as easily be put in ordinary box cars."

"The situation is getting so serious," continues the bulletin, "that shipments may have to be seriously curtailed and driveaways resorted to, to keep factories in production. Will you (the member) please take up with your local association the appointment of a committee to call upon the railroads in your territory to desist from this improper use of automobile equipment and get it back immediately to the manufacturing area. If you will report to this office any misuse of this equipment we will take it up immediately with the American Railway Assn. so that proper steps can be taken by them to get the offending carrier in line."

STUDEBAKER'S BOOST IN PRICE IMPRESSES

Unexpected Move Remains Unexplained—Heartening News to Dealers—Several Explanations Advanced Including Competitive and Other Motives.

Studebaker's advance of price on the big-six model, bulletined by AUTOMOBILE TOPICS last week, has made a profound impression on the trade. The move was unexpected, and remains unexplained in official quarters. Various surmises have been advanced concerning it, but regardless of the cause, it remains a fact that the change has done more to hearten automobile dealers than any other recent event.

Of several possible explanations which have been advanced, one, and perhaps the most superficial, is that it is simply a competitive manoeuvre, possibly intended to disguise the subsequent intentions of the Studebaker Corporation with respect to one or both of its two other models. Another, and more plausible, is that the change represents an economic adjustment within the line; the operating margin on the large car, it is suggested, may have been out of proportion to that on the other cars, so that a change of price was deemed advisable in order to balance up the retail end of the business.

A third explanation, however, has been eagerly seized upon by the trade, and is borne out by testimony from other quarters. It is that the tide of manufacturing costs has unmistakably turned, so that the general trend of prices must from now on be upward. Studebaker, on its highest-priced model, has admittedly been offering not only a very large and attractive car for the money, but has also sold it with an exceedingly liberal range of equipment. Naturally, increased production costs, say for materials, would affect this model first, be-

(*Continued on page 1236, third column*)

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France Honors Col. Clifton

Col. Charles Clifton, president of the National Automobile Chamber of Commerce, has been made a member of the Legion of Honor of France. The decoration comes as reward for his work in caring for French war orphans. The induction ceremonies took place at the Buffalo club, Buffalo, N. Y.

Plath Enjoying California

John J. Plath, director of sales of the Maxwell Motor Corp., is in California for a well deserved vacation in company with Mrs. Plath. Despite the high pressure of Maxwell business Plath has persuaded himself to forget routine for the time and is combining work with pleasure in the Far West.

R. C. Durant Hangs Up Record

R. C. Durant, son of W. C. Durant and owner of the yacht *Black Swan*, hung up a record when he made the trip between San Francisco and the Hawaiian Islands in eight days and 12 hours. As noted in these columns under date of October 21, Durant left on his boat, a gasoline motor propelled yacht, for a vacation.

Goodyear Executives Banquet

Two hundred and fifty office and factory executives of the Goodyear Tire & Rubber Co., held their annual banquet in East Akron, O., the evening of November 4. Sales methods and the outlook for the future were discussed by President E. G. Wilmer, Sales Manager L. C. Rockhill and General Superintendent William Stephens.

Carmody Joins McKinnon Chain

John D. Carmody, formerly territory manager for the Champion Spark Plug Co., and more recently a district manager of the Wainwright Engineering Co., has been appointed western manager for the Columbus McKinnon Chain Co., Columbus, O. He will have his headquarters in Chicago and will cover Illinois, Iowa, Missouri, Minnesota, Wisconsin, Kansas, Nebraska, and the Dakotas.

Poxson Now with Dort's Detroit Office

E. G. Poxson, formerly assistant general sales manager of the Dort Motor Car Co., has been appointed manager of the direct factory sales and service office recently established at Detroit by the Company. Rejuvenation of the sales rooms and re-equipment of the service department has been accomplished.

J. H. Burgess Selling New Lines

J. H. Burgess, who has been identified with automotive merchandising for a considerable length of time is now established in Detroit as Michigan representative of the Electro-Chemical Engraving Co., and Litho-Etching Corp. handling their lines of etched scuff and sill plates, as well as name plates, which are already used in connection with important lines. Burgess' last connection was as Detroit manager of the Reliance Mfg. Co.

BITTING NOW SALES CHIEF OF STANDARD WELDING CO.

Transferred as Sales Manager from Eaton Axle Division

George L. Bitting, sales manager of the Eaton Axle Co. since its organization, took over, on November 1, the sales managership of the Standard Welding Co. of Cleveland. Both companies are divisions of the Standard Parts Co. of that city.

Bitting's new appointment is in line with the aggressive sales policy recently instituted by Parts company for its tubing and rim plant of which the tubing capacity alone is 50 million feet annually. P. T. Hill succeeds his former chief as sales manager of the Eaton company.

Muir Joins Hall Lamp

James A. Muir, formerly with the Corcoran-Victor Co. as general manager for a number of years, has joined the C. M. Hall Lamp Co., Kenosha, Wis. He will specialize in developing the jobbing business on the Company's Solar lamps.

Griffith Heads Forsyth Sales

E. L. Griffith has been named sales manager in charge of all sales of the Forsyth Bros. Co., disc-wheel makers. He succeeds Walter Mack who resigned some time ago.

Roy Cole Joins Bourquin

Roy Cole, formerly of the Liberty organization and more recently with the Saxon Motor Car Corp., Ypsilanti, has been appointed assistant to James Bourquin, vice-president and general manager of the Continental Motors Corp. Cole designed the original Saxon car.

Herbig Talks to Dealers

E. T. Herbig, sales promotion manager of the General Motors Truck Corp., is visiting dealers throughout the middle west. He addressed Chicago men last week.

Duffas Assistant N. A. D. A. Manager

Robert Duffas, prominent in Kalamazoo, Mich., automobile selling, has been named assistant manager of the National Automobile Dealers' Assn., St. Louis. His assignment to national promotion work will keep him traveling practically all of the time.

Amos Joins Dodge Brothers

Frank B. Amos has been appointed manager of foreign advertising and sales promotion by Dodge Brothers. He was formerly with Studebaker and recently was vice-president and general sales manager of the Lalley Light Corp.

McCormick, Jr., at Harvester Helm

Cyrus H. McCormick, Jr., has been placed in charge of the International Harvester Co.'s manufacturing plants throughout the world. He is son of the chairman of the board of the concern and has been at work in the home plant at Chicago since his graduation from Princeton in 1912.

Eastman Heads N. Y. Dealers' Assn.

Lee J. Eastman, president of the Packard Motor Car Co. of New York, has been elected president of the Automobile Merchants' Assn. of that city. The new vice-president is Russell L. Engs, president of the Cole Motor Car Co., Inc., New York. An aggressive, forward looking program was sketched out by Eastman at a luncheon this week when he declared that the organization was to expand its activities and "become a real, live leader of the dealer associations of the Country." He declared Alfred Reeves, general manager of the National Automobile Chamber of Commerce, is prepared to cooperate with the new administration in working out a constructive program that will include the various problems that will confront the industry during the coming and succeeding years.

Bartholomew Heads Farm Association

J. B. Bartholomew, president of the Avery Co., since 1907, has been elected president of the National Association of Farm Equipment Manufacturers. He is one of the best known tractor, motor farming, threshing, and road-building machinery inventors and builders in the Country. His inventions are listed in a special Patent Office volume which numbers several hundred pages.

Hilbish Now with Star Rubber

G. H. Hilbish, whose seventeen years of experience in the tire business has given him a wide circle of friends, has been appointed special factory representative of the Star Rubber Co., Inc. Hilbish was for nine years with the B. F. Goodrich Co. and later with Goodyear. He joins Star, with Akron as his headquarters, from the Goodyear organization.

Harry U. Kibbe

Harry U. Kibbe, since 1914 head of the sales department of the Detroit Cadillac Motor Car Co., New York distributer, and previously vice-president of the Renault Automobile Co., of that city, died on November 3 of heart disease. He was 57 years old and a nephew of George Kibbe, former deputy surveyor of the Port of New York. Kibbe, as noted in these columns under date of November 4, was stricken as he left the steamer on which he was returning from South America. Taken to Flower hospital in New York, he only survived the attack a few days.

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PEERLESS BREAKS ALL PRODUCTION RECORDS

Cash Receipts Also Exceed Previous High Marks—October Volume Five Times That of Same Month in 1921—1,009 Cars Shipped in That Period.

All previous records for production, sales and cash receipts were shattered by the Peerless Motor Car Co. during October. The volume for the month was more than five times that of October, 1921, and more than 36 per cent over the volume of last May, when the present management established new production figures for the 21-year-old concern. Thus, as the enterprise enters upon its majority in years, the administration of R. H. Collins and his associates has demonstrated the motive power that it was early predicted it would show.

Cars were shipped by freight and express and driven away from the plant during the month to the total number of 1,009. The production department was operated at top speed during the entire time, and each week a new shipping record was set up. Enclosed models are in special demand, and the factory entered November with no finished product on hand and orders still accumulating.

Material for 9,000 cars has been purchased, according to a statement by Collins himself, who says that the maximum production will be in the neighborhood of 10,000 cars per year. This total is expected to be reached in the year ending August, 1923. On this basis, the output of the old concern will have been practically doubled.

Approximately 2,200 hands are now employed, and overtime is being resorted to in some departments. Construction of a material warehouse and a new loading dock is soon to commence. These additions are to be rushed to completion in an effort to counteract the effects of a possible Winter tie-up of railroad traffic.

Reflecting the rapid gains in sales activity, the earning power of the Peerless has likewise evidenced material improvement. Profits for October were at the annual rate of $28 a share, it was said. The improvement naturally was reflected in the local stock market, where Peerless stockholders watched with satisfaction the upward ride of their holdings, while the price of the concern's convertible bonds also reflected the movement of the stock and registered a material advance.

Wisconsin Has Right Idea

More than $9,000,000 was spent in the construction of concrete roads in Wisconsin so far this year. The season has been officially closed with actual building mileage 335 instead of the 445 planned.

Ford Business Still Growing

Creditable reports indicate that Ford sales have just about doubled since the price reduction of October 17. "Business is better than it ever has been," said President Edsel Ford, of the Ford Motor Co., returning from his western business trip. October retail total is reported to have been 100,000 cars, an increase of 70,000 over last October.

Fall Business Holding Up Well

Fall business is holding up well, according to reports from many quarters. Favorable returns on the October sales of the leading manufacturers are almost uniformly accompanied by statements indicating that November sales are continuing to show strength. Direct returns from dealers show the usual admixture of advances and seasonal retrogressions, but with few exceptions indicate greater volumes of sales than prevailed a year ago at this time. In New York, sales seem to have held up surprisingly well. There was a marked hiatus during October, but a number of dealers say that this has been safely passed.

MAKER-SUPPLIER-DEALER

From a prominent car manufacturer—"Kindly accept our thanks for your cooperation in placing this information before the public in an accurate manner."

From one of the largest makers of equipment—"Your Table of Passenger Car Selling Points is certainly an advance in the method of listing such information."

From one of the Country's most successful car distributers—"Your new Table giving equipment on various cars is very valuable and important information."

The data listed on the Table is useful and helpful to all branches of the industry. Because it is so helpful, it is kept up-to-date by weekly revisions, that the trade may always be correctly informed.

In this issue the Table appears on pages 1281-3. It is revised to November 6.

Olds Production Records Broken

What Guy Peasley, general sales manager of the Olds Motor Works, believes to be the result of the recent price reduction is the fact that all production records for the Company were broken in October. Not only did output exceed post war experience, including the boom period of 1920, but the month proved to have been the largest from all standpoints of any thirty-day period in the 25 years of the concern's existence save only one month of 1918 during the height of the war boom.

Timken Bearings Profits Grow

Net profits of the Timken Roller Bearing Co. for the three months ended September 30 were slightly higher than in the preceding quarter. The total was $2,300,000 and for the nine months to date $6,339,000. Current operations and earnings indicate a net for the year of about $8,500,000.

DRIVEAWAYS CONTINUE TO GROW IN INDUSTRY

N. A. C. C. Figures Reflect Statistics on Railroad Car Shortage—Boat Shipments Drop Off as Navigation Season Draws to Its Close—Outlook Fair.

October shipping records of the National Automobile Chamber of Commerce, released this week, show very plainly the continued growth of driveaways throughout the industry. That this reflects the acute car shortage on railroads cannot but be patent since, as pointed out in these columns under date of November 4, the carrier problem becomes worse as the weeks go by.

Indicated production for the month was 244,400 passenger cars and trucks for all makers. The increase over September, as noted heretofore in AUTOMOBILE TOPICS, is thus 20 per cent, whereas last September's figure was greater than the succeeding October's by approximately seven per cent. It may also be pointed out that this October saw a 68 per cent increase of shipments for the same month of 1921. The previous October record was in 1919 with 200,000 cars.

Factory figures for all manufacturers are as follows:

	Carloads		Driveaways		Boat	
	1922	1921	1922	1921	1922	1921
Jan.	15,357	6,485	7,479	3,185	143	93
Feb.	19,636	9,986	10,173	7,507	180	99
Mar.	27,753	16,287	16,917	9,939	560	75
April	31,334	20,187	22,381	14,197	2,960	1,619
May	33,416	18,608	28,827	15,193	7,406	2,381
June	34,230	20,269	33,857	18,834	7,737	3,947
July	29,116	19,514	28,100	15,533	7,030	3,726
Aug.	32,814	20,758	36,754	15,218	10,096	3,595
Sept.	25,950	19,002	30,055	13,840	8,002	2,959
Oct.	*26,980	17,808	*33,320	12,971	*7,040	2,226
Nov.	.....	14,264	.....	10,528	.....	1,402
Dec.	.....	12,310	.....	7,501	.....	188
Year's total	195,478	.....	144,446	.....		22,310

* October, 1922, partly estimated.

The situation on the railroads might be summed up as follows: Locomotives continue at over 30 per cent bad order; accumulation of loaded cars shows a slight reduction as of October 6; bad order cars on October 15 were 11.9 per cent of the total number in use. Thus the locomotive condition is about twice as bad as it would be normally and while the car situation is showing improvement, ordinary conditions would not warrant more than five or six per cent of rolling stock being laid up for repairs.

The railroads are making every effort to better their condition, which cannot be entirely laid at their door since the United States railroad administration's policies during war-time and afterwards were not designed to provide for future contingencies. In addition to the 12,950 new automobile cars recently reported in these columns, the N. A. C. C. provides the information that 3,900 more have been ordered by six western roads while ordering of an additional 3,000 is being considered by the Grand Trunk, Rock Island and Chicago, Milwaukee & St. Paul railroads.

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EXECUTIVE OFFICES OF SELDEN NOW AT PLANT

Administration Moved to Factory as Move Toward Economy—No Change in Industrial Motors Policies—Election of Officers Postponed.

Executive offices of the Selden Truck Corp., a division of the Industrial Motors Corp., Rochester, N. Y., have now been combined with the factory office in that city. For a number of years these offices of the Selden organization have been located in the East Avenue building in the downtown section of Rochester, but with the formation of the Industrial Motors—Selden and Atlas trucks—it was found more economical to combine the two offices under one roof at the Selden factory.

The sales division of the Industrial Motors Corp. will continue at Rochester and the direction of the Selden and Atlas sales will, as in the past, be under the supervision of Hal T. Boulden as director of sales of the Industrial Motors. The Atlas truck will continue to be manufactured at York, Pa., and general offices will be maintained there with Allen R. Cosgrove as general manager in charge.

The election of officers of the Selden corporation, scheduled for November 6, has been postponed until December 4. In the interim George C. Gordon continues as president of Selden while John J. Watson, Jr., is president of the Industrial Motors.

NASH WARNS DEALERS OF RAIL CONGESTION DANGER

(*Continued from page 1233, second column*)

Nash line represent the best and most conclusive effort of the great Nash factories, and that no changes of any kind are contemplated, up to at least July 1, 1923. Hence, dealers, in taking cars now, have the assurance that they are getting the latest and best, and that the commercial risk in handling volume stocks is minimized.

Not only are the Nash dealers advised to store cars, but at the New York meeting Nash showed them how to handle what, under other circumstances, might seem a difficult undertaking. As a companion speaker, he had the comptroller of the Federal Reserve Bank, for the eastern district, who lucidly explained the operation of the Federal Reserve system, while a vice-president of one of the great New York banks outlined the banker's attitude toward the automobile industry.

The well-posted modern banker, he explained, looks upon the automobile business in exactly the same way that he regards every other established industry. He placed in order three important considerations. These are: The character of the dealer, viewed simply as a moral risk; the quality and standing of the product; and the dealer's status, as indicated by his financial statement.

The speaker strongly advised that the dealer become personally acquainted with his banker, recalling the observation popularly attributed to the elder Morgan that he would sometimes lend a million dollars to a man on his face when he wouldn't let him have so much as a single dollar on his statement. When a man is not personally known to the discount committee of his bank, his request for accommodation will be treated in an entirely impersonal manner, whereas if the dealer himself is known and highly regarded, he may receive some extra consideration.

The story was told of the man who went to his bank with a request for an extra loan, which was at first denied, but upon his earnest pleading, the banker, whom he knew well, at last declared that he would take a sporting chance on him, and let him have the money on one condition. This, it appeared, was that the applicant should correctly designate which of the financier's eyes had been fashioned by man. The latter, unknown to many of his acquaintances, had worn a glass eye for years. This was unsuspected by many of his acquaintances, while among those in the know there was much speculation as to which eye was false and which was true.

After regarding him earnestly for a few seconds, the would-be borrower unhesitatingly selected the left orbit as the artificial one. Having admitted that in picking out the left eye he had, so to say, picked the right one, the banker wanted to know how he decided.

"That's easy," said the customer, "I merely chose the one that looked sympathetic."

This story illustrated the popular opinion of a banker some decades ago but the reverse is true today, it was asserted by the speaker. Proper cultivation of relations with banking circles would assure the automobile world ample cooperation from that quarter.

An official of a large acceptance corporation, who also spoke, outlined advantages of doing business with such a concern rather than tying up capital at his local banker. Sales Manager Earl H. McCarty spoke frankly to the dealers of the sales policies of the Company and promised greater cooperation from the factory in the future.

The meeting was one of a series and was followed the succeeding day by a similar one in Boston. C. B. Warren, head of the New York concern, was master of ceremonies.

Baldwin Presented with Heir

Mr. and Mrs. James Harold Baldwin have announced the birth, on October 25, of James Craven Baldwin. The father is president of the Dunlap-Ward Advertising Co., Cleveland.

STUDEBAKER ADVANCE IN PRICE IMPRESSES TRADE

(*Continued from page 1233, third column*)

cause it is sold in relatively smaller quantities, so that its pro rata share of the general overhead would be proportionately higher.

Reflecting on this view of the case, it is of interest to record that Charles W. Nash, in addressing his New York dealers this week, remarked that prices would increase before they again declined. He gave assurance that his own line is stabilized, as far as changes are concerned, until the middle of next year. Officials of the Maxwell and Hupp Motor Car companies are quoted in similar vein. The change is alluded to in despatches as "a good tonic for the usually dull winter months," and as verifying what other manufacturers have known for the last 60 days, namely, that the price pendulum has begun to swing the other way.

New prices on the Studebaker Big Six, as officially corrected, subsequent to the first announcement, released to this publication November 4, are as follows:

STUDEBAKER BIG-SIX

Model	Old	New	Change
Touring ....(7).....	$1,650	$1,750	$100
Speedster ...(4).....	1,785	1,835	50
Coupe .....(4).....	2,275	2,400	125
Coupe .....(5).....	2,375	2,550	175
Sedan special (7).....	2,650	2,750	100
Sedan (regular).....	2,475	Discontinued	

Would Guarantee Car Ownership

Organization of Security, Inc., a Delaware corporation, has been accomplished with L. B. Howey as president and William Jackson as vice-president. The concern plans to issue guaranteed titles to accompany the car during its life.

AMERICAN CHEMISTS TO STUDY FUELS AND OILS

A. C. S. Special Committee Gets to Work Under Petroleum Institute

How future supplies of motor fuels and oils can be obtained is the problem to be studied by a special committee of the American Chemical Society, working under the direction of the American Petroleum Institute, which has begun its studies. The list of problems, which may be termed sub-heads under the general thesis, were supplied by W. F. Farragher of the Mellon Institute before the meeting of the petroleum section of the A. C. S. at Pittsburgh recently.

These problems are as follows: Investigation of fractionating columns looking towards greater yields; preparation of more rational specifications for petroleum products together with better volatility specifications for gasoline; investigation of actual need for more highly refining gasoline; study of carbon formations in cylinders; study of lubrication from colloid chemical standpoint; chemistry of petroleum hydrocarbons, particularly higher homologs; chemistry of sulphur, oxygen and nitrogen compounds.

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HUDSON OFFERS NEW PLAN TO ITS DEALERS

Financial Rearrangement Forms Basis of New Consideration—Details Not Disclosed—Both Hudson and Essex Lines Reduced to Seven Models Only.

With its dealer list expanding rapidly, the Hudson Motor Car Co. has perfected a general sales policy which, in the opinion of its officials, greatly lessens the problems of the dealers handling its line. This is a finance plan which permits of the handling of cars throughout the entire year at an unusually small expense.

Many plans have been submitted to the Company in recent seasons. But the executives have held off until one was offered which combined the virtues of entire dependability and an economical interest charge on the money which would be advanced.

In recent conferences of sales officials at the factory, plans have been laid for a definite campaign to extend the use of the finance scheme throughout the organization. Details of the offer were not disclosed.

To further lessen the financial burden on dealers, the Hudson-Essex line of cars has been radically reduced. Hudson and Essex are asking their distributers and dealers to handle only seven models, an unusually small number for as large a manufacturer as Hudson. These are: the Essex phaeton, coach and cabriolet, and the Hudson speedster, seven-passenger phaeton, coach and sedan. The popularity of each of these models makes for rapid turnover on the dealer's part, thereby eliminating the possibility of tying up a large amount of money, it is asserted.

Heretofore, Hudson and Essex in one year produced as many as twelve different models. In one year, before the Essex was introduced, the Hudson alone had nine models.

It is said in connection with this policy that 21,000 Hudson and Essex coaches have been marketed in the last ten months. Closed car ratio to the entire Hudson-Essex production is now 56 per cent, and this figure is said to be greatly on the upward trend in the 1923 plans of Hudson-Essex distributers as now being formulated.

AMERICAN BOSCH FORESEES BIG YEAR FOR ITS TRADE

Agricultural Buying and Other Indications Point to Much Trade

Basing its predictions on present agricultural buying of magnetos and prospects of other business already in sight, the American Bosch Magneto Corp. believes the most profitable six months in its history will begin December 1. The Corporation is receiving orders from tractor manufacturers which will tax its output in that direction to the limit. International Harvester and J. I. Case are heavy buyers, according to the Bosch officials.

This agricultural demand is augmented by orders from the Corporation's passenger car and truck customers. Chandler, planning a record production for 1923, is pointed to by Bosch executives as one of the large users of their products. The recent Rickenbacker contract represents new business and before the end of the present year other profitable contracts are expected to be given the Corporation.

Hupmobile Betters 30,000 Schedule

Hupp Motor Car Corporation has already considerably bettered the 30,000 production schedule it had set for 1922 and is continuing at maximum output basis with no indication of any immediate let-up. Typical of the dealer viewpoint of Hupmobile prospects for 1923 is that of the Chicago distributer who recently took 70 of his dealers to the Detroit factory. He declares his territory would demand a greater allotment of cars than the 1922 quota, which has already been sold in spite of the fact that it was double that of 1921.

HOLDERS OF G. M. C. STOCK FEWER THAN LAST QUARTER

69,217 Total, However, Higher Than Any Quarter Previous to This Year

Compilation of stockholders of General Motors Corporation for the last quarter shows a slight decrease in the total number compared with the first three quarters of this year, although the number is higher than in any other quarterly period up to the beginning of 1922. While present total of 69,217 is some two thousand under the preceding quarter, it will be recalled that statistics of the Corporation published in these columns October 28, indicated a substantial increase in the number of stockholders owning small lots of 50 or less.

Total number of stockholders of all four classes by quarters back to and including 1917 is recorded as:

Calendar Year	Quarter			
	First	Second	Third	Fourth
1917.....	1,927	2,525	2,669	2,902
1918.....	3,918	3,737	3,615	4,739
1919.....	8,012	12,523	12,358	18,214
1920.....	24,148	*26,136	31,029	36,894
1921.....	49,035	59,059	65,324	66,837
1922.....	70,504	72,665	71,331	69,217

*Jan., 1920, stockholders authorized exchange of one share common, par $100, for 10 shares common, without par value, first exchange being made Mar. 1, 1920.

Dorris Holds Closed-Car Salon

A closed-car salon was held all this week at the factory of the Dorris Motor Car Co., St. Louis, the showroom having been appropriately decorated in an Autumn setting. Three new models were displayed, the coupe, standard sedan and custom-built sedan. The last mentioned was recently described in these columns.

BUICK OUTPUT TOTALS 17,666 FOR OCTOBER

Surpasses September Production by Nearly 1,000—No Lessening in Demand Seen by Bassett—Detroit Plant Making Large Number of Closed Cars.

October hung up a new record for the Buick Motor Co., with a total production of 17,666 automobiles, as was told in these columns last week. While the present month is too young to prophesy, President H. H. Bassett points out that November figures seem to be solely dependent on shipping facilities, since no lessening in the demand has been noted. In this connection he explains that October brought excellent weather for driveaways.

The record of October was greatly enhanced by the growing efficiency of the Detroit plant. This auxiliary factory, formerly the home of Scripps-Booth, now finishes and ships all but two models of the closed car line. On the record day, October 30, when 1,029 Buicks were started on their way to buyers, the Detroit plant is credited with 251 shipped or driven away.

While surpassing the month of September in the matter of production, by 824 units, the figure achieved is best compared with that of October, 1920, when 13,121 cars were made, and of October, 1921, when only 9,113 were produced. As another feature of the record the Company asserts that total October production of automobiles of all makes was appreciably below September. Among the shipments of the Buick concern were 33 solid train loads to individual consignees.

EASTERN STAR OF TRADE BRIGHT, THOMPSON FINDS

Stutz President Tours Territory and Returns Enthusiastic

"Business is improving gradually, but surely and we look forward hopefully to next year as a year of unusual opportunity. All motor car manufacturers have reason to be enthusiastic and we are sure that 1923 will mark one of the best years the industry has had." Thus W. N. Thompson, president of the Stutz Motor Car Co. of America, reports after a swing around the eastern States.

Trade in New York was accelerated by the closed car show, held recently, he found. In Philadelphia the local dealers see continuance of the present satisfactory business well into the Winter. At Boston, Stutz merchants have increased selling forces to take advantage of the improved conditions. Likewise in Pittsburgh, Baltimore, Washington and Providence dealers report a very active demand, with excellent prospects for future business.

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DURANT LINES SHOW GROWING ACTIVITIES

Star, Durant and Locomobile Forces Speed Up Production—Flint Car Delayed by Experiments and Testing—New Plant for Star Begun at Flint.

Trainloads of Star cars are now leaving the Elizabeth, N. J., factory it was announced this week by W. C. Durant. Furthermore, trainloads will be coming from the Lansing plant later in the month while these two factories, together with those at Oakland, Cal., and Leaside, Ont., are scheduled to turn out 16,000 of the little automobiles before January 1, 1923.

Ground is being broken for a new $1,000,000 plant at Flint, to be used exclusively for making Star cars, and it is expected to be enclosed by the end of this month, but will not be in production before next Summer. This is not to be confused with the new Flint plant for Flint cars.

As was announced in these columns under date of October 28, 231,000 Stars sold to date are to be made within the next fifteen months. The proportion assigned for 1923 to the four factories now in operation is as follows: at Elizabeth, 53,750; at Lansing, 86,000; at Oakland, 43,000, and at Leaside, 32,250, a total of 215,000.

This total, together with the 16,000 to be made this year will thus serve to fill the present accepted orders. Orders for 300,000 more are on hand. The Flint plant is expected to supplement 1923 production to the extent of 50,000 of the Star cars.

Other Durant activities likewise are speeding up. The force of employes at the Locomobile plant will be increased materially from its present 1,000 men, particularly to meet the manufacturing schedule of the Mason Motor Truck division. The Locomobile sales organization, too, is being supplemented and strengthened in various parts of the Country.

While the public showing of the new Flint car has been delayed, engineers at the plant predict a "sensation" greater than those attributed to the introduction of the Durant or the Star. Extensive tests have delayed the appearance of the car.

As far as the Durant car is concerned, output is no less marked. As previously pointed out in these columns, October production brought the total Durants turned out since the inception of the business to 44,000. The sixth plant, at Elizabeth, N. J., is scheduled to turn out its first finished car on November 15. Trainloads have been sent out in increasing numbers. One of the first to be sent to the Gulf Coast States has been ordered by the Whitlock-MacDonald Mfg. Co., Inc., distributer at Birmingham, Ala. The train being made up consists of 30 freight cars loaded with 150 automobiles. Philadelphia has ordered another trainload consisting of 150 Star and 175 Durant cars for delivery next week.

Meanwhile a petition, signed by 8,342 residents of Bay City, Mich., has been sent Durant asking him to locate a plant for the manufacture of some of his lines in that city. At the meeting held to conclude the signing of the document business men asserted $5,000,000 would be raised if necessary to provide such facilities as to persuade Durant to locate part of his organization in Bay City.

Durant's businesses now provide employment to 27,000 men. It is planned to increase the force to more than 100,000 by next June. The stockholders in his enterprises now number 105,181.

Hudson Continues to Prosper

Hudson Motor Car Co. reports for the quarter ended August 31, a net income of $3,656,218 after Federal taxes. Total profits were $4,183,327 from which was deducted tax reserves of $527,109. From the net income, dividends totaling $600,247 were paid, leaving a surplus of $3,055,971. Production for the fiscal quarter of the Hudson year ending November 30, it is estimated will exceed 17,000 cars, including both Hudson and Essex.

Petroleum Specifications Approved

Latest revisions of the Federal specifications for petroleum products have been approved by the Government. The outstanding change is in automobile gasoline, the intial boiling point being lowered to 55 degrees Centigrade, or 131 degrees Fahrenheit. The 90 per cent point is raised to 200 degrees Centigrade, or 391 degrees Fahrenheit. The change is made, it is explained, because of great improvements in refinery practice since the last specifications were set in 1919.

TOPICS' TOPICS

Ambitious New York promoter proposes to stage "Pleasure Car Show." Where have you been, Van Winkle, old top?

* * *

Trackless trolleys help roll up Democratic vote in Staten Island.—News Item. And a very appropriate vehicle, under the circumstances.

* * *

German General Electric Co. reports 165,100,000 marks net for the year, as evidencing advance of business in that country. But how are they going to spend the $24,642 these millions of marks represent in real money?

* * *

"Should car catch fire," advises newspaper writer, "jump for nearest preventive," adding "first few fires will leave one completely unnerved." Anyhow, we jump for the street and seek no experience.

* * *

Explosion uncovers hooch station in Brooklyn garage. Thereby showing variation from usual explosions in such premises, caused by patrons after viewing repair bills.

MOON FALL BUSINESS FAR AHEAD OF 1921

October 390 Per Cent in Excess of the Same Month Last Year—Production Schedule for November Set at Same Standard as Demand Continues Large.

Fall business of the Moon Motor Car Co., St. Louis, surpassed even the expectations of the management when a casting up of accounts showed sales several hundred per cent greater than in the corresponding period of 1921. October alone recorded a 390 per cent increase over trade done in the same month last year, bringing the total for that thirty-day period within 30 per cent of last August's sales, which set the record for the history of the concern.

While business this Fall dropped off in some sections of the Country, this was offset to a large degree by the pick-up in others, particularly the West, the officials explain. In California, especially the southern part, more Moon cars are being sold than at any time since the early part of 1920. The same holds good of Texas and a great many other points.

Production schedules for November call for the same number of cars as October and the demand seems to be keeping up. D. G. Halley, eastern sales manager, reports that all dealers in his territory are now taking, on the average, five times as many cars as they did last year, which, he points out, is approximately a 500 per cent increase in business. The factory declares that every car shipped leaves on the dealers' specific shipping instructions, which, of course, means no surplus stocks on hand in dealers' showrooms.

Caruthers Joins Earl at Cincinnati

Paul Caruthers has been placed in charge of the wholesale department of Earl-Cincinnati Motors, distributer for that city. He was formerly connected with the Chevrolet organization.

NEW YORK STATE BANS MANY HEADLIGHT DEVICES

Sixty-Nine Out of Nearly 100 Previously Approved Declared Illegal

Sixty-nine of nearly 100 automobile headlight devices previously approved for use in New York state have been declared illegal. This action followed a recent hearing at which manufacturers of headlights of questionable legality had an opportunity to show cause why approval should not be withdrawn.

Several additional manufacturers will have a hearing within a few days and the final approved list will then be made public. Under the ruling now enforced manufacturers and users of the condemned devices are granted six months in which to dispose of their devices or fit their cars with legal headlight equipment.

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CHEVROLET SPEEDS ZANESVILLE PROGRAM

H. P. Bowman Sent There to Take Charge of Work on New Chevrolet Assembly and Fisher Body Units—Progress on Construction Reported.

With the view of speeding up the starting of production at the Chevrolet assembling and Fisher Body plants at Zanesville, Wis., the General Motors Corporation has sent H. P. Bowman as general manager of the local Chevrolet plant to that city to take charge of the preliminary program. Bowman, who was in charge of the Chevrolet division at St. Louis previous to his present appointment, does not say when production is going to start, but on the other hand is concentrating his efforts toward the completion of the building projects first.

Construction is well under way on the two plants in Spring Brook, a Zanesville suburb. Steel for the new addition at the rear of the main assembly plant formerly occupied by the Samson Tractor Co., has been fabricated and is said to be about 45 per cent complete.

South of this building contractors are laying out the ground for the Fisher Body plant which will build Chevrolet bodies for the local assembly station. This structure, for which material is declared to be already on the ground, will be 160 x 620 feet.

Changes are being made in the offices and shops of the G. M. C. building to suit the needs of the Chevrolet division. This work is comparatively minor in character, however, the office rooms only being slightly remodeled and the assembly shop necessitating but a few changes and shifts.

Schwab Sees "Greatest" Future

Charles M. Schwab declared this week that while it is difficult to see what the immediate future holds in prospect for American business, he practically believes that the general tendency is "upward and onward." After 43 years in business, he continued, he sees a greater future now than at any time in the past.

DORT EXECUTIVES VISIT POINTS OF DISTRIBUTION

Past Weeks Sees Scores of "Personal Contacts" Established by Them

During the past week, scores of distributing points were visited by the executives of the Dort Motor Car Co. as a means of establishing personal contact wih dealers throughout the Country. J. Dallas Dort, president, went to Detroit, Buffalo, Boston, New York, Pittsburgh and Philadelphia. John D. Mansfield, general sales manager, visited Chicago, Milwaukee, Minneapolis, Omaha, St. Louis and Cincinnati.

Wesley Buck, sales engineer, met the distributers and dealers in Chicago, Omaha, Salt Lake City, Los Angeles, San Francisco, Portland and Spokane. Similarly, others followed itineraries that carried them into every section where Dort cars are sold.

Gary Defends Pittsburgh Base

Elbert H. Gary, of the United States Steel Corp., appearing before the Washington Federal courts last week in connection with the investigations being carried on by the government regarding the practice of a Pittsburgh basing point for steel prices, defended the practice. He declared the custom was established solely on a supply and demand basis and was frequently modified in times of stress, explaining that a Pittsburgh base does not establish and maintain fixed prices among manufacturers.

SALE OF NEW PROCESS GEAR TO W. C. DURANT CONFIRMED

Intends Turning Over Plant to T. W. Warner, According to Corporation

Ending a rather lengthy litigation, Judge Cooper of the Federal courts at Albany, N. Y., on November 3 signed an order confirming the sale of the Syracuse plant of the New Process Gear Co., last remaining subsidiary of the Willys Corp., to William C. Durant. The bid of Durant's representative was $2,100,000. In connection with the confirmation it was learned of Durant Motors, Inc., that it is Durant's intention to turn the plant over to the T. W. Warner Corp., Toledo.

The Warner corporation is closely allied with the Durant organization, T. W. Warner himself being a vice-president of the latter concern. The original bid of Warner for the plant was $1,904,000 but this, as well as a subsequent bid of $1,925,500, was rejected by the court as inadequate. It is the intention of the Durant corporation to continue its contractual relations with the New Process company after it becomes a unit of the Warner industry.

Revere Plant Is Closed

After having been in operation for almost two years under a receivership, the plant of the Revere Motor Car Corp. at Logansport, Ind., has been closed on order of the court. October 21 was advertised as the date for receiving bids, one bidder appearing and the amount he offered or his identity not divulged. Newton Van Zandt has been indicted on a charge of embezzlement of the Corporation funds for more than a year but has not appeared to be tried.

NEW LOCOMOBILE IS REFINED IN DETAILS

Changes All Consist of Improvements in Chassis—Bodies and Prices Are the Same—Battery Ignition Adopted and Clutch Undergoes Development.

W. C. Durant's intention to continue the Locomobile without radical change is proven by the new series "8," disclosed this week by the reorganized Locomobile Company of America. The car as it will now be produced shows no change in body or price, and those details that are new in the chassis are strictly along the lines of refinement and improvement.

One of the most important changes, in fact, one which was determined some weeks ago, is the adoption of Delco dual battery ignition to replace the magneto used by Locomobile for years. Marked improvements have been made in the clutch. Direct engagement is made from the clutch drum to the asbestos-compound driven discs, without conventional intermediaries of metal. This is accomplished through meshing a great number of stub teeth, none of which carries more than 10 ounces under full engine load.

Contributing toward silent operation are the new type of timing gear and redesigned camshafts. The latter has a cam of modified pitch, claimed to be silent under all engine speeds. Riding qualities have been bettered through a new spring suspension and the use of more resilient springs.

Body lines and types are unchanged. Prices range as heretofore, $7,600 for the touring to $11,000 for the sedan, with the chassis listed at $6,800.

Sales Abroad Called Problematical

Gordon Lee, chief of the automotive division of the Department of Commerce, in addressing the Automotive Equipment Manufacturers at Chicago this week, declared there is little buying power abroad for them just now save in Spain, Denmark and Sweden. He asserted the chief markets now are South America, Australia, Indian Malay States and South Africa. Out of the $150,000,000 automobile export business, 30 per cent is done by direct salesmanship and the balance by mail, he finds.

Olds Revives Old Song Hit

Distributers of the Oldsmobile filled the air with the old-time melody hit "In My Merry Oldsmobile" last week through the offices of the radio. Indicative of the interest aroused, the Olds Motor Works has been the recipient of many requests made by those who heard the tune on their wireless phones for copies of the song, once so great a hit.

The Table on pages 1281-3 shows the standard equipment without which price comparisons mean little.

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NASH TO CLOSE YEAR WITH RECORD OUTPUT

Will End Fiscal Period This Month with Production of 40,000—Earnings for Third Quarter $1,751,905—Preferred Stock to Be Retired February 1.

With sales running 95 per cent ahead of last year's, production of the Nash Motors Co., Kenosha, Wis., for the fiscal year ending November 30, 1922, will reach the record figure of 40,000 cars. The best previous year was 1920 when 36,963 cars were produced. For the quarter ended August 31, 1922, Nash reports net earnings of $1,751,905. This makes net earnings for the first nine months of the fiscal year $5,023,441. The current quarter is expected to easily bring the total up to $6,000,000, which would compare with $7,007,451 in 1920 and $5,089,036 in 1919, former big years.

Stockholders at a special meeting in Baltimore last week approved the plan to retire on February 1, 1923, $3,500,000 seven per cent cumulative preferred stock at 110 and accrued dividends. The retirement will require about $3,800,000 and will save the Company a preferred dividend payment of $245,000 a year. It will leave the 54,600 shares of common stock the only outstanding capital liability since there is no mortgage or funded debt.

Because of the Company's extremely conservative policy regarding common dividend payments, cash has accumulated far in excess of manufacturing requirements, the treasury now holding in cash and Government securities between $15,000,000 and $20,000,000. Attesting to the judicious management of the Nash enterprise is the fact that when the Company took over the Thomas B. Jeffery Co. in 1916 the common stock was issued at $1 par, and later in that year had a minimum market value of $60, whereas the current quotation is $501.

President C. W. Nash, commenting on the third quarter's earnings, says: "All this year we have been in a practically over-sold condition, despite plant additions and increased production. In the first ten months this year 95 per cent more cars were marketed than in the corresponding period last year.

"The advent of better business generally and the noticeable improvement in agricultural districts of both the Middle West and Southwest, together with better outlook in cotton and tobacco territories, point to a considerably greater demand for Nash cars in the coming year than we have ever witnessed."

Reynolds Declares Dividends

Dividends on the preferred stocks of the Reynolds Spring Co. have been declared by the board of directors. They amount to 1¾ per cent on both the "A" and "B" shares. Both are payable January 1, 1923, to stockholders of record December 18, 1922.

MACK TRUCK SALES AND PROFITS CONTINUE HIGH

Quarterly Report Shows Turnover 20 Per Cent Better Than Year Ago

Net sales of Mack Trucks, Inc., for the three months ended September 30, 1922, were 20 per cent higher than for the same quarter last year. Net earnings, after charges, depreciation and Federal taxes, were $1,205,732, as compared with $12,634 for the same period in 1921. Total net earnings for the first nine months of 1922 were $2,766,564, against $540,668 for the corresponding two hundred and seventy days of the previous year.

On the balance sheet of September 30, 1922, prominent items making up the total assets of $32,428,940 include: cash, $3,518,964; receivable, $7,867,866, and inventories, $10,666,013. Current liabilities on that date were $2,157,099; reserve for taxes and contingencies, $1,172,320; surplus, $11,229,820. There are no bank loans and the Company has no bonded indebtedness.

Wagner Electric Plan Progresses

All assets of the Wagner Electric Manufacturing Co. have been transferred to the newly organized Wagner Electric Corp. In an effort to eliminate high capitalization, because of taxation requirements, several plans have been prepared for cutting the $7,500,000 total, which will be voted on at the meeting of stockholders which has been called by the directors for December 29.

DIVIDENDS DECLARED

Brunswick-Balke Collender Co.—Regular, quarterly dividend of 1¾ per cent on the common stock; payable November 15, 1922, to stockholders of record November 5, 1922.

Firestone Tire & Rubber Co.—Regular, quarterly dividend of 1¾ per cent on the 7 per cent preferred stock; payable November 15, 1922, to stockholders of record November 1, 1922.

B. F. Goodrich Co.—Regular, quarterly dividend of $1.75 on the preferred stock; payable January 2, 1923, to stockholders of record December 22, 1922.

International Harvester Co.—Regular, quarterly dividend of 1¾ per cent on the preferred stock; payable December 1, 1922.

Kelly-Springfield Co.—Regular, quarterly dividend of $2 on the 8 per cent preferred stock; payable November 15, to stockholders of record November 1, 1922.

Lee Rubber & Tire Corp.—Dividend of 50 cents; payable December 1, 1922, to stockholders of record November 15, 1922.

Martin-Parry Corp.—Regular, quarterly dividend of 50 cents; payable December 1, 1922, to stockholders of record November 15, 1922.

Miller Rubber Co.—Regular, quarterly dividend of 2 per cent on the preferred stock; payable December 1, 1922, to stockholders of record November 10, 1922.

Reynolds Spring Co.—Regular, quarterly dividends of 1¾ per cent on the "A" and "B" stocks; both payable December 31, 1922, to stockholders of record December 18, 1922.

A. O. Smith Corp.—Regular, quarterly dividend of $1.75 on the preferred stock; payable November 15, 1922, to stockholders of record November 1, 1922.

A. O. Smith Corp.—Dividend of 25 cents on the common stock; payable November 15, 1922, to stockholders of record November 1, 1922.

Stewart-Warner Speedometer Corp.—Regular, quarterly dividend of $1; payable November 15, 1922, to stockholders of record October 31, 1922.

SECURITIES QUOTATIONS

Published quotations of the more active automobile securities traded in the New York and Detroit markets are listed below. These figures represent the high and low points, respectively, as recorded in those markets during the week ended November 8. They are presented for purposes of comparative record only, as being more nearly indicative of the general market trend than the day-by-day quotations of the ordinary stock report. Unlisted as well as listed securities are included wherever possible. New York quotations follow:

	High	Low
†Advance Rumely, preferred	49	48½
Ajax Rubber	14⅛	13
Allis-Chalmers (4)	45	43½
American Bosch Magneto	40	35
Chandler Motor	62⅝	61
Chicago Pneumatic Tool	84¼	78¾
Cleveland Motors	29¾	29¾
Continental Motors, common	11¼	9⅞
Durant Motors	52	48
Durant Motors of Indiana	13⅞	13½
Fisher Body	153	142
Fisher Ohio Body, preferred	94	93½
Fisk Rubber, common	12½	12½
General Electric	180	177½
General Electric, Special	11	10¾
General Motors, common	14⅛	13¾
General Motors, preferred	84	83½
General Motors, 6% deb	83½	82
General Motors, 7% deb	97	95
B. F. Goodrich, common	34¼	33
B. F. Goodrich, preferred	82½	82½
Goodyear, common	9⅝	9⅜
Goodyear, preferred	25½	25
Gray & Davis	11	10¼
Hayes Wheel, w. i	37⅞	36¾
Hudson Motors	21¾	20
Hupp Motor Car, common	21¾	21
International Harvester, new	106¼	104¾
International Harvester, pf	118½	118½
*Kelly-Springfield Tire, common	43	41
Kelly-Springfield, pf. (8)	101	100
Kelsey Wheel	103	100
Kelsey Wheel, pf	103	103
Keystone Tire	7	6½
Lee Rubber	25⅜	25⅜
Mack Trucks, Inc	58½	54
Mack, Trucks, 1st pf	93¼	89½
Mack Trucks, 2d pf	84½	83
Maxwell Motors, Class A	50¾	48¾
Maxwell Motors, Class B	15½	14½
Mercer Motors	2½	2
Moon Motors	16½	15½
Mullins Body	19	18¼
Nash Motors	501	490
Packard Motor	18½	17½
Packard Motor, pf	92½	92½
Parish & Bingham	11¼	10
Pierce-Arrow, common	13¾	11¼
Pierce-Arrow, preferred	30⅞	27
Reo Motors	13	12⅞
Republic Motor Truck	2	1¼
Saxon Motors	4	3½
Stewart-Warner Speedometer	57½	51
Stromberg Carburetor	54	52½
Studebaker, common	129⅞	125¼
Studebaker, preferred	118¼	118¼
U. S. Light & Heat	1⅞	1⅜
U. S. Rubber, common	53¾	52
U. S. Rubber, 1st preferred	97	96
Westinghouse Air Brake	98½	95
Westinghouse Electric & Mfg. Co.	61¼	60
White Motors	50	47¼
Willys-Overland, common	6⅛	5⅜
Willys-Overland, preferred	41	39¼

†Par $50. *$25.

Prices for automobile securities quoted in Detroit during the week ended November 6 are as follows:

	High	Low
Auto Body	4¼	4¼
Charcoal Iron, common	1½	1
Charcoal Iron, preferred	2¾	2
Columbia Motors	2¾	2¼
Commerce Motors	4½	4½
Continental Motor	10¾	9⅝
Edmund & Jones, common	26¼	25
Federal Truck	20½	18½
Ford of Canada	400	390
General Al. & Brass	10¼	9¾
Motor Products	91	87½
Motor Wheel, common	13	11
Packard Motor, common	18	17
Packard Motor, preferred	93½	92¼
Paige-Detroit Motor Car, common	23½	22¼
Reo Motor	13⅜	12¾
Timken Axle, common	28	26
Timken Axle, preferred	91	89½
Truscon Steel, common	20	17¾
Truscon Steel, preferred	10¼	9

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CHALMERS RECEIVER MEANS MERGER NEAR

Action Regarded as Final Step in Plan of Reorganization and Merging with Maxwell—Has No Effect on Factory or Dealer Body—Sale December 7.

Following the general plan of liquidating Chalmers and merging with Maxwell, B. E. Hutchinson, treasurer of the Maxwell Motor Corp., has been appointed receiver for the Chalmers Motor Corp. on application of the Fisk Rubber Co. This, it will be recalled, is the same procedure as was followed in the Maxwell reorganization. The Chalmers business, of course, will be carried on as usual by the receiver, and nothing in the action will affect the Company's distributers and dealers.

Federal Judge Tuttle at Detroit ordered a date set early in December for the receiver's sale of the Chalmers assets and set an upset price slightly under $2,000,000. Later, William S. Sayres, Jr., special master, announced that the property would be offered at public auction at Detroit to the highest bidder at noon, December 7.

The property is to be sold in three parcels, described as "A," "B" and "C." No bid will be accepted for parcel "A" for less than $1,350,000; for "B," not less than $225,000; and for "C," not less than $412,500. If the three parcels are offered together as an entirety, the total bid must not be less than $1,987,500.

The Maxwell corporation is naturally in a favorable position to make a successful bid for the property. It holds over 90 per cent of Chalmers serial notes with an aggregate face value of $2,800,000. Other claims held by Maxwell against Chalmers total around $4,000,000. Receiver Hutchinson declares he will employ the present Chalmers force and continue operating as heretofore until the date of the sale.

Youngstown Republic Plant at Work

Daily tire production of 1,000 is the immediate aim of those directing the policies of the Youngstown plant of the Republic Rubber Co., recently put into operation. E. H. Fitch, general manager of the Company, finds orders in October record establishing, which will be reflected in November.

Keystone Tire Makes Report

Income account of the Keystone Tire & Rubber Co. for six months ended June 30, 1922, as submitted to the New York Stock Exchange shows profits of $175. Sales totaled $508,519. Manufacturing costs were $403,476, expenses and interest $18,541 and other charges $89,302.

Howe Rubber Sales Grow

Howe Rubber Corp. is now running at capacity and sales for 1923 will be practically double those of 1922, it is believed. John Tenney, Jr., president, and Otis R. Cook, vice-president, completing a trip through the South and Southwest recently, find conditions such as to warrant a very optimistic view of future sales in those sections.

FIRESTONE SEES 1922 AS ONE OF ITS BEST YEARS

Winter Months to Result in Good Business with Satisfactory Profits

Announcement of the regular quarterly dividend on the Firestone Tire & Rubber Co. 7 per cent preferred stock this week was accompanied by a statement to the effect that the fiscal year ended November 1 will probably prove to be the most satisfactory in the history of the Company. While final figures are not available, the number of tires sold during the past Summer and Fall has not only exceeded the best previous records for these seasons but the year's total will be the greatest in the experience of the concern.

"With the recognized improvement in general business conditions, a maintenance of motor car sales beyond the seasonal average and the greatly increased mileage of good roads," the Company points out, "it is reasonable to expect that a larger percentage of cars will be in service this Winter than ever before. As some authorities estimate the car registrations for 1923 at well above 11,000,000, we expect tire sales to hold to a high level during the Winter months."

OHIO QUOTATIONS

Prices for automobile securities quoted in Cleveland during the week ended November 7 are as follows:

	High	Low
Firestone	74	71
Fisher, Ohio	60	56
Fisher Body, Ohio, preferred	97	95
Goodyear	10	9
Grant	¼	⅛
Grant, preferred	3	1½
Jordan, common	228	210
Jordan, preferred	85	80
Peerless	62½	59
Standard Parts	3	2¾
Standard Parts, preferred	17	10
F. B. Stearns	22	20
Torbensen Axle	23	20
WSM, common	50	33
WSM, preferred	63	60
Winton, preferred	30	20

Prices for rubber securities quoted in Akron during the week ended November 7 are as follows:

	High	Low
American R. & T., common	15	15
Amazon Rubber	5	5
Firestone, common	74	71
Firestone, 6% preferred	100	97
Firestone, 7% preferred	88	86¼
General Tire, common	300	260
General Tire, preferred	97	97
B. F. Goodrich, common	33	31
B. F. Goodrich, preferred	84½	82½
Goodyear, common	10	9
Goodyear, preferred	26⅞	25½
India, common	86	80
Marathon, common	2½	2
Mason, common	10	8¼
Mason, preferred	52	50
Miller Rubber, common	74	70
Miller Rubber, preferred	100½	100
Mohawk Rubber	10	10
Mohawk Rubber, preferred	75	75

OVERLAND STATEMENTS REVEAL LARGE GAINS

Third Quarter Earnings Set at More Than Three and a Half Millions—Shipped 36,077 Cars in That Period—Working Capital Now $22,000,000.

Statements issued this week by the Willys-Overland Co. record highly gratifying results for the past three months'—the third quarter—earnings and production. Closely estimated, these will be $3,624,675 while in that period 36,077 cars were shipped.

July seems to have been the high month for the Company in the way of earnings. The sum for that month is estimated at $1,808,494 while in August it was slightly less, $1,661,271 and in September it fell off to $629,910. This is a total for the period of $4,099,675 but from this is deducted an item of $475,000 in the form of a reserve to balance price decreases leaving the final estimate as given above.

Shipments for the quarter included the following: Overland, Model "4," 27,448; Willys-Knight, Model "20," 8,277, and Model "27," 352, a total of 36,077. For the period January to July total shipments were 43,782, making a total for the half year of 79,859, of which the bulk, 62,392, were Overland Model "4."

In connection with the price cut it has been pointed out that the Willys-Overland company has chopped 49 per cent from its peak car prices of 1919-20. On August 1, 1920, the prices for Overlands reached their highest point when, due to exorbitant costs of raw materials and labor, the mark went up to $1,035. This was soon afterwards reduced to $895. The biggest slash made at one stroke was in June, 1921, when $200 was lopped off and the price stood at $695. Since that time the price has gone to $525.

The consolidated balance sheet of the Company as of September 30 shows current assets totaling $30,364,142 and current liabilities of only $7,646,195, indicating a net working capital of $22,717,947. The principal items in the current assets are cash $7,053,808, accounts receivable net, $3,172,267 and inventory of merchandise, net, $19,269,641.

Yale Tire Expands Distribution

Yale Tire and Rubber Co., New Haven, Conn., finds its business greatly expanded after four years in production. Expansion of its distributing organization is now in progress.

Joseph Joins Sign Company

H. Belden Joseph has been appointed sales manager of Strauss & Co., Inc., New York city, sign makers since 1897. Joseph was at one time advertising manager of the Kelly-Springfield Tire Co.

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JERSEY ASSOCIATION TO WATCH ROAD CASH

Good Highways Body to Be Made Permanent for That Purpose—Will Also Participate in Other Legislation—Expect $40,000,000 Bond Issue to Pass.

Confident that when all returns are in from the voting on November 7 the $40,000,000 bond issue for New Jersey good roads will be found to have passed, the Good Roads Assn. of that State is laying plans to make its organization a permanent one. It proposes to watch the expenditure of the $40,000,000 fund for the completion of the State highway system and also to take a part in promoting or defeating, as the case may be, additional legislation which will be needed in the event the big bond issue is authorized.

New Jersey is thus the 24th State to establish a good roads association. The construction of highways and bridges is by far the leading economic feature under consideration, the Association believes. It points out that while motorists and others amenable to vehicle taxation will have contributed $6,000,000 through fees to the State this year, only $4,000,000 is provided for bettering the roads and building new ones.

Among additional legislative activities contemplated as probably needful in this connection is the repeal of the county reimbursement act. Later on, the Association believes, a road patrol system will have to be devised. Several other measures of economic importance to the welfare of the citizens are also under contemplation, it is said.

TRAFFIC BODY TO STUDY LEGISLATIVE PROGRAMS

Regulatory Measures Scheduled for States' Action to Be Discussed

Traffic regulations which are to come before State legislatures in the Middle West next Spring are to have the earnest study and discussion of the members of the National Highway Traffic Assn., at a joint session of the North Central division of that body and the Michigan State Good Roads Assn. at Grand Rapids, Mich., on November 21. A program covering speeds, truck overloading, lights, road costs and economic values of franchises has been arranged for the conference.

At the afternoon session, when Roy D. Chapin, who, in addition to his other widespread activities, is Michigan director of the N. H. T. A., will preside, the questions of speeds, weights, overloading and dimensions of trucks will be taken up, together with the problem of proper lights. In the evening, when R. C. Hargreaves, of the N. H. T. A. North Central division, presides, the equitable distribution of highway costs and the franchise matters will be taken up. The sessions will be held at the Hotel Pantlind.

A. A. A. TO AID FIGHT ON WAR EXCISE TAX

Association Lays Out Comprehensive Legislative Program for 1923—National Reciprocity for Motorists Part of Its Plans—Adds to Its Membership.

Elimination of the discriminatory war excise taxes against automobiles, trucks and accessories and national reciprocity for motorists will be the goal of the legislative activities of the American Automobile Assn. during the coming year. These planks in the 1923 platform of the organization were inserted at a meeting of the directors late last week when it was also agreed that the building and maintenance of highways should be carried on under two distinct provisions of any scheme that might be enforced.

It is pointed out by the directors that the Supreme Court has ruled that automobiles traveling from one State to another are classed as interstate traffic and that the Interstate Commerce Commission has the right to regulate such traffic. The several State laws are so at variance that there is much confusion. This would be eliminated under national laws, and to this end the Association will strive.

Fifteen more local associations, ranging from Florida to Hawaii were accepted for membership at the meeting. The next meeting will be held at Cincinnati on December 11.

Teach the Boy About Motors!

FOR thousands of years nothing much was done to improve man's methods of transportation. Examining the pages of history prior to the nineteenth century, nothing is found save that a few good roads were built and that the sedan and palanquin gave way to wheeled vehicles which, in turn, were improved somewhat.

But the manner of propelling vehicles, of getting over the ground, was left to the 1800s to be bettered. In the comparatively few years since the trolley car has appeared, late in the last century, and the first automobile trundled along the roads, that wonder of modern days, the internal combustion gas engine, has come to its present stature.

In every school of the land the scholars, the future men and women of this Country, learn all there is to be known—broadly speaking and forgetting for the moment the strictly scientific principles—about the wagon, the wheel, the boat, the steam engine, the telephone, the agricultural implements, the trolley car and even dynamos and other electrical contrivances—but where in education is the gasoline engine? Nowhere.

It needs but a moment's thought on these things to make it very, very plain that something is amiss with a system of education—and one that, as now, boasts of eminent practicability—that pays no specific heed to the internal combustion engine which serves man as practically no other servant has done since man first discovered he had a neighbor in the next valley and rode some animal over the wilds to get to him for good or ill.

It will benefit the industry to have the principles and care of its product a matter of common knowledge, knowledge acquired when the mind is best able to grasp fundamentals and when the student has most time to devote to the matter. For most of the complaints against the modern automobile are the complaints of ignorance. No machine can run indefinitely without care. Surely no machine subjected to such extraordinary strains as is the automobile's mechanism can be expected to exercise care for itself.

Yet lack of public education means just that. The buyer pays what he thinks is a good price for an article, runs it to death and then complains when it breaks down. To throw down this last barrier to the automobile becoming a fundamental of every man's every-day life, AUTOMOBILE TOPICS urges the attention of the industry and the public at large be given a fair proposition: The study of the internal combustion engine and its application to the automotive vehicle be made a part of the curricula of grammar schools—particularly for boy scholars. For that is

An Industrial and National Need

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NORTH EAST CO. ADDS SPEEDOMETER TO LINE

Two Styles Provided in New Production —Emphasizes Accuracy — Vibration and Wear Reduced to Minimum— Now on Dodge Brothers and Reo.

Following several years of development work, which has been carried out with its usual painstaking thoroughness, the North East Electric Co. has at length permitted announcement to be made of its new speedometer. This is of the magnetic type, built with special compensating and other mechanical features that commend it to the attention of equipment buyers. While ostensibly new, however, it is so only to the general market. Its features have been tested so long and so thoroughly that it is already in production as standard equipment on Dodge Brothers and Reo cars, although that fact has not heretofore been generally made known.

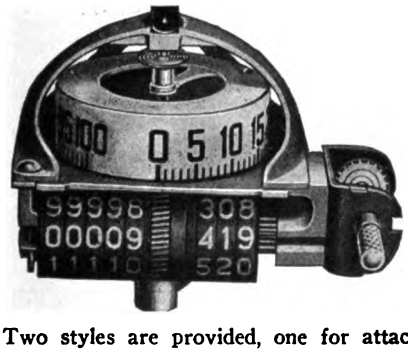
Special features of the instrument are four in number, as follows:

1. The moderate speed at which it is designed to operate which is accomplished through using the very highest grade of magnet that could be developed.

2. Special provision to eliminate the effect of temperature changes upon the accuracy of the instrument.

3. General ruggedness and simplicity of construction making the instrument especially easy to service.

4. Attractiveness of appearance and finish, together with convenience of reset mechanism and readibility of indicating and registering figures.



Two styles are provided, one for attachment of the shaft at the bottom and the other at the back. The drive shaft used is of multi-coil type and is extra heavy, vibration and wear on moving parts of the entire instrument being reduced to a minimum by the fact that the rate of speed of the driving mechanism is kept within moderate limits at all times. The instrument is neatly finished in flat black with a polished nickel bezel, effectively setting off the face, which has a special oxidized finish that is attractive and enduring. The Company advises that the speedometer has been adopted as standard equipment by Dodge Brothers and Reo cars.

The instrument may be described as follows:

The scale cup is carried by a separate bracket, which is doweled onto the top of the main frame. The shaft which carries the rotating magnet also has a worm cut on it which engages with a ring gear in the middle of the odometer element. This ring gear drives internally through a planet pinion which engages with a pair of sun pinions, one of which is held stationary and the other driving the odometer shaft.

The revolving pinion has one less tooth than the stationary pinion and hence this arrangement serves as a reducing drive for the odometer. The odometer shaft engages through back gearing with a clutch which drives the first ring—the tenths ring—of the trip odometer. At the other end, the shaft carries a cam which revolves inside the special drive gear so as to effect a further 10 to one reduction in driving the first ring (this is the miles ring) of the season odometer.

The odometer rings drive each other through a succession of transfer pinions so arranged as to carry the ring one-tenth of a revolution each time the preceding ring completes a full revolution. The entire odometer assembly is built up as a detachable unit which can be easily lifted from the frame and taken apart for inspection without disturbing any of the rest of the speedometer mechanism.



Oiling of the instrument is taken care of by wick oilers which rest upon the upper and lower portions of the magnet shaft and also on the horizontal drive shaft in the case of the back drive type of instrument. These wicks are designed to hold sufficient oil to last for at least a year without requiring further attention.

FAR EASTERN REPUBLIC SEES FUTURE IN ROADS

Development of "War Baby" State's Highways Called Imperative

Development of the highways of the war-born Far Eastern Republic, in Siberia, is imperative if the new State is to live, declare the members of the special delegation to America. The experiments being conducted in the Republic in the matter of transportation are of great interest since railroad service is practically non-existent and there are not enough funds available to the directors of the destiny of the country to build lines.

"Together with the water routes," the Commission asserts, "highways are of tremendous importance to us. In the near future it will be possible to organize either through the government or by private means automobile and tractor transportation of freight on the same commercial basis existing at the present time on the principal water routes."

EQUIPMENT PEOPLE CONVENE IN CHICAGO

A. E. A. Convention and Show Big Feature of the Week—Program and Exhibits Filled with Interest—Manufacturers' Association on the Side Lines.

Members of the Automotive Equipment Association are looking forward to a busy and productive session at their seventh annual meeting in Chicago next week, and possibly a warm meeting as well. Held in conjunction with the fourth annual jobbers' show in the Coliseum, the affair is gaining in importance from year to year. This year, with the prospect of a big turnover in all automobile lines during 1923, interest in jobbing lines and in the problems of the distributers of automotive merchandise is a great deal higher than ever before.

A special element of controversy, introduced by the show—whose very existance has been a much-debated factor—is the question of its character. As programmed, it is to be in every sense of the word a "closed" show. Manufacturing members of the A. E. A. are to be the only exhibitors, while their representatives and the jobbing members of the Association are to be the only visitors, under a strict interpretation of the rules.

It is also to be compulsory, in the sense that members in attendance at the meeting must be in attendance Tuesday, Wednesday, Thursday and Friday afternoons.

This arrangement makes the show strictly a private affair, wholly within the confines of the organization, and therefore eliminates all troublesome questions of sanction, restriction of exhibits and exhibitors, exclusion of non-member exhibitors, and so on. Admittedly, the arrangement has many advantages. It was arrived at by vote of the Spring meeting of the Association, at Colorado Springs, but not without considerable discussion.

There are members, however, who believe that more benefit would result from an open than a closed show. Some of these are manufacturers who desire to sell their products to non-members in distributing lines. The jobber membership is said to comprise about one-third of the total number of jobbers, scattered throughout the Country, but, on the other hand, the question of "who is the jobber," is still more or less indeterminate, and it is admitted that the issue is perpetually open for argument.

To render matters still more complex, some of the members, following the Colorado Springs meeting, claimed that they had misunderstood the question when voting on the closed show question, and had by no means intended to lend their endorsement to the project in its

(Continued on page 1244, first column)

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SHIPMENTS OF TIRES LESS IN SEPTEMBER

Inventories and Production of Casings and Tubes Also Lower—Increase Noted in Solid Tire Operations—Ratio to 1921 Trade About Normal.

That shipments of pneumatic casings and tubes, and to a lesser degree of solid tires, fell off considerably in September as compared with August is shown plainly in the monthly statistics provided by the Rubber Association of America. That inventories did not show a corresponding decrease is attributed in some quarters to a lower sales record for the preceding month.

Comparing the accompanying figures with those of August, which appeared in AUTOMOBILE TOPICS under date of October 14,

TIRE BUSINESS IN SEPTEMBER

PNEUMATIC CASINGS

	September 1922	September 1921
Number reporting	64	63
Inventory	4,612,037	3,340,798
Production	2,504,744	1,929,268
Shipments	2,502,106	2,047,929
INNER TUBES		
Number reporting	64	62
Inventory	5,164,757	3,827,830
Production	3,501,442	3,274,822
Shipments	3,558,971	2,645,758
SOLID TIRES		
Number reporting	11	11
Inventory	200,016	161,832
Production	82,767	37,441
Shipments	66,797	50,276

it is seen that the ratio of growth of the business of 1921 is practically evenly maintained save in the matter of production. While in August, 1921, production of pneumatic casings and tubes was much greater than output of these items in 1922, September, 1921, shows all figures exceeded this September.

Further examination of these statistics shows an excess of shipments in August of casings of 527,719, and of tubes, 661,000. Another indicative comparison is that production of casings in September fell off 401,000, the tube and solid tire items being 300,000 and 2,000 less in September respectively.

EQUIPMENT PEOPLE CONVENE IN CHICAGO

(*Continued from page* 1243, *third column*)

present form. An effort was made to call a special meeting to reconsider the action, but it was discovered that Commissioner Wm. M. Webster was then absent on a Mediterranean tour, and that without him no meeting of the Association could have legal effect and force.

The forthcoming meeting is to mark the reappearance of the Commissioner, who is expected to assuage the ruffled feelings of his constituents in his customary and masterful way. The program, apart from show question, is replete with interesting subjects and a frank discussion of all of them is promised.

In the meantime some restiveness within the ranks of the A. E. A. has been caused by the effort to organize on a national scale the Association of Automotive Equipment Manufacturers. This is an outgrowth of the organization in Chicago, in 1916, of a group of local manufacturers of automotive equipment. Some of these were also members of the Automotive Equipment Association, but others were not. It was then claimed, and still is by adherents of the newer group, that benefits might be established for manufacturers, which an association of jobbers could never hope to offer.

This association, however, has gradually gained strength with numbers, and now, with a roster of nearly a hundred concerns, has selected the week of the jobbers' convention for its own annual gathering, at which a new constitution is to be offered for adoption. At the head of the manufacturers' association as general manager is George Fritz, who was formerly field secretary of the jobbers' organization, who is accounted an earnest and able association man. Fritz has plans in view which he believes will render the new association of great benefit to manufacturers, and a good many manufacturers, in turn, view his projects with respectful interest.

Apparently, the success of this enterprise would, to some extent undermine the financial strength of the A. E. A., since the latter is avowedly operated for the benefit of distributers, manufacturers having secondary considerations, at least in the estimation of some of them. Without the manufacturing membership, however, the revenues of the Association would suffer considerably.

This fact, naturally has bred hostility between the headquarters batallions of the respective camps, though members of both classes are less openly arrayed. Influencing both is the important circumstance that one group produces the goods which the other group sells. This has been a sufficient bond to bring them into a single association and hold them there for quite a number of years, and it is a bond which all of them have the best possible reasons for not wanting to sever. Hence, the proceedings of the coming week in Chicago promise to be somewhat intricate, as well as interesting.

Ford's Son Explains It

Edsel B. Ford, in an interview emanating from Salt Lake City, Utah, declared sales in the territory of 50 cars a day would bring to that city and the intermountain region a new assembling plant similar to those at Kansas City and Denver. Ford is on an inspection trip of western branches and distributers.

MULLINS BODY SHOWS ITS EARNING POWER

Net Profits for First Nine Months of Year $125,072—Net Sales $1,692,611—September 30 Report Shows Gains Over Figures for Full 1921 Year.

Mullins Body Corp. reports for the nine months ended September 30, net profits of $125,072 from total net sales of $1,692,611. This compares with the full year ended December 31, 1921, when deficit was $110,393 and net sales $1,431,243. Surplus for the first nine months of 1922, after an adjustment for state tax, was $63,841.

The income account for the nine months ended September 30, 1922, together with figures for the full twelve months of 1921, follows:

	9 Months 1922	Full Year 1921
Net sales	$1,692,611	$1,431,243
Gross profit	255,780	130,061
Administration expenses, etc.	118,931	217,678
Operating income	136,849	*87,617
Total income	136,849	*87,065
Interest, etc	11,777	*23,328
Net profit	125,072	*110,393
Taxes	.....	4,747
Dividends	58,200	178,400
Reserves bad debt	†3,031	29,339
Surplus	63,841	*322,879

†Adjustment State tax. *Deficit.

Condensed balance sheet as of September 30 shows quick assets of $1,199,905 against liabilities totaling $672,768. Some of the principal items on the statement are: cash, $270,474; trade accounts and notes receivable, $372,052; merchandise inventories, $432,364; accounts receivable, $237,494; notes payable to banks, $450,000; accounts payable and accrued, $101,095; surplus, $2,004,976; total assets and liabilities, $4,150,901.

Pennsylvania Farmers Have 138,000

Farmers of Pennsylvania now own 138,000 passenger cars and trucks, the Department of Agriculture finds. This is an increase of 61 per cent since the census of 1919. The truck total is 17,000 or nearly double what it was three years ago.

"One-Lungers" Stage a Classic

Two cars of ancient vintage, a Cadillac and an Oldsmobile of the one-cylinder ancestral types, "thrilled" spectators in Boston recently when they raced on the Brockton track, getting up a speed of 15 miles an hour. The Cadillac thereafter began a tour of New England driven by Louis Russell of the Boston Cadillac Co.

Alabama Trade Called Good

Gaston's Garage, Overland dealer at Fairhope, Ala., reports sales conditions in its territory as good with present sales about a third greater in volume than a year ago or than a few weeks ago. Stocks of both new and used cars are less than is normal for the season.

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RETALIATORY DUTIES ORDERED ON IMPORTS

Provisions of McCumber-Fordney Tariff Put Into Effect on Automobiles and Parts from England and France—U. S. Will Impose Same Rates They Levy.

Retaliatory provisions of the McCumber-Fordney tariff law applying to automobiles and motorcycles, have been ordered into operation on imports from Great Britain and France by the Treasury Department at Washington. Collectors of customs have been given extracts from the tariffs of the two countries mentioned, showing the rates of duties on motor vehicles, with instructions to govern themselves by these in the assessment of duty under the new tariff act.

Paragraph 369 of the McCumber-Fordney law calls for a duty of 25 per cent ad valorem on automobiles, bodies, chassis, motorcycles and parts thereof, not including tires, whether finished or unfinished. Where any country imposes a duty on these articles when imported from the United States in excess of 25 per cent, however, there shall be imposed upon such products when imported directly or indirectly from that country, a duty equal to that imposed by the country in question on United States goods. It is provided, though, that in no case shall the U. S. duty imposed exceed 50 per cent ad valorem.

The extracts from foreign tariffs were furnished the Treasury Department by the bureau of foreign tariffs, Department of Commerce. That bureau advises the customs men with reference to the French tariff as follows:

> You will note that a basic distinction in rates is made dependent upon whether the car weighs up to 2,500 kilos (5,500 pounds) or more. Inasmuch as very few automobiles are made in the United States which weigh as much as 5,500 pounds, for practical purposes, the duties of interest to you are those relating to cars under 2,500 kilos.
>
> On these the rate of duty from the United States is 45 per cent of the c. i. f. value French port on both the car and all its parts with the exception of the tires and inner tubes. The latter are usually shipped separate and are not within the province of Paragraph 369.
>
> Automobiles weighing 2,500 kilos and over, as well as any parts, are dutiable according to weight under a long schedule specifying all the different parts which go into a completed car.

Duties imposed by Great Britain on automobiles and parts, as set forth by the bureau of foreign tariffs in advices to the customs division, are:

> Motor cars, including motor bicycles and motor tricycles, 33 1-3 per cent ad valorem; accessories and component parts of motor cars, motor bicycles, or motor tricycles, other than tires, 33 1-3 per cent ad valorem.
>
> Motor cars which are proved to the satisfaction of the commissioners of customs and excise to be constructed and adapted for use, and intended to be used solely as motor omnibuses, or motor-ambulances, or in connection with the conveyance of goods or burden in the course of trade or husbandry, or by a local authority as fire engines or otherwise for the purpose of their fire brigade service, and chassis, component parts and accessories, which are so proved to be intended to be used solely for any such motor cars, are not charged with import duty. If a motor car, motor bicycle or motor tricycle is imported with tires attached value of tires is deducted.

Tariff rates imposed by France on automobiles and parts are listed as follows:

> Rate to United States, francs per 100 kilos. Automobiles (pneumatic tires are dutiable separately); chassis with or without bodies, with or without motors, including wheels imported separately and automobile axles equipped with casings, grease boxes and cases for ball bearings, weighing 2,500 kilos or more, including axles weighing 50 kilos or more, 90.00 francs ad valorem; less than 2,500 kilos, including axles weighing less than 50 kilos, 45 per cent per 100 kilos.
>
> Chassis frames of flanged steel for automobiles weighing 2,500 kilos or more, 85 ad valorem; less than 2,500 kilos, 45 per cent per 100 kilos; bodies of automobiles weighing 2,500 kilos or more—trucks, 27.60, passenger, 172.50; weighing less than 2,500 kilos, 45 per cent ad valorem; rims of iron or steel for automobiles weighing 2,500 kilos and more, flat, 20.40; other rims (A) for motor trucks, 60; (B), others, 22; less than 2,500 kilos, flat, 20.40; others, 45 per cent ad valorem.
>
> Lamps and generators of acetylene for automobiles, with reflectors, silvered, or not, 480; (Note: batteries, dynamos, amperemeters, automatic lighters, etc., are dutiable separately.)
>
> India rubber and gutta percha manufactures: pneumatic tires, casings and inner tubes, 225.00; brake shoes, solid tires for vehicles, rough, further manufactured or finished, 150.00; tires, casings and inner tubes for cycles, rough, further manufactured or finished, dutiable as part of cycles; belting, tubes, valves and other articles of India rubber or gutta percha, pure or mixed, soft or hard, combined or not with cloth or other materials, including tubes for tire pumps, 360.00 each; spark plugs with insulating parts of soap-stone, petroid, stecolith or similar materials, 0.45.
>
> Articles are dutiable on the gross weight when the duty is not more than 10 francs per 100 kilos; when over 10 francs per 100 kilos the duty is based on net weight.

English Rubber Plan Forwarded

Legislation necessary to enforce the new rubber restriction rulings of the British government has been passed in Ceylon, Straits Settlements and the Malay States. The new duties, through which it is hoped to curtail the output of plantations, went into effect on November 1.

HALF-MILLION SETS REMY'S 1922 RECORD

Company Schedules 1,500 Generators and as Many Starting Motors Daily for This Month and Next—August Set New High Mark for Production.

By the end of 1922 Remy Electric Co. will have produced nearly 500,000 starting, lighting and ignition systems, and thereby broken all previous records in the history of the concern. A schedule of 1,500 generators and as many starting motors per day for November and December and corresponding increases in other departments has been established.

August has heretofore been the record-setting month of the Company's history. The larger production for November was due to one of Remy's largest customers who began ordering complete Remy equipment whereas heretofore it has been a consumer of ignition items only.

The Company now cites 28 American cars and trucks using its products and, though factory additions have been made on a number of occasions, new orders have forced the use of all the 450,000 square feet of floor space available. There are at present 2,200 employes and it is believed this force will be maintained intact throughout the Winter.

Norwalk Opens Chicago Office

Norwalk Iron Works Co., Norwalk, Conn., builders of air and gas compressors for all purposes, has opened a Chicago office at 627 West Washington boulevard. The new branch will be in charge of L. R. Bremser, formerly of the Gardner Governor Co.

Black & Decker Moves Offices

Philadelphia branch offices and service station of the Black & Decker Mfg. Co. have been moved to 824 North Broad street. They were formerly located at 318. The move was made to obtain more commodious quarters.

Detroit Ball Bearing in New Home

November 1 will see the Detroit Ball Bearing Co. established in its new Detroit quarters at 3958 Cass avenue. The Company formerly was located at 2812 Grand River avenue.

Receiver for Syracuse Rubber

William Rafferty has been appointed receiver for the Syracuse Rubber Co. The application was not opposed by the Company which claims assets $360,000 in excess of liabilities but admits inability to borrow the necessary money to keep going.

AUTOMOBILE TOPICS' Table of Passenger Car Selling Points appears on pages 1281-3 of this issue.

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RETAIL SALES SPOTTY IN WESTERN STATES

Conditions Vary from Pre-War Normal to "Unusually Quiet"—Turnover Falls Off in Nebraska and Gains in Southwestern Sections of the District.

Considerable variation in the volume and character of retail sales is reported to AUTOMOBILE TOPICS this week from dealers in the wide-spread territory from Texas to Fargo, S. Dak. Whereas in some spots sales were from 50 to 100 per cent better than last year at this time, in others they were quite a bit below normal.

The Overland Texarkana Co., distributer, Texarkana, Ark.-Tex., finds sales about 60 per cent of normal, considering normal as the pre-war level. Sales during October were 50 per cent better than of the same month last year but sales last month were 20 per cent below those of September.

"Our present supply of new cars is somewhat below normal," the Company states. "The unexpected shortage of railroad cars held up delivery and our stock is somewhat lower than usual. We order conservatively with the idea of keeping from 30 to 40 cars in stock but we hope to eliminate any future shortage by carrying a little heavier stock of new cars from now on. We could do an almost unlimited amount of business if we would take in used cars promiscuously as part payment. But our stock is kept down to not exceeding ten cars of this character. The market for them is sluggish."

From the Harter Implement & Motor Co., Dodge Brothers at Winfield, Kan., comes the statement: "The automobile business in this locality is a trade and partial payment business to at least 75 per cent."

"The automobile dealer that can make money out of his trade is happy and progressive," the Company continues. "But there is just as good a market for used and new cars. The rates of sales is better than last year which was a painful surprise to dealer and manufacturer, for which reason we are unable to make delivery."

"Unusually quiet," is the way the Changstrom Motors Co., distributer of Westcott at Omaha, Neb., characterizes the market there. But while the present rate is less than a year ago, the outlook is better now than it was then.

The trade also reports "slow markets" at Minneapolis. Present rate of sales is about half that of last year. Stocks of new cars are correspondingly high while the number of used and new automobiles on hand is about the same.

At Duluth, Russell S. Sherman, Inc., Dodge Brothers, finds very few straight sales, most being trades. Trucks and commercial cars are selling well, however, with the automotive business in general about the same as in September and early October, which were better than last year.

Dealers in larger cities in North Dakota are reporting fairly good sales but very few farmers being in the market, turnover in the agricultural sections is light. In the western part of the State the crops were better and farmers obtained some profit, which the eastern ones did not, this helping the market in the former section. The information comes from the Lewis Motor Co., Nash distributer.

New Philadelphia Kissel Agency

Columbia-Kissel Motor Co. has been formed at Philadelphia to take on the distributership of the Kissel car line. E. J. Fink and Samuel F. Levy, associated in Maxwell distribution in Richmond, Va., and later in Philadelphia, head the new concern with offices at 250 North Broad street.

AIDS TO SALES ABROAD

Surveying the markets for automotive products in foreign fields, the Department of Commerce this week points to the reports listed below. Culled from the findings of the Department representatives in many lands, the information here is passed on as particularly interesting to those of the American industry who bid for sales abroad. The following thus summarizes the situation:

Far East—Conditions less depressed in Hongkong than year ago. Dealers looking for increased activity. Canton motor tram service in financial difficulties, but may be remedied in Spring, and will require additional equipment. Hongkong dealers generally counting on opening branches in Canton with expected improvement in conditions. Conditions around Singapore and Kuala Lumpur very bad.

Mexico—Krupp trucks, of 5-ton capacity and pre-war type, being laid down in Mexico City for 6,000 pesos. Although lower than American prices, trucks lack post-war improvements, and it is felt will not constitute serious competition.

China—Motor traffic opened on highway from Weihsien to Hwanghsien, 143 miles. Remainder of road expected to be opened. Ministry has granted monopoly rights to motor cars, and service of about 20 cars has been started, charging $8.80 per passenger for the 7-hour trip. Granting of monopoly rights will keep native carts with narrow wheel rims off road, and it will thus be possible to keep it repaired. Seen as step in right direction for good roads in China.

England—Several producers of high-powered cars in Great Britain announcing 1923 models of lighter and lower-powered types to sell at price considerably below larger cars, in order to meet popular demand for small economical vehicles. Overhead valve gear gaining in popularity as requisite for increased efficiency and silence in running. Increasing demand for spare tire covers of waterproof nature, padlocking devices and anti-splash mud guards.

Norway—New company, the A/S Autolaedo, being organized to manufacture motor sled designed to substitute for front wheels of any and all motor cars and trucks. Models have been made and connections being sought with factory able to manufacture device. It is expected 50 cars will be supplied with runners by December of this year.

Poland—Now 2,148 passenger cars, 115 taxicabs and 1,200 trucks in use in Warsaw. Italian Fiat, baby touring model, generally used for taxicab service, at present selling for 29,500 lira, without duty in Warsaw. Import duties and internal taxes amount to 1,500,000 marks. Taximeters in use are French Mosqueta, German Brin and Swedish Helda. Last named meter sells for 75,000 marks at present, or about $8.35. Other meters quoted to 120,000 marks.

South Africa—Recent ordinance by Council of Cape Town will necessitate installation of some 200 taximeters on taxicabs in city before January 1, 1923. Meters must register in English monetary denominations.

BIG BUSINESS AGAIN BUYING MANY TRUCKS

Vance Day, of General Motors Truck, Sees Industry at Large on Normal Basis—Transportation a Barometer—Fleet Owners Now in Markets.

Proof that big business interests throughout the Country are now on a normal schedule again is cited by Vance Day, general sales manager of the General Motors Truck Co., of Pontiac, who asserts that for the first time in two years large fleet owners are again buying trucks on a large scale. Day believes that an almost infallible barometer of general business conditions can be found in the truck market.

Transportation, Day believes, is the one thing which indicates the growth or falling off of any business. As an instance, when the business depression of last year first became noticeable to the general public it had been noted long before in the truck industry. Similarly business throughout the Country must be on a sound basis since the truck transportation field has picked up tremendously in the last few months.

It is his contention that instead of receiving small orders for one or two trucks as they have been doing the five big packers, owners of some of the largest truck fleets in the world, are again in the market with the Standard Oil Co. and other large fleet owners. The Company has been filling single orders for twenty and twenty-five trucks at a time and their salesmen report that still larger orders will be forthcoming soon. Day points to broader sales opportunities in the many new enterprises which will be started during 1923, which will demand motor trucks to meet their problems.

Gasoline Cut Again

Prices of gasoline have been lowered in Texas and Virginia. The cost at filling stations has been cut two cents to 21 cents a gallon in the former State and one cent to 25 cents a gallon at Richmond.

Champion Engages MacManus, Inc.

Champion Spark Plug Co. has engaged MacManus, Inc., Detroit, as advertising counsel. All Champion national and local advertising will henceforth be inaugurated through MacManus, which has been associated with motor products for the past 15 years.

Miller Returns to Advertising

Franklin A. Miller, formerly advertising manager of the Stromberg Motor Devices Co., has joined the staff of the Dunlap-Ward Advertising Co., Cleveland. For the past three years Miller has carried on his own company, merchandising automotive parts and accessories.

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CHICAGO ASKS FOR A CAR FOR CHRISTMAS

Trade Association Reports Many "Shopping" for Automotive Gift — Low Prices and Big Values Attract Santas —Sales Momentum Increased Thereby.

Prospective Santa Clauses in Chicago are begining to shop around in that city for automobiles to give away. This is the word received from the Chicago Automobile Trade Assn., members of which have had the spread of the "Ask 'em to buy for Christmas" idea brought to their attention this year by the unusual number of such persons hunting for self-propelling gifts.

The idea is greatly increasing the momentum of sales, Thomas J. Hay, president of the organization, declares. It began to appear after the closed car show staged by the Chicago trade recently and has since grown.

"I am not at all surprised to find that the automobile is entering the Christmas gift class along with other merchandise," Hay points out. "With prices of nearly every good make of car lower today than they ever were before there is no reason why they should not sell this year in large numbers as Christmas gifts."

CANADIAN MOTOR EXPORTS GROW DURING SEPTEMBER

Final Figures Record Increase Over August of 14 Per Cent

Canadian exports of automotive products during the month of September were 14 per cent greater than during August. The total valuation of such exports in the former month was $2,038,030 while August's sum was $1,778,827. Price reductions had no appreciable effect on the total valuations, it is pointed out by the Department of Commerce, Automotive Division, which provides the figures.

The number of automobiles exported was 2,943 in September as against 2,716 in August, an increase of about eight per cent. Two hundred and seventy-four trucks were shipped in September which may be compared with only 133 in the preceding month. By far the largest number of units were shipped to Australia, with Great Britain a poor second in this regard.

Sheldon Changes Positions

George H. Sheldon has been appointed general manager of Thresher Service, New York city. He has had wide experience in advertising work having been with the firm of Snodgrass and Gayness, Inc., New York city, for a number of years.

Sacramento's Camp Profitable

Showing at once the value to the industry of a city of the establishment of automobile camp sites, the Sacramento municipal government reports 11,653 cars visited its "guest park" during the season just closed. It is declared that each party spent at least $10 in the city because of the camping spot and the city comptroller figures the city gained $116,410 as well as much good-will because of its small investment in the site. The 35-cent admissions mounted up to more than $4,000 while expenses were less than $2,000.

CALIFORNIA ASSOCIATION CLOSES SUCCESSFUL YEAR

Grows from Small Outfit in 1918 to Body Requiring Office Force of 200

With a record of serving 225,000 individual motorists with maps and road information and directing and caring for 3,100 transcontinental touring parties, the California State Automobile Association closed its fiscal year last week with the election of directors. The report of the secretary showed that the association has grown from a tiny body in 1918 with seven employes, to an organization employing more than 200 persons and operating for its use 58 automobiles and trucks.

During the past year the Touring Bureau distributed 307,500 maps, an increase over the previous year of 135,757. Keeping up to the minute on changing road conditions cost the association $1,000 monthly. Nearly 75,000 telephone calls for information were answered. Six thousand and twenty-four road signs and 201 other markers were erected in California. In addition 4,000 signs have been placed on main highways as far East as Kansas City at a cost of $20,000. The association is contemplating inaugurating and maintaining a Safety First Bureau. George S. Forderer is president and D. E. Watkins, secretary.

Californian Sees Big Season Ahead

Henry P. Federspeil, Pacific Coast district sales manager of the Dort Motor Car Co., who visited the Flint factory last week, predicts an unprecedented sales season ahead in California this year. This despite the fact that that state has absorbed an average of 14,000 automobiles a month for the past seven months.

Oakland Plans Its Fifth Show

Oakland, Cal., will have its fifth annual automobile show in the Civic Auditorium in that city from January 13 to 20 inclusive. The exhibition, at which it is hoped to have a full line of 1923 models, will be held under the auspices of the motor car dealers' division of the Alameda County Automobile Trade Association.

Brown Howe Manager at New York

Thomas R. Brown, Jr., has been made New York district manager for the Howe Rubber Corp. He was formerly office manager of the Corporation in New York.

SERVICE MANAGERS TO REVIEW BIG PROBLEMS

Three Hundred Presidents and Secretaries of Local Bodies Invited to Chicago Meeting Next Week—Cobleigh Plans Factory and Other Programs.

More than 300 presidents and secretaries of local service associations have been invited to be present at the Factory Service Managers' meeting to be held in Chicago November 14 and 15 at the Hotel LaSalle. Of the two days, the first will be devoted to "factory problems" and the second to "sell service associations to the dealer associations," as H. R. Cobleigh, secretary of service of the National Automobile Chamber of Commerce, which is back of the meeting, expresses it.

The program, as outlined by Cobleigh, is an attractive one. Following the addresses of welcome, delivered by Thomas J. Hay, president of the Chicago Automobile Trade Assn., and an address by H. J. Leonard, vice-president and general manager of the Stephens Motor Car Co., a number of interesting reports are scheduled for delivery. Among these the questions of how to save transportation costs on parts by shipping in carload lots and how to distinguish taxable and non-taxable parts, and the subject of parts discounts to independents will be heard.

The Wednesday program is extensive and includes a three-cornered discussion of the importance of better service and service associations from the car-owner's, the car-seller's and the car-maker's points of view. These will be presented, respectively, by Alexander Johnston, Gene Silver of Cole, and B. B. Bachman of the Autocar Company.

Following luncheon, the question of how to make service associations most effective will be given extended consideration. The meetings will close with a display of moving picture films concerning service work.

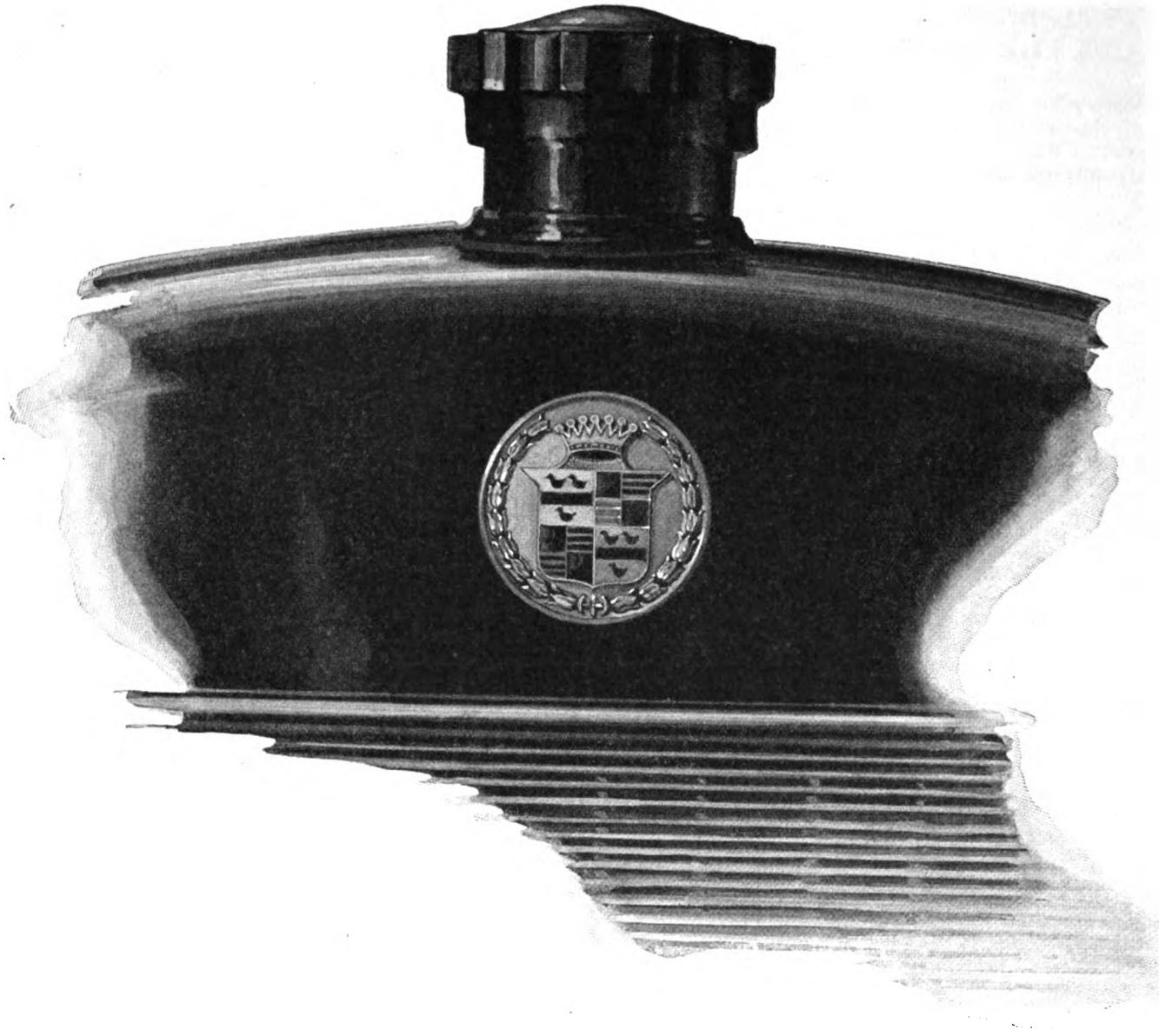
Miller-Judd Given Nash

Miller-Judd Co. has been awarded the Nash distributing franchise for the Detroit territory, which includes that city and southeastern Michigan. In making the announcement, C. B. Voorhis, vice-president and director of sales of the Nash Motor Co., paid W. A. C. Miller and Walter Judd high compliments on their ability as merchandisers. Their place of business is at 5535 Woodward avenue.

Smith Promoted to Sales Chief

Jamie H. Smith has been promoted to sales manager in charge of both retail and wholesale departments of Butlet-Veitch, Inc., Marmon and Fageol distributer at San Francisco. He was formerly wholesale manager.

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So eloquent of quality has its emblem become that prospective owners are convinced that all they need to know about the car is that it is a Cadillac.

C A D I L L A C

Standard of the World

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Automobile Topics
THE TRADE AUTHORITY

Established 1900

MOTOR TRADES PUBLISHING CO.

1790 Broadway, New York City

FRANK W. ROCHE, President and Treasurer
C. D. WIGHT, Secretary

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Land Yachts

As "Land Yachts" motor sleeping cars may yet attain vogue. In many ways it would be an advantageous thing to take steps to introduce them on a really high-class plane. As "Motor Caravans," they have been heard of in England and Europe for quite a number of years, but hardly more than that. The name caravan, of course, was derived from the nondescript conveyance used by gypsies, and the associations, especially in thickly populated communities were not always attractive to people of taste and means.

The land yacht, on the other hand, may be all that the name implies, and with the development of motor bus chassis of sorts, may be a comfortable and moderately speedy conveyance, as well as a traveling abode. Well ventilated, convertible sleeping quarters, kitchenette and proper sanitary arrangements, together with appropriate and somewhat elaborate equipment; these are part of the picture and help to differentiate between the "yacht" and the motor camping outfit. This distinction may be as great as the inclination or purse of the owner dictates, and it may be social as well as physical. The possibilities, at all events, are interesting, and as yet only tentatively explored.

"J. P."

One of the factors working against proper regulation of highway traffic in rural districts is the petty and prejudiced Justice of the Peace. Of such local civil authorities there are doubtless thousands scattered over the countryside who are, according to their lights, equitable judges and honest exponents of the statutes. But there are other thousands whose acts, during the past fifteen or twenty years have combined to render odious the very name of the office upon whose perquisites they live. For the essence of small-town bias and the narrowness of the backwoods politician it is seldom necessary to look further than the dusty desk of the "Squire." Were the profitable speed trap his only offense this might be condoned. Unfortunately, he often goes further. Deliberate picking on motorists from foreign states is by no means uncommon. In an instance which recently came to note, one of these functionaries made a specialty of certain makes of car with the features of which he had familiarized himself. All told, the country "J. P." has made a bad name for himself, which only the awakening of popular intelligence in his own bailiwick can efface. He himself is a left over from the days when the "circuit court" rode astride a "great roan mare," and carried its Blackstone in the saddle bag.

Back Stage

Superficially, the used car situation is much improved by comparison with last year, but how far appearances and actual conditions check would be hard to say, back stage things always look different. It is a fact worthy of note that many dealers, heretofore either blind or indifferent to the menace of heavy used-car stocks, now go light on them. In some instances they do so by declining to trade in old cars except where there is a definite resale market for them. In others accumulations are periodically got rid of by selling blocks of cars to second-hand dealers for a lump sum. In a few instances that have come to light dealers have placed an embargo on used cars of certain makes, accepting such cars only when the second-hand dealers will promise in advance a price that will make the trade profitable. There remain, unfortunately, many dealers who are still, as the graphic phrase is, trading their heads off.

Of the several newer aspects of the matter, perhaps the gravest from the viewpoint of the lines affected, is the marked decline in trading value of certain makes of car. Local reputation has a good deal to do with this, of course, but it is evident that should such discrimination continue the reputations of the lines are bound to be affected adversely. By the same token, in those instances where high exchange valuations prevail the manufacturers' reputations are affected favorably. This influence upon present sales of the product of two, three and four years ago is something not always contemplated with entire calm.

Certainly the manufacturer who finds his dealers suffering from the effects of embargoes of this character, which may not be the fruits of conspiracy, but rather the misfortunes of changing fashion has but one obvious recourse. That is to encourage the retailers to trade in their own lines exclusively, and thus buy the market out of competitors' hands.

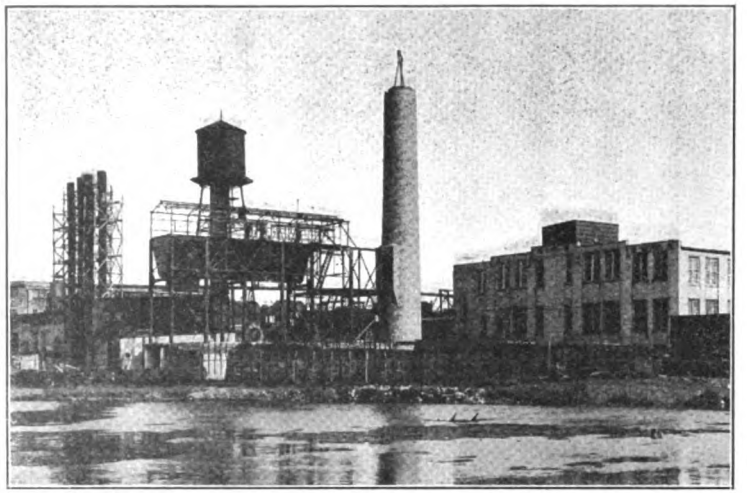
Cultivating Repute

Sometimes there is more value in a chance observation than in its context. As, for instance, in the case of the recent remark of a public speaker that "the success of any industry depends upon the attitude of the banks toward that industry." Is it not true, moreover, that one who cultivates his banker wisely cultivates also his own reputation?

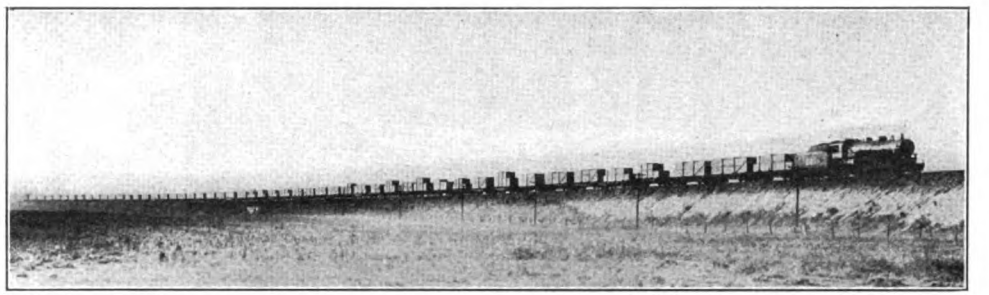
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Manufacturers Continue to Give Proof That They Are "Up and Doing"

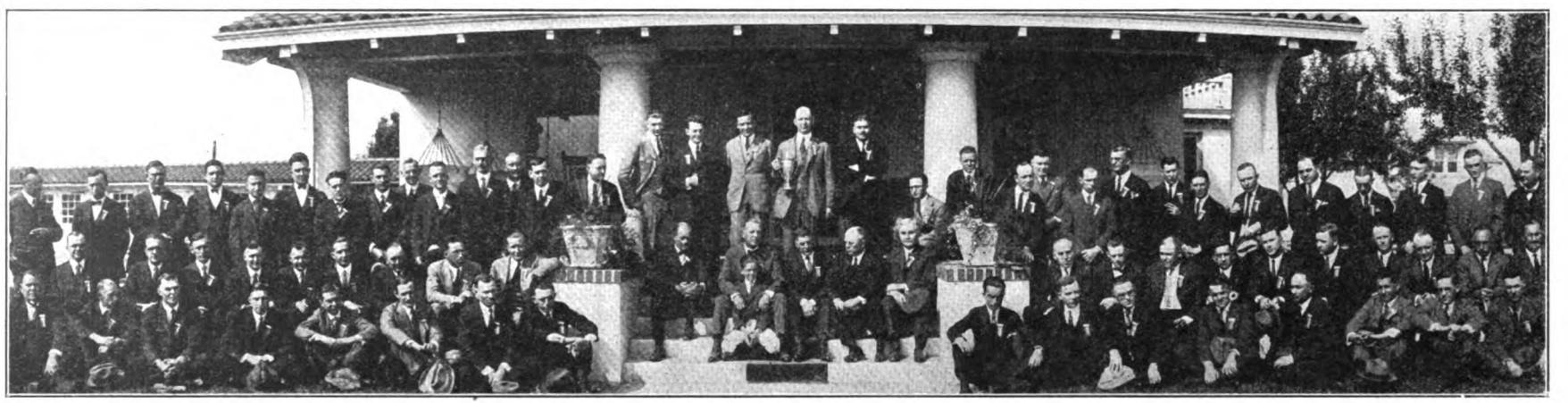
Kissel Has Faith in Future; General Motors Avoids Traffic Tie-Up; Gabriel Snubber Distributers Meet



ERECTION of a new power house is the first step of the extensive expansion program of the Kissel Motor Car Co., Hartford, Wis. The building, which is now under construction, when completed will represent an investment of approximately $150,000. It is of structural steel, capable of giving the factory an additional 300 horsepower at nominal rating for manufacturing purposes



By moving a railroad train, containing none but cars for export over a special route, General Motors distributers overseas recently were supplied with cars a week to three weeks quicker than if the cars had been left to come through the congested freight area



Distributers from every State and all important cities were in attendance at the third annual convention of the Gabriel Manufacturing Co., which was held recently at the company's headquarters at Cleveland, Ohio. The program was not all of a serious nature as the group above indicates

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Proving It Pays to "Ask 'em to Buy"

A. E. A. Campaign Shows Far-Reaching Results—Retailers Make Big Sales Gains Through New Methods

"YOU never can tell 'til you try." Old as the idea is history is literally crammed with illustrations of new things that have lain fallow for years before leaping into prominence, merely because people "thought" they wouldn't work, but would not prove up their own adverse opinions. It has been so with inventions, manufacturing processes and products, and it has been so with methods. It was so with the merchandising of automotive equipment until the birth of that almost magic slogan, "Ask 'em to Buy."

Even yet, it is said by some that the slogan and the campaign which it represents are of questionable value, save in respect to certain rather limited applications; but in those instances it may be the slogan has never been made an inflexible "rule of the house." Those who have tried earnestly and persistently, are tremendously enthusiastic, so that the curious little phrase, which may be a battlecry, an exhortation or a command,—according to who uses it, and how,—has come to deserve a special chapter in the current history of automobile events.

To well-informed readers it need hardly be said that the idea of applying direct solicitation to the retailing of automotive equipment on a campaign basis originated with the Automotive Equipment Association, or that such a campaign has been waged for more than a year with conspicuous success. The fact that this work has now passed into a second stage—a "Greater Business" campaign—is proof enough that what was admittedly a good deal of an experiment at first has become an established and highly successful system.

But more important than the mere fact that one particular campaign has been successful, is the outstanding record of the Merchandising Department of the A. E. A. as a whole. This represents in many ways a new development in trade association work, and one that other associations well might study.

Broadly, this was a project, launched August first, 1921, for the purpose of injecting new life into the automobile jobbing business, which was then suffering not only from the postwar depression, but also was considerably affected by the turbulent condition of the automobile business as a whole. Organization of the new department, at such a time, as a distinct innovation, required not only enterprise, but abundant courage; for there were those in the ranks of the jobbers who said the underlying idea was good in theory, but would never work. It is much to the credit of the A. E. A., therefore, that it possessed the proper blend of confidence and curiosity to make the experiment. That the effort has been richly rewarded in many instances, is the best possible answer to those who stood forth for a time as objectors.

Briefly, the idea from which the Merchandising Department sprang was to teach the retailer of automotive equipment how to sell the stuff that was on his shelves. Individual manufacturers and jobbers have done this sort of thing before. The new thought was to apply the tried and proved principle, that education always pays its way, by co-operative means, with the entire organization of jobbers and manufacturers as a background. One concern might accomplish much, it was reasoned, but if every concern selling a given group of retailers were to proceed along similar educational lines, the results would be multiplied enormously.

And so it has proved. It is difficult to measure the results in dollars. Members of the Association were asked, when the first campaign was still less than a year old, how much additional business it had brought them in. Their replies totalled over a million dollars. But this sum is not an official figure. The A. E. A. people say it is almost impossible for anyone to measure the benefits of such a campaign accurately; consequently they hesitate to make use of it.

Nevertheless it is a fact that a group of automotive equipment manufacturers and distributers believe the work has been worth at least a million dollars to them. Therefore, as the total outlay involved has been negligible by comparison, the effort may be at once written down a marked business success.

Even the bald record of outstanding facts is significant. From August to November, 1921, 37 meetings were held with a combined attendance of 1,875. From August to November, 1922, 129 meetings were held, with a combined attendance of 10,757. The total record of public gatherings adds up to more than 800, since the campaign started, with an aggregate audience of 60,600. Distribution of the two books, "A Greater Business," and "Shop Profits," has run to more than 21,000 in one case and more than 18,000 in the other. Stickers, which are put on the outgoing mail of the Association members have been distributed to the number of more than 800,000. Four hundred and fifty thousand of the "Christmas" stickers are now being put into circulation.



PAYING TRIBUTE

DURING the coming week, the Automotive Equipment Association meets in Chicago for its annual convention and show. There is promise that the meeting will be filled with interest and not without its political high points. But the occasion should not pass without rendering tribute to the Association for the work that it is accomplishing, through its Merchandising Department, in stimulating the retailer of automotive merchandise to a higher and more effective class of effort. AUTOMOBILE TOPICS believes that in this direction the Jobbers' association is performing a noteworthy service not merely in its own interests, but in the interests of the industry as a whole

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The trade knows well enough how it was done. But let Ray Sherman, Merchandising Director of the A. E. A., tell it himself.

"First thing we did was inaugurate the 'Ask 'em to Buy' plan and start passing it along to dealers through the jobbers' salesmen, through the 'Greater Business' book—which every dealer may and should have and read—and through the able assistance of the business papers. We produced the Ask 'em to Buy film a year ago and it has actually started many dealers on the road to profits.

"In Oregon one jobber, whose experience is like that of the others who cooperated with him in a campaign in that state, increased his business 50 per cent on Moto-meters, 125 per cent on bumpers, 100 per cent on fan belts and 200 per cent on spotlights. And he attributes all of this increase to the Ask 'em to Buy movement.

"The industry entered actively into the promotion of the idea through meetings of dealers and their employees. There were 26 Ask 'em to Buy films in operation the first year. Now there are 28.

"To date there have been held 807 meetings attended by 60,658 people, mostly dealers, garagemen and their employees. These were in practically every part of the United States and Canada. We now have requests that this film be loaned to Mexico and Hawaii.

"The Greater Business book, which deals mostly with selling goods for the 'after market,' has been distributed to the number of 21,278, almost entirely on requests from dealers. We don't give it to a man who isn't interested. Most of the copies are distributed by jobbers and their salesmen.

"As a second stage of the work we developed (in June of this year) the 'Shop Profits' idea. There are a film and a book, both with the same title, 'Shop Profits.' There are 14 films in use and we have distributed since August 1, 18,252 Shop Profits books.

"Up to this time a year ago there had been 37 meetings. For the same period this year there have been 184 attended by 14,058 people.

"We have numerous cases of dealers who have run their monthly sales of automotive equipment up to from twice to ten times their former sales. We have jobbers who have made substantial gains.

"One thing we need—and have secured in many instances—is this merchandising story in the trade literature and advertising of the manufacturer. Many of the manufacturers are telling the story in fine shape but there are scores of others who could help themselves and this movement if in their story to the dealer they talked more about how the dealer can make money out of the goods and less about the consumer end of it.

"One example is the Christmas sale drive. Here is an idea that has been obvious for years, yet nobody did anything with it to speak of. Now—several manufacturers have devised a special Christmas dress for their goods, are doing the right kind of trade advertising, are getting a tremendous interest on the part of jobbers. Heavy retail selling pressure during the holiday season is bound to result. The idea MUST sell equipment for Christmas gifts.

"We have several jobbers who are supplying to their dealers every holiday specialty the manufacturers get out. For other merchandise the jobbers are supplying holly paper and red string.

"For the first time we can say in advance that the Christmas windows of the automotive trade will be conspicuous during the coming holidays."

Sherman himself, naturally, has been in the thick of it from the very start. His is far from being a mere "desk" job. In the past year, for example, he has addressed upwards of 30 meetings, in at least that many towns, located in seven or eight states. Besides running the campaign, which naturally involves a tremendous volume of correspondence, he has contrived to edit and publish two little "house organs," of his own, *The Automotive Equipment Merchandiser,* which reaches the men on the firing line, and *The Sales Executive,* which tells the men behind the line of progress at the front.

But, being a born organizer, Sherman entertains no illusions either concerning his own importance or the measure of his work. "The thing I want to do is give credit and publicity to the work of the members, not myself," he said to AUTOMOBILE TOPICS. "This thing never could have reached the point where it is but for the manufacturers and jobbers who have got behind it and put it across; it never could have been even a half-way success, but for the real punch that the road men of the industry have put into it.

"You know, a salesman has a certain amount of respect for his calling. If he is any good, he has his own methods, his own ideas about cultivating his trade, and he must have a large amount of self-confidence and self-respect. When such a man—a real salesman—gets down into the dirt and actually cleans up a customer's store, dresses his windows, rearranges his stock, puts in maybe a whole day waiting on customers,—when he goes out of his way to make sales on other lines than his own, in order to demonstrate the value of a sale-method to a dealer—that man is more than a salesman. He is a business builder."

The average dealer in automobiles and supplies, like the average retailer in any other line, habitually asks the customer what he can do for him, instead of finding out for himself. No wonder business is "bad"!

"You never can tell 'til you try." Right. And furthermore, "It pays to try."

BUILDING THE "AFTER MARKET"

IN the fifteen months that the Automotive Equipment Association has been operating its Merchandising Plan results have proved exceedingly well worth while. Yet the effort that has secured them is small by comparison with that which is possible.

If the total merchandising potential of the industry—which will be brought into play as time goes on—could be put into action at once, the industry could double its volume inside a year; and keep it doubled!

As an industry, all parts are much alike—dealers, jobbers and manufacturers—in that there is a tremendous volume of unused merchandising ability. This is destined to make a lot more money for everybody, once it is fully in use.

We have a market made up of the 10,000,000 people who own nearly all the wealth in the Country, and all of the automobiles. Every one of them could have greater car satisfaction if he had some of the things the automotive equipment industry produces.

Dealers must come to a realization that their great and sustaining income lies in the "after market" rather than in the sale of new cars alone. The net profit in the sale of a new car is less than five per cent, and can be secured only once; the average in the "after market" is greater, and the volume continuous.

The "after market" is the automobile from the minute the sales contract is signed until the car goes to the junk heap.—*RAY W. SHERMAN, Merchandising Director, Automotive Equipment Assn.*

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SELLING GOODS AT RETAIL

AT least one parts manufacturer exhibiting at Chicago during the coming week has heeded the call of "radio." In connection with his regular line of automotive equipment, he is showing radio appliances. His action is attributed, in his own words, "to the growing interest of the jobber in such products."

Considerable interest will be attached to the coming showing as indicative of the extent to which radio has entered the automotive field. This should determine in some measure whether the "spurt" of last Spring has left indelible traces in its wake or has vanished in thin air.

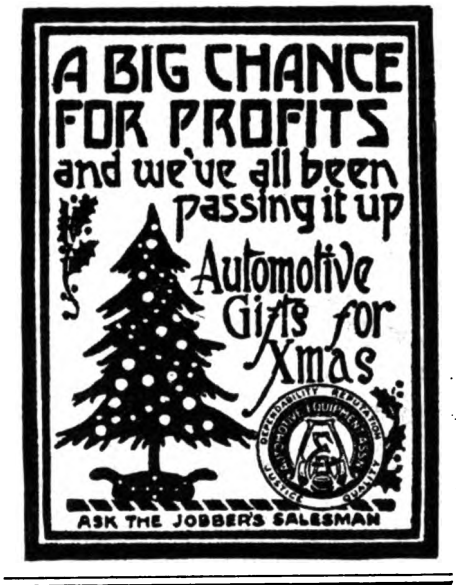
"ASK 'EM TO BUY FOR CHRISTMAS"

MANY and varied are the plans proposed whereby the used car problem may be eliminated for once and all. Without analyzing the merits and flaws of these proposals, it is a significant fact that the problem still exists and in acute form. As such it demands immediate attention.

Now comes another idea. So successful has it proved in one dealer organization that it is being passed on with the suggestion to try it as an experiment.

A half dozen prospects were persuaded to try to sell their cars to some friend, it being emphasized that in that way they could realize more than they could hope to get from the dealer. Four out of the six succeeded with little difficulty.

AS "SID" SNYDER SAYS



In two instances the dealer found it necessary to fix the machine up a bit. He also inspected the gears and made a detailed statement to each owner as to the exact condition of every running part.

Who can say but that a slogan "Sell Your Own" emblazoned over every used-car department might do the trick! Anyway, it is easily tested out.

"ASK 'EM TO BUY FOR CHRISTMAS"

GETTING the customer off on the right foot is good business. It spells greater satisfaction for him as well as greater prosperity for the merchant.

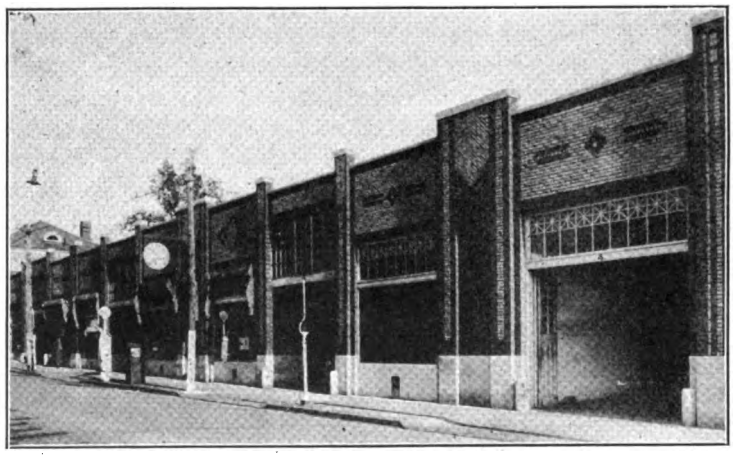
Says Charles E. Howes, general manager of J. E. Sloan, handling Buicks and White trucks in San Jose, Cal.:

"With every sale we instruct thoroughly not only in driving but in general up-keep of the car or truck. This we feel is a valuable asset, as it gives our owners a general knowledge of the car they are driving, and thus reduces our service cost, which comes in many cases from a driver's ignorance. We find it has also an excellent advertising value, as satisfied customers pass the good word along."

Just another instance where cooperation with the customer—cultivating his good-will—has paid handsome profits.

Where Buick Tells Its Story Down in Old Kentucky

SATISFIED Customers," is the slogan of the Marshall-Featherston Motor Co., Inc., which handles Buicks in Lexington, Ky. The company's building is 184 feet long by 200 feet deep with a shop that has established a reputation for good service. "We do our best to serve every



Buick owner that comes our way," says Gen.-Mgr. S. B. Featherston. "Should one of them have a kick to make, we see to it that he is satisfied, regardless of what it takes. We get our prospects from personal calls, newspaper advertising, and our satisfied Buick users."

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Dissatisfied Customers Are Danger Signals

Pays to Be on the Watch for Them, Dashiell Motor Co. Finds —Checks 'em Through Field Service Salesmen

A DISSATISFIED customer is a danger signal. Disregard him, and trouble is bound to be encountered sooner or later. Observe him—give heed to his complaints—and the path ahead is cleared immediately of at least one obstruction that ultimately will cause disaster.

So very obvious is it, that at first thought it appears a mere rehashing of what the automobile merchandiser knows only too well. Yet does he know it?

If so, what is he doing to eliminate the possibilities of ignoring any such danger signals? In his ambition to keep adding new customers to his list is he giving proper heed to those he has already amassed? In other words, is he paving the way for re-sales with the same care that he endeavors to close new transactions?

Were a Dodge Brothers owner located in Chicago or its environs to read the foregoing there would be little doubt as to his reply. The chances are, to lend emphasis to his brief but decisive "yes," he would hand over a card just received, with the words "Dashiell Motor Co., Dodge Brothers Motor Vehicles, 2542 Michigan avenue" printed plainly across the top.

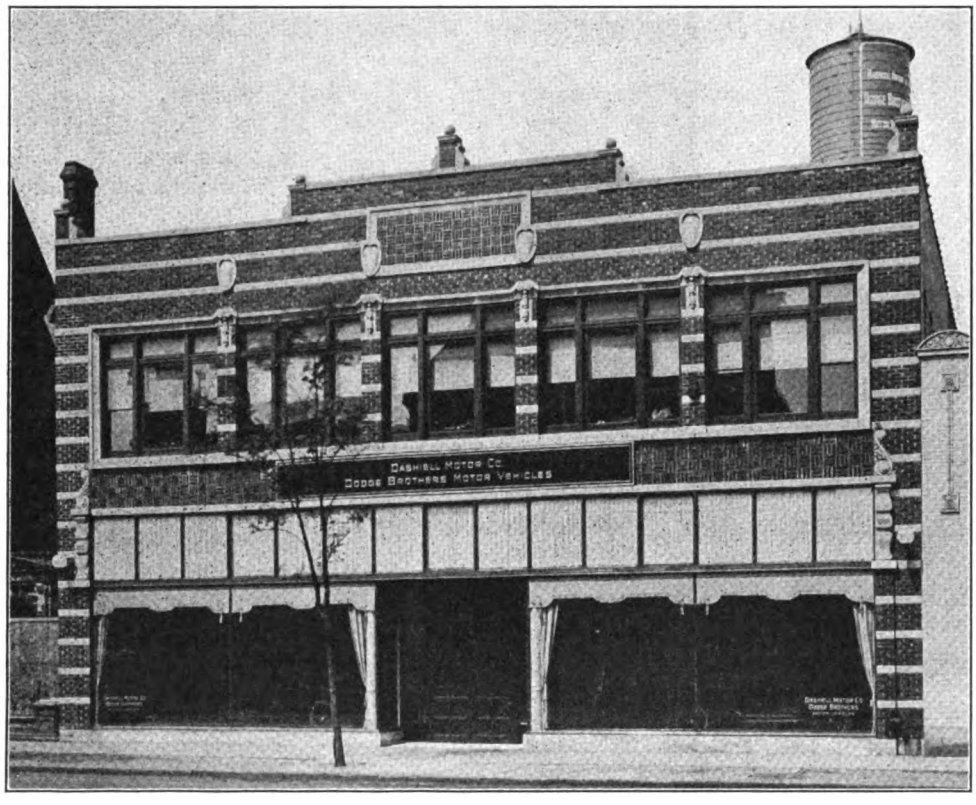
"That tells the story" he would say, whereupon he would advise you to read the balance of the printed matter. But it would not be surprising if his suggestion were to pass unheard so interested had you already become in the story of an automobile merchandiser who makes a specialty of field service work.

"I called on you today," reads the card, "to make sure you are getting the sort of service from your machine which every Dodge Brothers owner has a right to expect. This is an additional service rendered by the Dashiell Motor Co., to insure that you are getting maximum service from your Dodge Brothers car.

"I will call again in two or three months. If I can be of service in the meantime, please call Calumet 7300."

Such is the message that each of the four field service salesmen of the Dashiell company leaves behind him when he is unable to see the man on whom he is calling. This message, too, is responsible in good part for the wide reputation the Company is establishing as a promoter of good-will among its customers.

These four service salesmen, as they are known, get around to each car owner about every three or four months. Upon them falls the task of seeing that every customer secures proper service from his machine. They also bring to the owner's attention the service facilities that the Company offers. In addition, this Field Service Department, which is a division of the service station checks up on all customers who stop in, and makes sure they are satisfied with the way their work has been handled.



New salesroom and office building of the Dashiell Motor Co., Chicago. Service is handled in a separate building located just across the street from the sales quarters

Method of furnishing these service salesmen with names is as follows: The entire list of owners is run off on addressograph plates. These are then divided up into smaller districts so that there will be as little waste motion as possible on the part of the men.

Meetings are held with these salesmen every morning. For fifteen or twenty minutes, work of the previous day is gone over, and each man's enthusiasm and energy is maintained at the highest possible pitch.

Any unusually difficult problem that may have been encountered is discussed. If a satisfactory so-





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"ASK 'EM TO BUY FOR CHRISTMAS"

lution has been found the details are gone over for the benefit of all.

Following this meeting they start out on their calls. Where it is impossible to see the car owner, they leave behind them the card already referred to. They also leave for his inspection a small illustrated folder, giving some reasons why each and every owner should patronize authorized Dodge Brothers service stations.

"We always try to get our customers to bring their cars down to our service station," the Company states, "so that we may look them over there. Our Field Service salesmen are not mechanics, and they make no mechanical adjustments whatsoever."

The steps taken to follow up every repair job which passes through the service station are worthy of notice. Every morning a letter with card enclosed is mailed to those who have had their cars in for repairs the day before.

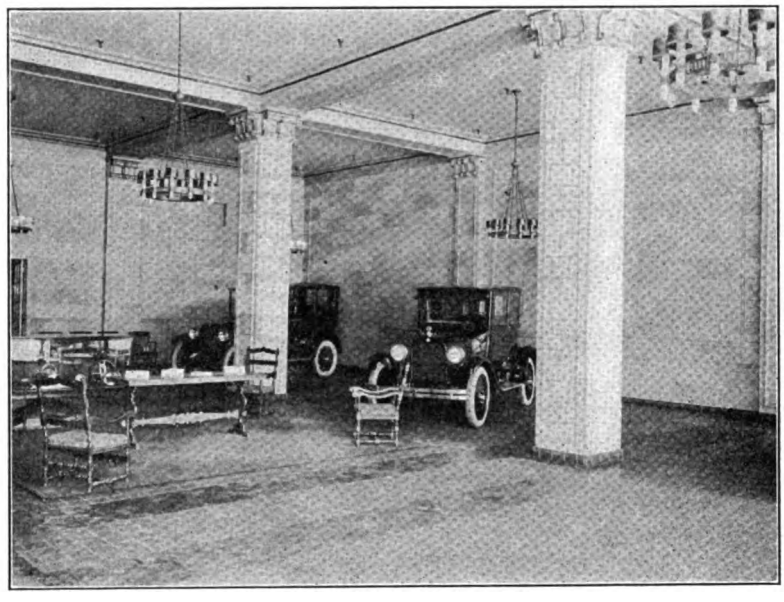
"Was the repair work satisfactory which we did on your car?" the letter reads.

"We are constantly striving to keep our Service Department as nearly 100 per cent as possible. You can help us by checking the enclosed stamped card and mailing it to us.

"It is our sincere desire that you get full, honest value in every dealing you have with us. Should we 'slip-up' at any time, you will always find us anxious to rectify our mistakes—if you will tell us about them."

The Company's field service file acts as a complete record of the repair work that has been done for each and every customer. Moreover, it records the calls which the service salesmen make on owners.

What has been accomplished by the Company as a result of this work which it conducts along such systematic lines, is reflected in one or two examples of instances where a dissatisfied customer has been made a booster.



Simplicity is keynote of the Dashiell company's salesroom

"Last Summer," the Company states, "one of our men called on a customer who claimed to be rather displeased with us on account of a repair job which we had done to the body of his car. Our man induced him to bring in the car. We checked over our work and the man left in a much better frame of mind.

"ASK 'EM TO BUY FOR CHRISTMAS"

"About fifteen minutes ago, this man was noticed on our salesroom floor, talking with one of our salesmen, and our used-car man was out in front appraising his car."

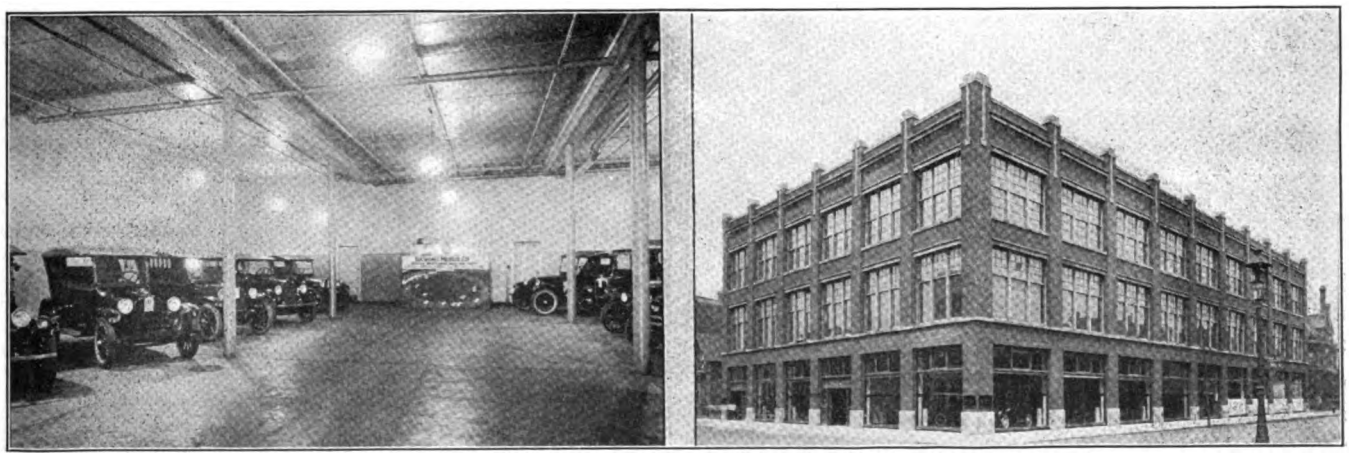
That is one specific instance where the dissatisfied customer was recognized as a danger signal. Instead of being unheeded, however, this complaint was investigated and made right, with the result that he was resold.

Still another interesting example of this service work follows:

"A short time ago, we called on a new owner who had driven his car about two and a half months. As this man was a new driver he was not handling his car properly, and was displeased with the way the car was running. Our man had a long talk with him, explained our policy and our facilities for service and induced this customer to bring his car down to us so that we could look it over and see if it needed fixing.

"It seems that this customer was out of town, and did not bring his car in until after the warranty period had expired.

"When he brought the car in we found that a part of one of the ac-



More than 100,000 square feet of floor space are available for the selling and servicing of Dodge Brothers vehicles. To the left is shown the used-car salesroom, while the picture to the right gives an idea of the impressive service building

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cessories on the car was defective, and sold him a new part. The customer felt that even though he had had his car longer than the warranty period, that he was entitled to a new part, and got in touch with the field service salesman who had previously stopped in to see him.

"This salesman took the defective part, personally, to the manufacturer and was able to secure a new part for the owner."

and take the time to get these records, we have no trouble in showing him that it is our honest intention to give him his money's worth for each and every dollar he spends with us.

"We turn over all of our complaints which we receive from the return postcards, or from our canvassing, to one of the field service salesmen to handle. Many minor complaints or grievances which our men run across in their owner-to-owner work are straightened right there on the spot by them."

This method of deliberately going out into the highways and byways and searching for complaints has been condemned in some quarters as a waste of time and effort. Why spend good money trying to get people to pick some flaw in the service you're offering them?, is the argument used by those who have never stopped to give the matter the serious thought and study it deserves. "You need never worry about the kicks coming in," they'll tell you. "Just wait long enough and you'll get your share."

DASHIELL MOTOR CO.
DODGE BROTHERS MOTOR VEHICLES
2542 MICHIGAN AVENUE

Date_____

M_____

I called on you today to make sure you are getting the sort of service from your machine which every Dodge Brothers owner has a right to expect. This is an additional service rendered by the Dashiell Motor Co. to insure that you are getting maximum service from your Dodge Brothers car. I will call again in two or three months. If I can be of service to you in the meantime, please call Calumet 7300.

DASHIELL MOTOR CO.

_____
Field Service Department

This card is left for the car owner by the field service salesmen

This makes Case No. 2 where a satisfied customer was made from one who felt that he had a just complaint. And that is just where lies the importance of such work as the Dashiell Motor Co. is doing.

Every customer is apt to feel he has a just complaint. When the merchant tries to convince him that he is all wrong and that there is no justification in his claims, he becomes all the more firmly convinced that he is in the right. On the other hand, where his claims are studiously avoided, the sore festers until it spreads to other of the company's customers.

In this connection the experience of the Dashiell organization is well worth noting. "We find," the Company points out, "that in practically every case, every man who is disgruntled or dissatisfied, is in that frame of mind on account of a misunderstanding. When we look up our records,



Some such complaints may drift in from time to time, it is true. Unfortunately for the merchandiser, however, many do not. Frequently he is in happy ignorance of them until they have assumed an acute form, or have spread themselves so universally throughout his territory that they become the subject of general conversation.

Strange as it may seem there are many individuals who experience a certain satisfaction in nursing any complaints they feel they may have. They'll take delight in telling everybody about them with the single exception of those most deeply involved, and who with a little explanation could adjust them satisfactorily.



It is for this reason that it pays to take definite steps to rout such misunderstandings, complaints, or whatever they happen to be, from the dark holes where they remain in hiding, bring them out into the open, turn them over, and sun them in the light of perfect understanding. When viewed in this way they quickly evaporate into nothing.

Some of the direct results secured by the Dashiell organization from this solicitation of complaints have been recounted already. More indirect results from the system in general, as well as from the Company's operating plan as a whole are revealed in the new quarters that have been opened recently.

The Company's new salesroom and office building which is pictured on one of the preceding pages is just across the street from the service station. These two buildings offer more than 100,000 square feet of floor space.

At the present time the Company employs about fifty salesmen. For the past two or three years junior salesmen have been used as a means of building up prospects during the Fall and Winter, and as a method of developing future senior salesmen. Ten junior salesmen are now engaged and it is the intention to put on about ten more in the very near future.

From this it will be seen that the policy is one of combing every square inch of territory constantly, so that there will be little chance of the Dodge Brothers' message being overlooked. Moreover, this message which the Company carries forth is one that it lives up to.

For whereas it is the ambition of the organization to keep adding to its list of customers, it is also alive to the necessity for giving proper heed to those it has already amassed.

Dissatisfied customers are danger signals. That the Dashiell Motor Co. knows full well. And that is why instead of going deliberately past them, it stops and gives them careful attention. That in turn, is why it now boasts of one of the finest organizations in the Country.



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Advocates "Selling Cars with Music"

Don Lee Installs Pipe Organ in Salesroom for Closed-Car Salon



FOR his recent salon of Cadillac closed models, Don Lee had installed in his San Francisco salesrooms a $15,000 Robert Morgan pipe organ. Believing that "selling it with music" has possibilities, he engaged an expert organist to render recitals every afternoon and evening. The instrument proved admirably adapted to this use and in Lee's opinion the experiment may lead to the opening up of a wide field for organ music for commercial purposes. The organ assuredly lends charm and dignity to the gorgeous setting

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PASSENGER VEHICLES NEWLY OFFERED

Chalmers to Push New Five-Passenger Coach

Two-Door Type $1,585 Closed Car Carries Full Line of Equipment

EXTENSIVE production on its new five-passenger coach is being planned by the Chalmers Motor Car Co., Detroit. This two-door composite-type closed car with full equipment lists at $1,585. It is already in dealers' hands.

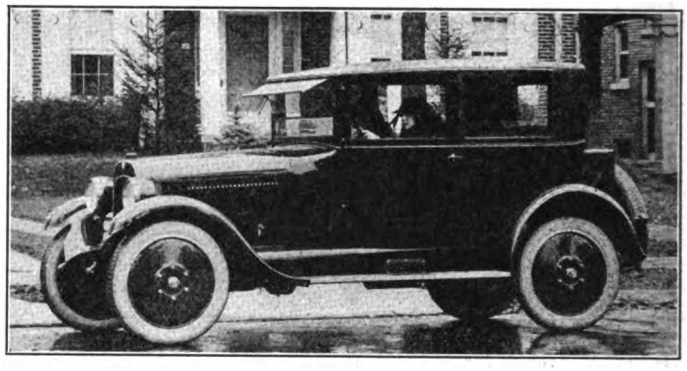
Noteworthy in the body design of the coach are the unusually wide doors, and in fact, the width of the body itself. The folding, forward-tilting front seats are also a feature by reason of the room they afford for entrance to rear seat. The driver's chair, for instance, completely clears the steering wheel when tilted forward. Windows are generously large.

Particular attention has been given the substantial fabric covering of the rear and rear side panels. Unsightly seams are eliminated by running fabric cut in one piece from one side window to the opposite side window. The fabric-covered roof is sloped at an angle that harmonizes with the slope of the hood.

Interior trim is in broadcloth with satin-finish hardware. Door window lifters are of the lever type, raising or lowering the windows with less than a half turn. Rear quarter windows are operated by a strap arrangement.

Windshield is a double-ventilating type. The upper glass is hinged from the top and the lower from the bottom, both sections swinging outward. The entire assembly is held all around in a rabbet, a water-tight and rattle-proof construction. A visor is also regularly furnished over the windshield.

A trunk is mounted on a nickeled rack at the rear. A dust cover is provided for the trunk. Striking a unique note in finish, the trunk bars that protect the body are of natural-finished wood. Further equipment includes parking lights, rear-view mirror, windshield cleaner, dome light, non-skid cord tires, five disc wheels and a heater.



UNUSUALLY wide doors and windows are characteristic of the new Chalmers two-door five-passenger coach. All the equipment shown is included in the list price of the car

The body is finished in maroon with black superstructure. A carmine stripe on maroon is run around the body several inches below the belt. The disc wheels are in black with maroon trimming.

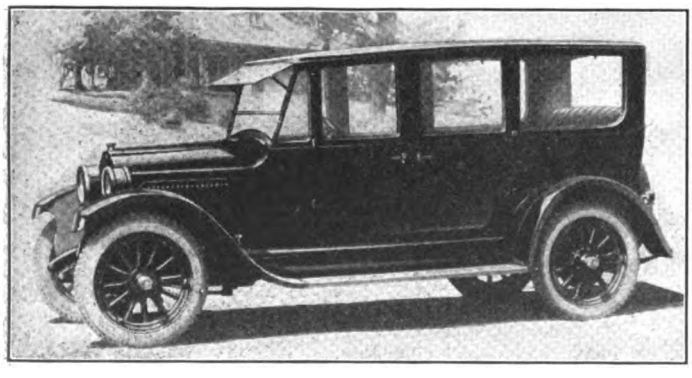
Seven-Passenger Willys-Knights in Demand

Production Being Pushed on New Larger Touring and Sedan Models

FIRST disclosed at last year's national shows, the Willys-Knight seven-passenger touring and sedan models are now being delivered by dealers. In response to the large volume of orders received for these larger models, production is to be pushed through regularly.

The chassis used for the seven-passenger cars is identical with the five-passenger chassis except in three details. The wheelbase is six inches longer, or 124 inches; gear ratio is 5.12 instead of 4.44 to 1; and tires are 32 x 4½ inches. Body design is similar except for the length.

All late Willys-Knight models now have adjustable roller bearings in both the wheels and steering pivots, a feature claimed not to be found in any other American-made car at any price. These afford a simple and quick means of taking up wear on bearings as required, and a remarkable ease in steering. Another recent adoption is the multiple disc clutch, consisting of 10 alternating steel and asbestos discs under 300-pound pressure when clutch is engaged, yet requiring only 16 pounds foot pressure in the pedal for disengagement.



BUT for added length, new Willys-Knight seven-passenger sedan is identical in lines with five-passenger type. It will be noted that upper part is practically all glass giving occupants unobstructed view

Stutz Investigates Life of Cars

In order to establish accurately the active life of Stutz cars, the Stutz Motor Car Co. of America is engaged in interviewing both original purchasers and those who have obtained their cars at resale. Figures available to date would indicate that the Stutz product retains its efficiency with a minimum of attention for at least five years.

Bus Fare Lower Than Street Car's

There are 22 Oldsmobile Economy buses in Seattle running in competition with street cars, according to the Olds *Current News Review*. The buses run on a five-cent fare against an eight-cent street car fare, and are said to be giving splendid satisfaction.

Coats Steamer Promised Soon

Coats $1,085 steam car, about which the trade first heard early in 1921, is now scheduled to make its appearance on the market soon. Preparations to market the first output early in 1923 are reported in progress at the Columbus, Ohio, plant.

Alemite Produces Ford System

Alemite lubrication can now be obtained for Ford cars. The Bassick Manufacturing Co. has placed on the market in neat package form a special set for these cars priced at $11.50. It includes four shackle bolts, two king bolts and two tie rod bolts, all of special design, and the regular Alemite fittings for use on the fan and other parts.

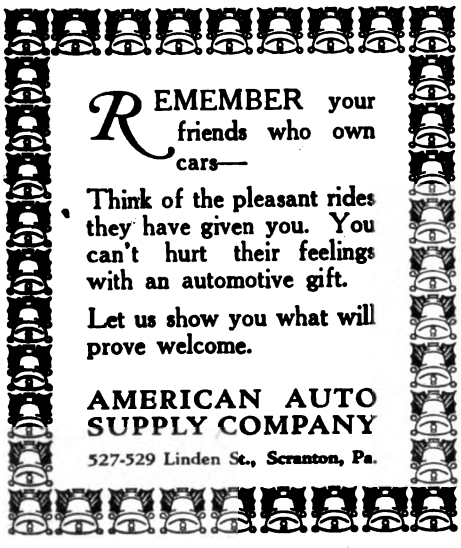
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"Say It with Something for the Car"

Looks Well in Print When Set Off by Christmas Border

WELL, what'll we do to "Ask 'em to Buy for Christmas?" That's a question that every far-sighted automobile accessory merchandiser is asking himself—NOW.

It is a question, too, that must be carefully considered and studied over if the Christmas selling plans are to hit the mark. For, if the public is to be weaned from giving presents that are of little practical use, some substitute must be offered. And experience has proved that the accessory merchant stands in a position to offer an effective substitute.



Injecting Christmas spirit into the window display is an important factor in attracting attention to the automotive accessory as a Christmas gift. But the educational campaign that must of necessity be waged by the dealer does not end there. It must be carried further. Its presence must be felt in other forms of pre-holiday advertising.

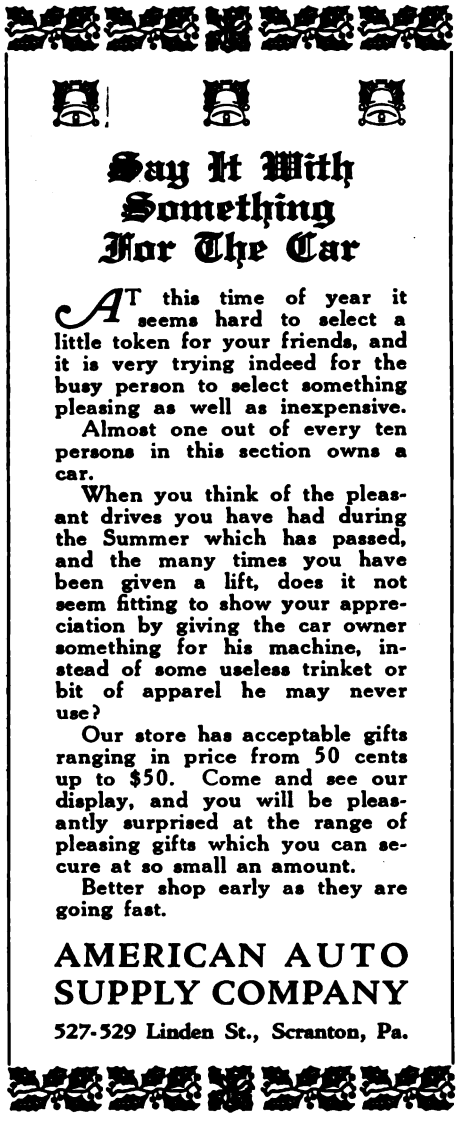
How this can be accomplished, and effectively, too, is shown in those advertisements which the American Auto Supply Company, Scranton, Pa., has tried out with success in former years, and which have made it a firm believer in the "Ask 'em to Buy for Christmas" idea. "If you put it up to them right," this Company states, "there is little doubt but that Christmas business can be secured."



In one of its displays that appeared in the local papers a few weeks before the holidays was an appeal to remember the friends who had been generous in extending the use of their machines. Remember them with an automotive gift, was the point clearly emphasized.

"Almost one out of every ten persons in this section owns a car," read this Christmas appeal. "When you think of the pleasant drives you have had during the Summer which has passed, and the many times you have been given a lift, does it not seem fitting to show your appreciation by giving the car owner something for his machine, instead of some useless trinket or bit of apparel he may never use?

"Our store has acceptable gifts ranging in price from 50 cents to $50. Come in and see our display."



There in a few words is the argument which every accessory merchant must needs emphasize during the next few weeks if he is to make the most of the holiday buying season. "Why give the car owner any old thing when you can give him something for his automobile?" is the question that must be stressed.



In framing the Christmas advertisement, moreover, attention must be directed to its dress. It is not sufficient that the words themselves convey the holiday spirit. The setting must be suggestive, as well.

This effect can be secured easily by generous use of borders of holly and Christmas-bell design. The figure of Santa conspicuously placed also catches the eye.

Such displays are of vital importance in stimulating public interest in automobile accessories as Christmas gifts. For as has previously been pointed out, it is an educational campaign that must be waged by the dealer.

Falling in a rut is the most popular job in the world. Such is the position now held by many Christmas givers. A suggestion is all that is needed in many instances to cause them to see the value in "saying it with something for the car."



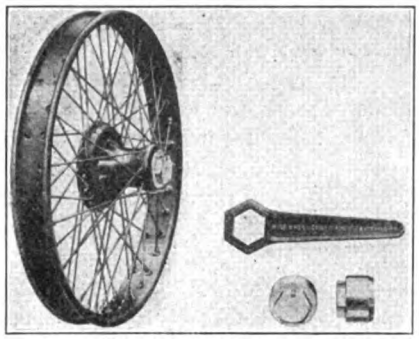
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WHAT'S WHAT IN THE CHICAGO LINE-UP

NEW CAP ON HOUSE WHEEL

Wire Wheel Corp. Displays Newest Type

Featured by the Wire Wheel Corp. of America, Buffalo, N. Y., is the No. 3 House type wheel which was described in



No. 3 House wheel

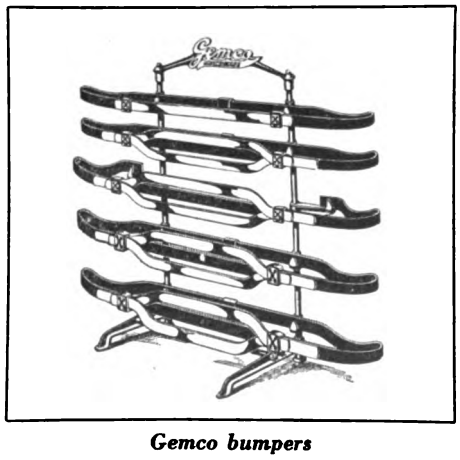
detail in these columns a few weeks ago. This product is conspicuous by reason of its new and distinctive hub cap.

The cap is considerably heavier, provides greater bearing surface for the wrench, and permits greater leverage on the wrench when the hub cap is to be removed or tightened. Each cap is stamped "right" and "left," and also has arrows which show the direction to turn for "off" and "on."

GEMCO ADDS NEW SERIES

Decorates Its Giant Line with Clamps

All the series of Gemco bumpers produced by the Gemco Mfg. Co., Milwaukee, Wis., are on view in the space occupied by that organization. This includes the Giant and Little Giant for heavy cars; Standard Triple-Gard and Mono-Spring for medium



Gemco bumpers

sized cars, and Light Weight Triple-Gard for light weight machines.

SHOWN AT CHICAGO

ON this and the following pages AUTOMOBILE TOPICS is describing briefly some of the interesting features shown at the Annual Show of the Automotive Equipment Association. Additions to well established lines, as well as refinements in design are here recorded. That there will be further disclosures when the doors are swung open there is little doubt. These, as well as notice of exhibits not included in these pages will be discussed in a forthcoming issue

Addition of an attractive Small-Kar bumper is also noted. This series is designed especially for Ford, Chevrolet "490" and Gray cars.

For 1923, Gemco Giant and Little Giant bumpers are equipped with special ornamental clamps on the front bars. These are copper coated and finished in nickel, the design being casted in the malleable and painted with green enamel.

SPLITDORF LINE FAMILIAR

Spark Plugs and Piston Rings Included

Spark plugs, meters, piston rings, and generator cut-outs are among those items shown by the Splitdorf Electrical Co.,



Splitdorf peened piston ring

Newark, N. J. In the main, these constitute a line which is familiar and whose popularity is well established.

Green Jacket spark plugs are carefully constructed of mica and porcelain, and built to stand up under excessive heat. Sizes are made to fit every engine.

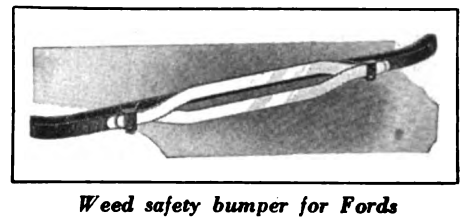
The Splitdorf peened piston ring is specially heat treated so as to assure its retaining its shape. Another feature which is worthy of emphasis is its special patented non-leakable joint.

WEED BUMPER NOW FOR FORDS

Tire Chains Also Featured in Exhibit

Among those products featured by the American Chain Co., Bridgeport, Conn., is the Ford type of Weed safety bumper, which has lately been described in detail in these columns. This fits all models, both front and rear and offers a wide impact area.

Weed De Luxe tire chains also play an important part in the exhibit. These have reinforcing links superimposed on the main cross chains to prevent breaking. The Twin-Loc side chain is smooth on both sides, and withstands excessive strains from any angle. A lever locking connecting hook



Weed safety bumper for Fords

draws the side chains together with little effort and is locked securely with pressure of the thumb.

KLAXON HAS NEW MODEL

Also Cuts Price of Its Klaxon-5 Type

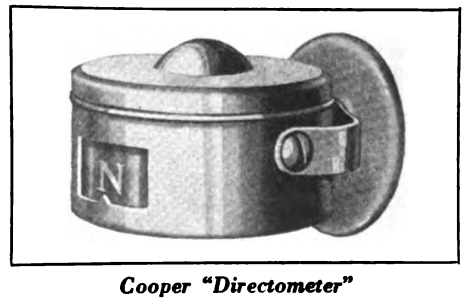
A sturdy dependable horn combining the quality of the Klaxon-12A with an extremely moderate price is being shown by the Klaxon Co., Newark, N. J. This new product is designated as Klaxon-8 and fills every requirement for both city and country use.

Interest is also manifested in a reduction in price of the Klaxon-5. This horn which formerly sold at $7 is now being offered for $5.50. It is adapted to smaller cars such as the Ford and Chevrolet.

"DIRECTOMETER" IS GUIDE

Cooper Mfg. Co. Offers Latest Product

Direction in which the car is traveling is told at a minute's notice by a glance at the



Cooper "Directometer"

Cooper "Directometer." This device which is being offered by the Cooper Manufactur-

NOW'S THE TIME—ASK 'EM TO BUY FOR CHRISTMAS

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JUST A SUGGESTION—SAY IT WITH SOMETHING FOR THE CAR

ing Co., Marshalltown, Ia., is of neat design and easily attached to the windshield where it is in full sight at all times.

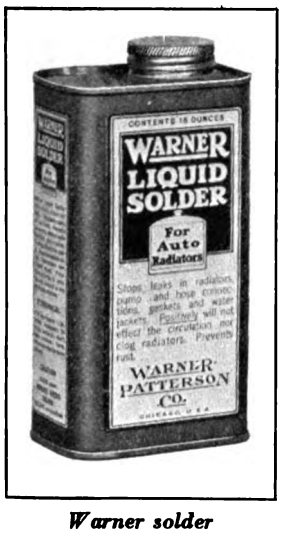
Eight principal stations of the compass are delineated on the dial in luminous letters, these being discernible at any time of the day or night. Construction throughout is of brass and aluminum.

Installation is accomplished by attaching the instrument to the windshield with special cement furnished. It is adapted for use on all cars, and sells, complete for installation, for $10.

SHOWS WARNER SOLDER

Is Addition to Warner-Patterson Line

Finds leaks and stops them are the claims made by the Warner-Patterson Co., Chicago, Ill., for Warner liquid solder, a product which is being shown at the Company's booth and which has already been described in detail in these columns. This is adapted to use in radiators, hose and pump connections, gaskets, and cracked water jackets.



Warner solder

Emphasis is also being laid by the Company upon the Patterson-Lenz. This projects a flood of evenly distributed light, perfectly controlled, 42 inches from the ground.

STEVENS HAS NEW OUTFIT

Axle Bushing Set Among Newest Tools

An extensive display of its 75 different Speed-Up tools is drawing attention to the booth of Stevens & Co., New York city.



Stevens universal joint tongs

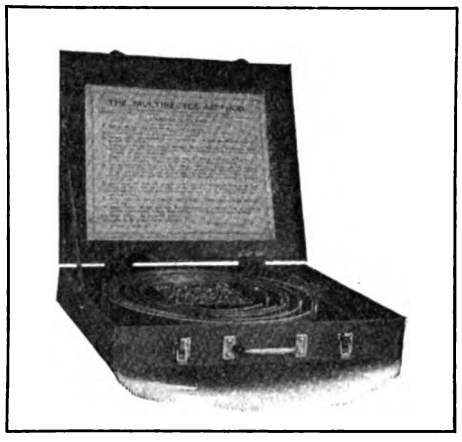
The Stevens line of automotive equipment and Heller sectional cabinets are also on view.

Among the newcomers are the Stevens axle bushing outfit, and the Stevens universal joint tongs for Fords. The first mentioned, remedies worn spindle bolt holes in Ford front axles by replacing them with a tapered upper bushing and a threaded lower bushing. Complete set consists of ten of each bushing, tap, taper reamer, and the fixture. Universal joint tongs provide perfect control and slip the joint into place instantly.

SHOWS HOW TO RELINE BRAKES

Multibestos Demonstrates New Method

Its new method of relining brakes in ninety minutes or less is demonstrated by the Multibestos Co., Walpole, Mass. In this connection there is featured the equipment that is required. This includes seven anvil rings, assortment of split rivets, straight rivet holder, offset rivet holder, riveting hammer, cold chisel, punches, and wire cleaning brush. As an effective means of telling its story to the jobbers, the Company is exhibiting its new moving picture film, "Tell 'em."

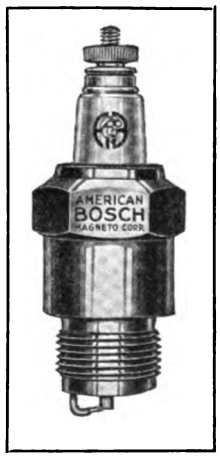


Multibestos equipment

AMERICAN BOSCH SHOWS PLUG

Draws Attention to 7 Standard Types

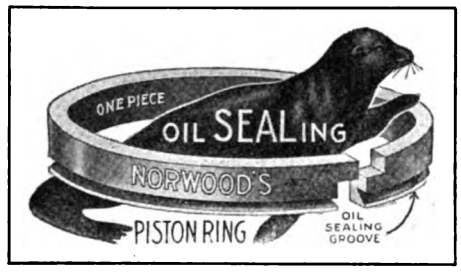
The Bosch spark plug is the device upon which interest centers at the booth of the American Bosch Magneto Corp., Springfield, Mass. This plug consists of but three principal parts; a heavy central electrode, a large single insulator, and a big strong, steel shell, all built together in a single, rugged unit. Insulator is made of "Ambrosite," an artificial stone, and the three electrodes are of nickel alloy. The Bosch plug is made in seven different sizes. These are displayed effectively.



Bosch spark plug

No-Leak-O Features Piston Rings

Entire efforts of the No-Leak-O Piston Ring Co., Baltimore, Md., are being concentrated on its No-Leak-O piston ring. Included in the exhibit is the Company's mechanical performing seal which succeeds is attracting considerable attention.

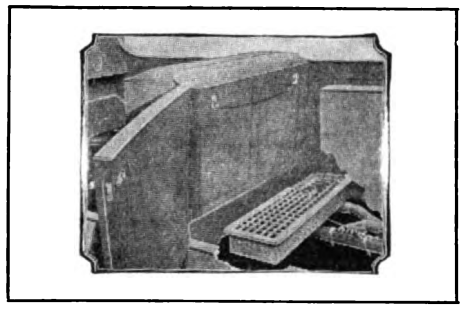


No-Leak-O piston ring

VICTOR HEATER PLAYED-UP

Refinements Noted in Product Displayed

Its improved Victor copper-aluminum heater is being emphasized by the Victor Manufacturing & Gasket Co., Chicago. Heating element in this device is a one-piece aluminum casting. Inlet and outlet connections at the bottom are doubly sealed with copper asbestos gasket, tapering pipe thread and lock nut.



Victor copper-aluminum heater

Control can be placed on the dash, on the foot-board, or on the floor. It is positive in action and holds the valve tightly in closed, open, or partly open position. Universal valve is easily adjustable to any exhaust pipe from 1⅝ to 4 inches.

BOWEN PRODUCTS PRESENTED

Features Empress Lubricating System

Activities of the Bowen Products Corp., Auburn, N. Y., are being brought to the attention of the trade through a showing of the Empress high-pressure lubricating system. Emphasis is being laid upon this device together with the Company's regular line of Empress grease and oil cups and shackle bolts. The Bowen-Empress system is now standard equipment on more than fifty motor cars and trucks.

Two sizes are produced, according to size of car and available floor space. A

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Ford heater is also offered, equipped with a special valve and control.

SAFETY FIRST PYRENE SLOGAN

Shows Fire Extinguishers and Chains

Devices designed for safety and fire protection constitute the showing of the Pyrene



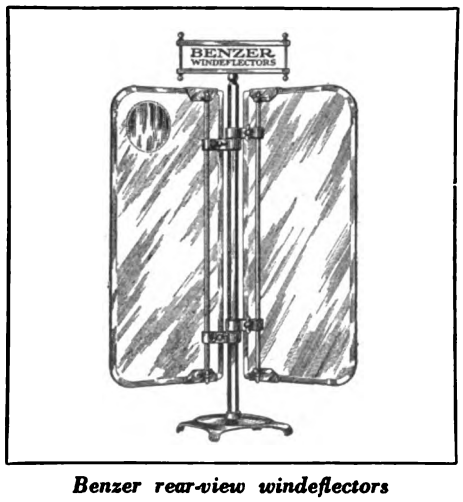
Pyrene Off 'N' On anti-skid chains

Mfg. Co., Newark, N. J. There is Pyrene, the familiar one-quart extinguisher as well as Guardene, a 2½ gallon extinguisher. Phomene, a foam-type extinguisher is also on exhibition. Attention is likewise directed to Off 'N' On anti-skid chains which are familiar to the trade. Pyrene safety cleaner is another product which is being stressed by the Company.

BENZER HAS WINDEFLECTORS

Ruby Tail Light Lens Also Present

Benzer rear view windeflectors and the Benzer Ruby tail light lens are the two products upon which stress is being laid at



Benzer rear-view windeflectors

the booth of the Benzer Corp., Brooklyn, N. Y. Other articles shown are the Benzer flower vase, and Benzer Type "A" headlight lens.

Benzer windeflectors are made of finest beveled ¼-inch plate glass, and are equipped with heavily nickeled brass fittings.

A feature of the Ruby lens is that it is sold with locking wires to fit. The lens itself is made of the finest Ruby glass and the locking wires are standard spring locking wire. It is furnished for all standard size lamps.

C. T. & E. SHOWS 190-Y SWITCH

Ignition Outfit for Fords Also on View

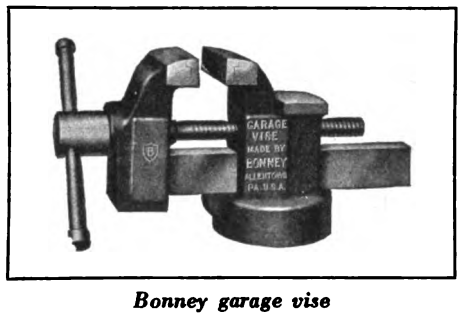
Much attention is being directed to the new replacement switch designated as 190-Y which the Connecticut Telephone & Electric Co., Meriden, Conn., is showing. Also included in the Company's exhibit is the Connecticut ignition outfit for Fords.

The Connecticut switch is almost universal in its adaptability. The heavy cast aluminum plate, black enamel finished, and the pin tumbler block, give it a high-grade appearance. Toggle action, cross-wise, of light and ignition controls, adds to the attractiveness and also provides easy operation.

BONNEY TOOLS ARE NEW

Vises and Battery Pliers Now on List

Several new items are being shown by the Bonney Forge & Tool Works, Allentown, Pa., in its exhibit at Booth No. 27.



Bonney garage vise

Included among these is the Company's line of garage vises and also its line of battery pliers.

Jaws of the Bonney garage vise are heavy reinforced gray iron castings with hardened tool steel removable faces. The screw is steel machine threaded, and the slide is cold rolled steel. A swivel base is provided which can be adjusted easily to any position by merely a turn of the base screw.

Cross milling of the double concave jaws of the Bonney battery and grease cup pliers allows a firm grip. Action is from any angle.

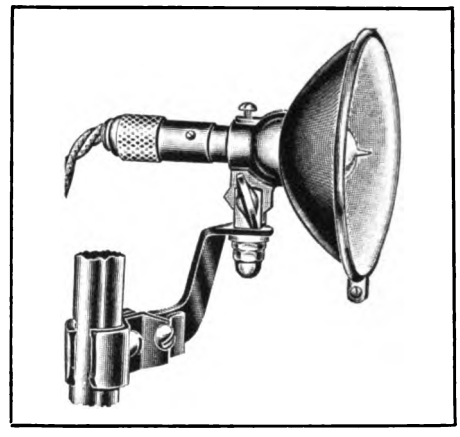
Johns-Manville Shows Standard Line

Its standard line of automotive equipment is being shown by Johns-Manville, Inc., New York city. This includes brake band lining, clutch facings, speedometers, hubodometers, packing commodities, together with Johns-Manville automobile tape.

EDELMANN HAS SPOTLIGHT

Also Introduces Locking Radiator Cap

A new locking radiator cap, and a special spotlight are two new members of its line which are being introduced by E. Edel-



Edelmann spotlight

mann & Co., Chicago, Ill. With these products the Company is likewise showing its "Break-Not" hydrometer, "Auto-Ray" spotlight, "Jumbo" grease gun, "Han-D" hammer, and "Four-In-One" screw driver.

The "Edelmann" spotlight is a combination searchlight and trouble lamp. The lamp is controlled by a switch in the handle, a quarter turn either way turning it off or on. The "Jumbo" combination grease and oil gun needs no introduction. It is made entirely of brass.

Sherardizing Co. to Move to Akron

Producers of inner tube mandrels, the New Haven Sherardizing Co., will move to Akron, O., in the near future. The concern is now operating at Hartford, Conn.

DOVER STAMPING NOVELTY

Shows New Electric Light Bulb Case

A surprise is held in store for visitors to the booth of the Dover Stamping &



Dover Flexo measure

Mfg. Co., Cambridge, Mass., in the form of a new electric light bulb case which the Company is introducing. Although this is not quite ready for distribution at the

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HERE is an excellent example of a selling window display concentrating on one specialized product. It shows how Ryan & Hughes, Inc., New York, devised to emphasize Winterfront automatic radiator shutters. Models for various cars serve to heighten interest to a greater number of passersby, while in general, placards telling how the shutters work hold the attention of everyone



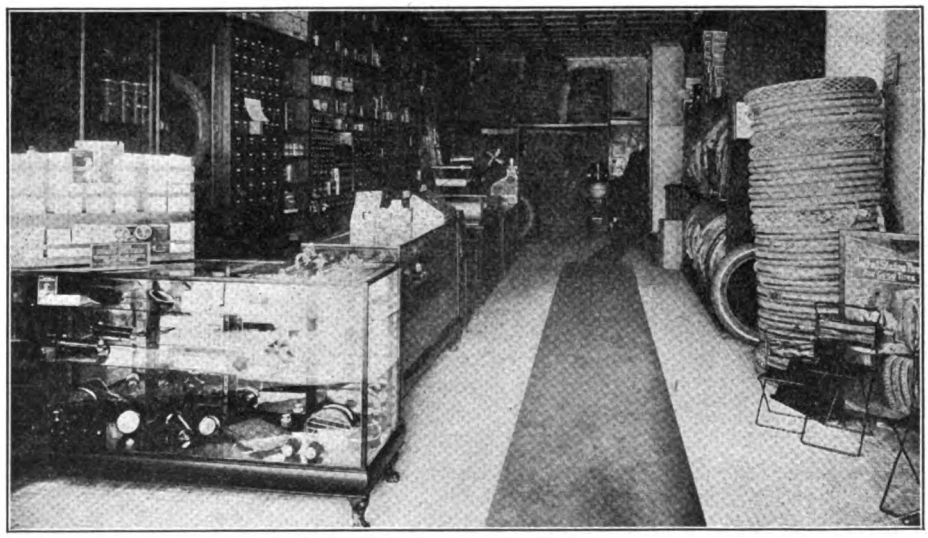


Displays Suggest What to Give for Xmas

Putting Accessories Out Where They Can Be Seen Helps

ONE of the best ways of "Asking 'em to Buy for Christmas" is to put accessories out where people can see what to buy. For the next six weeks everybody is going around wondering what they can give this one and that one for Christmas. Effective displays will give mental suggestions of just the thing to give! Here are three very effective displays of different kinds. To the left is pictured the manner in which Barclay's, Inc., Buffalo, N. Y., arranged an attractive window exhibition of numerous accessories

ASK 'em to Buy for Christmas" can also be practised to advantage by car dealers who maintain accessory departments. This is the manner in which one car merchant arranged his accessory department. Showcases and counters are employed to good advantage. All that needs be added now is the necessary trimming to give a truly Yuletide atmosphere and the dealer is all set



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LOOKS WELL IN PRINT—"AN ACCESSORY FOR CHRISTMAS"

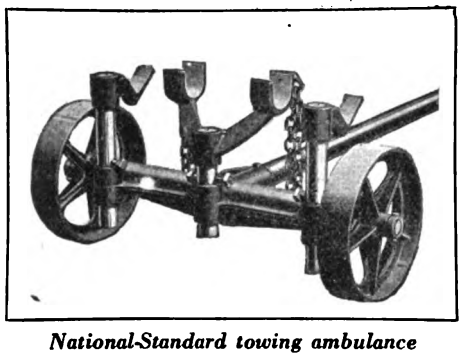
present time, it will be, the week following the show.

Prominent in the exhibit is the new Dover Flexo combination measure and funnel. Length of the flexible spout is eight inches and the diameter, 5/8-inch. The tube unscrews and packs inside the measure thus making it compact. The new Dover Flexo oilers, also on view, have seven-inch flexible spouts, which may be bent easily at any desired angle.

SHOWS TOWING AMBULANCE

National Standard Also Has New Jacks

Several new members have been added to the line of the National Standard Co.,



National-Standard towing ambulance

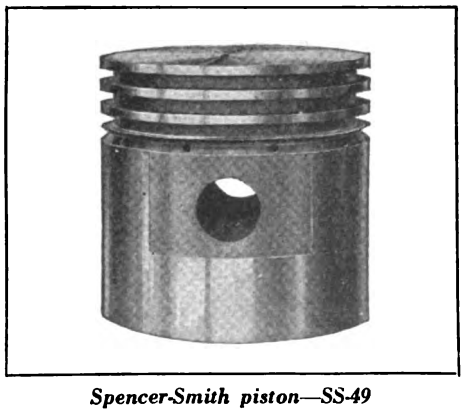
Niles, Mich. Included among these is a long handle screw jack for light weight cars, and a long handle ball bearing screw jack for heavier machines.

The Company is also featuring a new towing ambulance both in rubber tire and plain wheels which can be used under axles with torque rods. Patents of the Mosher Mfg. Co. covering this device have been taken over by the National Standard Co.

SPENCER-SMITH SHOWS LINE

Includes Turning and Grinding Arbor

Spencer-Smith Universal turning and grinding arbor is the latest product of



Spencer-Smith piston—SS-49

the Spencer-Smith Machine Co., Howell, Mich. This is shown together with Spencer-Smith pistons.

A feature of the Company's pistons is the oil groove and the non-clogging oil holes which prevent oil pumping. On the down stroke the oil is wiped into the groove and from there the holes drain it back into the crankcase.

HAS WIDE LINE ON VIEW

Thermoid Rubber Gives Space to Many

Thermoid hydraulic compressed brake lining; Thermoid hydraulic compressed clutch rings and facings; Thermoid and Testoid radiator hose; Thermoid Hardy universal joints, and Testoid inner tubes are among the products that are being shown by the Thermoid Rubber Co., Trenton, N. J.

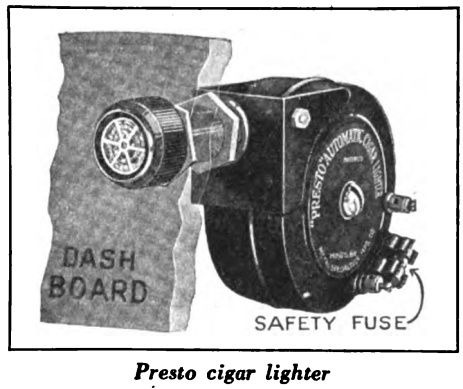
Thermoid non-collapsible radiator hose is reinforced internally with wire. By the Thermoid process, wire galvanized to prevent rusting is embedded into the walls of the hose, thereby eliminating any shifting or removal.

Testoid tubes are made of Crolide compound and have a solid duck inserted valve base. This is vulcanized between the layers of rubber at the time of construction.

PRESTO CIGAR LIGHTER NEW

Well Adapted to Demands of Xmas Trade

Particularly well adapted to the demands of Christmas trade is the Presto cigar lighter which has been brought out by the



Presto cigar lighter

Metal Specialties Mfg. Co., 338-352 N. Kedzie avenue, Chicago. No. 260, as it is known is concealed behind the dash and lights automatically when the cord is drawn out.

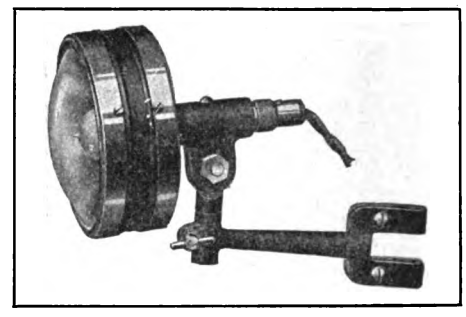
It is equipped with five feet of heavy cord which the cord winder winds up automatically when the lighter is not in use. Two terminals on the cord winder are connected, one to the ammeter and the other to one terminal of the battery.

OFFERS NEW DRUM SPOT LAMP

K-D Lamp Features Its Drum Type

Its new Drum spot lamp is being stressed by the K-D Lamp Co., Cincinnati, Ohio, along with the Drum type head lamps. This spot lamp is solid brass throughout and brackets are supplied for either windshield or closed car type.

Conspicuous in the Company's exhibit is



K-D drum spot lamp

a drum shape head lamp for Ford cars, known as Model No. 9, a hexagon door electric lamp, Model No. 3, and the K-D special head lamp. The Company is also offering electric tail lamps and license holders, parking lamps and electric side lamps.

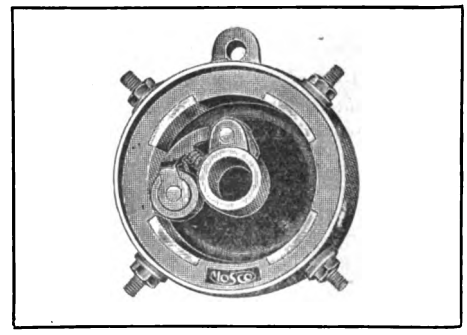
Packard Electric Has Novel Setting

Attention is directed to the space occupied by the Packard Electric Co., Warren, Ohio, through a large painting 10 x 6 feet which shows an automobile in silhoutte with all of the cable brought out in strong relief in natural colors. This emphasizes the importance of the cable system of the automotive vehicle and brings notice to bear upon the Packard products which constitute the rest of the display.

MOTOR SPECIALTIES EXHIBITS

Shows Wide Variety of Popular Products

A wide variety of products is on display in Space No. 133 where the Motor Specialties Co., Waltham, Mass., is renewing old friends as well as making many new ones. Prominent among the Company's products being shown are its floating plunger wheel puller, Ford type



Mosco timer

timers and bushing removers, together with its electrical connectors, switches and plugs.

Bussmann Offers Fuse Assortment Case

Buss automobile fuses form the chief center of interest at the booth of the Bussmann Mfg. Co., St. Louis, Mo. Particular empha-

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sis is being laid by the Company upon its new automobile fuse assortment case. This



Bussmann fuse assortment case

is designated as No. 5 and contains 100 fuses.

NEW FAN BELT FOR GILMER

"Super Service" Is Its Trade Name

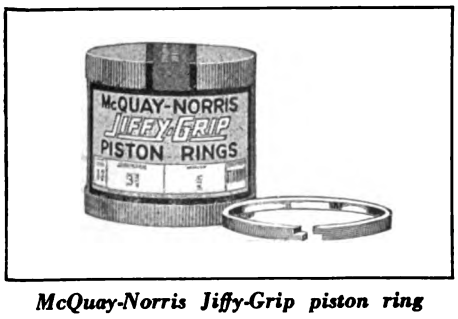
After countless experiments in materials, combinations of materials, treatments, and such, the L. H. Gilmer Co., Philadelphia, Pa., is introducing to the trade its new Gilmer Super Service fan belt. The Company's exhibit, therefore, includes a special line of belts, made up to illustrate the type and finish of the new product.

Emphasis is also being laid upon the Gilmer "Bull Dog" bounce absorber which the Company has been handling for about a year. Advantages of this product are illustrated by a small moving picture device.

McQUAY-NORRIS SHOWS RINGS

Pistons and Pins Included in Exhibit

Piston rings, pistons and pins make up the exhibit of the McQuay-Norris Mfg. Co.,



McQuay-Norris Jiffy-Grip piston ring

St. Louis, Mo. Four types of piston rings are offered, the Leak-Proof, Superoyl, Jiffy-Grip, and Plain Snap rings.

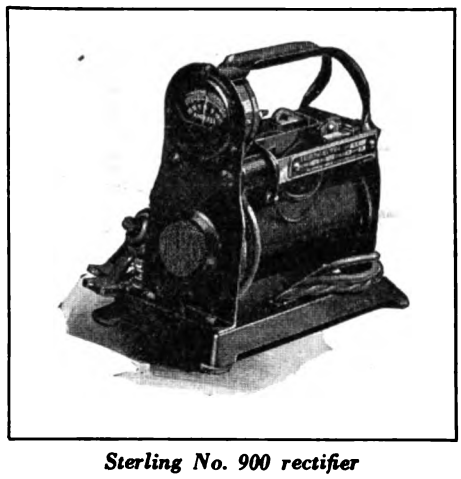
The McQuay-Norris Leak-Proof ring has contact against the cylinder wall around its entire circumference, but also equal tension or pressure at every point. One concentric ring is placed inside of another, both rings being of equal strength, with their openings opposite, or 180 degrees apart. The two sections or halves are made in angle iron or "L" shape.

The Superoyl ring is a concentric ring with an oil reservoir which collects all the excess oil from the cylinder walls on each down stroke of the piston. Face of the Jiffy-Grip ring is finished with a cutting tool instead of a grinder and has serrations around its circumference about one-thousandth of an inch thick. McQuay-Norris Snap rings are manufactured with both step cut and mitre cut joints.

STERLING RECTIFIER ON VIEW

Radio Equipment Also Part of Exhibit

In view of the fact that radio departments are becoming more common among automotive equipment jobbers, the Sterling Mfg. Co., Cleveland, Ohio, is exhibiting



Sterling No. 900 rectifier

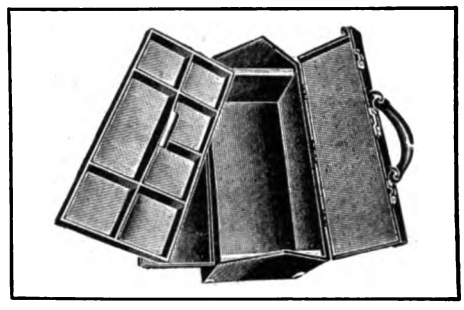
radio apparatus along with its line of automotive equipment. Among the automotive devices it is showing are the No. 900 Sterling rectifier, No. 600 High Rate cell tester, together with the No. 700 Magneto-Meter.

Design of the Sterling No. 900 device makes it possible to attach the rectifier terminals to the battery terminals without regard to which is positive or negative. This rectifier is made in two capacities, one, for charging 6-volt batteries, and the second for charging 12-volt batteries.

Sterling No. 600 High Rate cell tester locates defective cells, providing an accurate means for testing the performance of a storage battery under discharge without removing it to a test bench. Overall length of this instrument is 9½ inches.

Kennedy Kits Attract Attention

Its complete line of Kennedy Kits is being shown by the Kennedy Mfg. Co., Van Wert, Ohio. Whereas the Company has not brought out anything new in the way of automotive equipment, certain refinements



Kennedy kit

have been made to its popular and well-established products.

VANGUARD BUMPER IS NEW

Introduced to Trade by Metal Stamping

In addition to the Lyon straight bar, convex, and dreadnaught bumpers the Metal Stamping Co., Long Island City, N. Y., is displaying the Vanguard which will soon be placed on the market. This is intended for use on light cars.

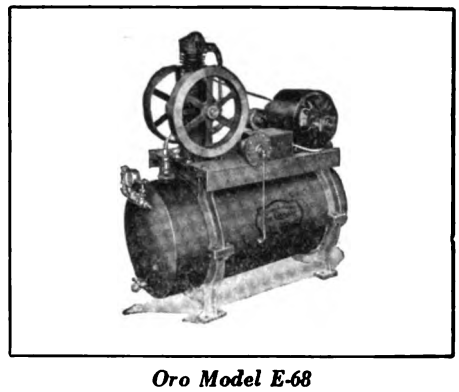
It has a broadened bumping surface both upward and downward which affords maximum protection while its simple two-piece patented construction allows for ample adjustment. It is made only of two-inch width steel in either Japan or nickel finish, and comes in two sizes Model "A" for cars having a frame width of from 25¼ to 28¼ inches, and Model "B" for 28¼ to 31¼ inches.

A new universal fitting is also exhibited. This makes the newest broad-faced designs of Lyon bumpers adjustable to most cars.

OFFERS ITS ORO LINE

Au-To Compressor Includes Ford Devices

Included among the various types of air compressors shown by the Au-To Compressor Co., Wilmington, Ohio, is Model E-68.



Oro Model E-68

This member of the Oro line is a medium-sized outfit—single stage—for automatic service. It is equipped with unloading device so that the motor starts without working against pressure.

In addition to the air compressors on view

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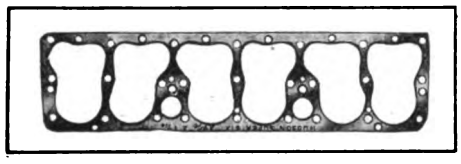
ACCESSORIES WILL BE ACCORDED A WARM WELCOME

the Company is also showing certain Ford devices. There is the Oro combination spark plug and cylinder bolt head wrench, for example, together with Oro connecting rods, and Oro steering wheels, tilting and non-tilting and locking.

FITZGERALD GASKET SEEN

Wide Variety of Sizes Shown in Exhibit

Its patented bound-edge Never Leak gasket forms the center of interest in



Fitzgerald gasket

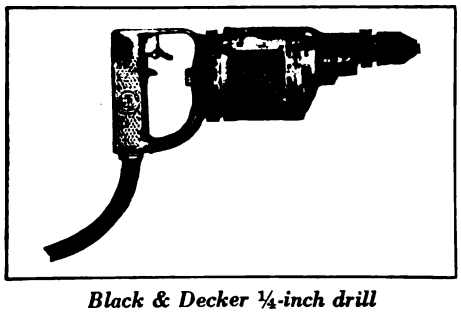
the display of the Fitzgerald Mfg. Co., Torrington, Conn. All the gaskets produced by this Company are of the same construction, cylinder head gaskets being manufactured and carried in stock for all popular makes of cars. These are being shown with shim stock, battery connector, push buttons, switches and other of the Company's products.

BLACK & DECKER CUTS PRICE

Reduces Standard Quarter-Inch Drill $11

Interest has been added to the display of the Black & Decker Mfg. Co., Baltimore, Md., through making public, news of a reduction of $11 in the price of the Standard quarter-inch electric drill. This tool which formerly sold for $39 is now offered at $28.

Featured in the Company's spaces Nos. 41 and 42 is a new display known as the Bureau of Electric Tools. This, as has already been pointed out in these columns,



Black & Decker ¼-inch drill

is a combination display and demonstrating bench which is being supplied to stock jobbers. A complete line of portable electric drills, drill stands, portable electric grinders, electric bench and floor grinders make up the exhibit.

Gill Introduces Two New Rings

Two new piston rings known as the Special Oil-Wiper, and Servus step-cut are being introduced by the Gill Manufacturing Co., Chicago, well known as the maker of Gill Interlocking-Joint piston rings. The Special ring is of the oil-wiping type, with a square oil return space around the bottom. The Servus ring is a high-grade step-cut ring, designed to meet the demand for a quality ring of this type. As in the Company's interlocking-joint ring these rings have their tension cast into them, each ring being individually cast out of round, of a special grey iron composition. Manufacture and distribution of these rings is now going forward on a large scale.

Las-Stik Is a Strong Tube Patch

Repairs anything up to a 17-inch blow-out, is the claim made by the Las-Stik Patch



Las-Stik tube patch

Co., Hamilton, Ohio, for Las-Stik tube patches which it is displaying. These patches are made of pure, white, Para gum rubber with a three-way grain and an air-tight backing. Each patch is 3/64 inch in thickness.

WALKER JACKS EXHIBITED

Nos. 116 and 500 Models Are Featured

Several additions to its line as well as some changes in its familiar models are disclosed by the Walker Mfg. Co., Racine, Wis. Special emphasis is being laid upon the No. 500 Walker ball bearing long handle screw jack, and No. 116 Badger long handle jack.

No. 500 model has turning type handle, with extra flip cap, giving two heights. It can be placed quickly under front or rear axle of car, operated up or down and withdrawn, all with the handle.

Leverage of the handle is so great in the Badger No. 116 type that the lift requires little effort. Specifications are as follows: height, 11 inches; raise, 6 inches; capacity, 1 ton; height of foot, 4¾ x 10¾; weight, 15 pounds; length of handle, 36 inches.

Fan Belting Shown in G & K Line

Standard line of G & K automotive equipment makes up the display of the Graton & Knight Mfg. Co., Worcester, Mass. All types of leather fan belting are shown as well as clutch leather, coupling discs, and other articles manufactured from heavy leather. A display cabinet is being used by the Company to present its products effectively.

CURTIS REVEALS 1923 LINE

Unique Exhibit Shows Operation Clearly

New 1923 models are being revealed for the first time by the Curtis Pneumatic Machinery Co., St. Louis, Mo. In addition to these the Company is showing its entire line, including single- and two-stage air compressors, portable, stationary, and complete motor driven.

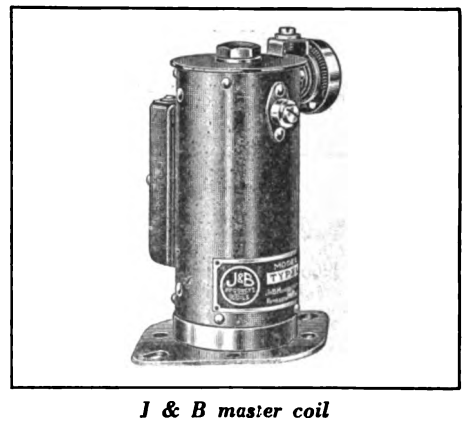
A unique feature of the exhibit is the operation of a glass crankcase machine, electrically lighted on the interior so that one can see under actual operating conditions exactly what happens on the inside of the compressor. This is especially valuable in illustrating exactly how the Curtis controlled splash oiling system functions.

J & B MASTER COIL SHOWN

Forms Latest Addition to J & B Products

Chief interest in the exhibit of the J & B Manufacturing Co., Pittsfield, Mass., centers in the J & B Master Coil, for replacements. This consists of a coil unit, usable on every car, to which is attached as occasion requires, either a six or 12 volt resistance element, a condenser, and a base or adapter for mounting. Six years' development and research work have been given to the development of this interchangeable and universal instrument.

Among other popular products of the J



J & B master coil

& B line are: the J & B timer for Ford cars and trucks and Fordson tractors, J & B bushing remover, J & B rocker arm lifter, J & B Buick valve cage remover, and the J & B Buick wheel puller.

Tingley Shows Many Tire Devices

Various tire accessories make up the exhibit of Chas. O. Tingley & Co., Rahway,

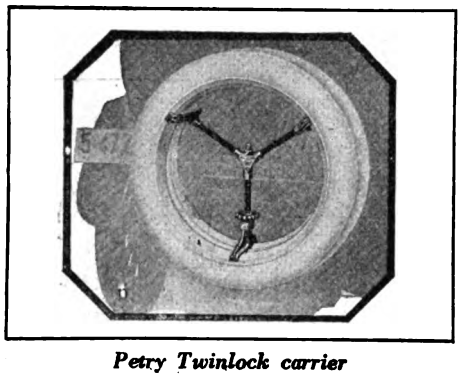
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N. J. These include the C. O. T. all fabric patch, the White Standard inside blow-out patch, the C. O. T. cure tight patching gum outfits, C. O. T. White standard liner, C. O. T. hook-on boot, C. O. T. lace-on boot, and C. O. T. rubber cement.

PETRY OFFERS WIDE LINE

Includes Petry Twinlock Tire Carrier

Prominent in the exhibit of the N. A. Petry Co., Inc., Philadelphia, Pa., is the

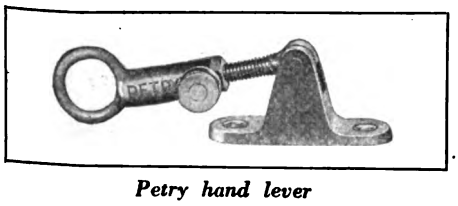


Petry Twinlock carrier

Petry Twinlock tire carrier which was described in detail in these columns several weeks ago. This device makes a double carrier out of a single carrier, locking both tires. A smaller type of the same carrier is offered in the form of the Twinlock, Jr. This is made especially for all models of Fords and is a tire carrier, license tag and rear light holder, and rear bumper combined.

For operating tuning-up valves, heater valves, and cut-outs the Company is offering the Petry hand lever. This can be placed on the floor or on the riser of the driver's seat. It has an adjustable throw from 1⅞ inches to 3½ inches.

Two types of the Petry heater and tuning-up valve are being produced. Type 250-A has variable opening heater valve tongue operated by sprag on the riser of the driver's seat and tuning-up valve tongue to be operated at will from the toe-board by use of the Petry pedal which is supplied. Type 250 has the same heater valve tongue action and sprag, but the tuning-up valve tongue is operated at the valve itself by a snap-over



Petry hand lever

center action lever which locks the valve open or shut.

A feature of the Petry pump, another popular member of the Company's line, is the spreading foot base. This is now being offered with a 17-inch or 20-inch barrel, 1½ inches in diameter.

IMPROVES NEEDLE BURNERS

Clayton & Lambert Shows New Design

Improved double blunt needle torches and fire pots form the chief points of interest in the space occupied by the Clayton & Lambert Mfg. Co., Detroit. All of the tools now being made by the Company feature the new double blunt needle burner.

Both needles have blunt points, thus making it possible to enlarge the burner orifice. The lower needle regulates the supply of gas and the upper needle has a small wire tip that cleans the orifice in the jet block.

A safety stop prevents the upper needle from being unscrewed too far. All double needle burners are supplied with two jet blocks, one for burning gasoline, and the other kerosene.

Burgess-Norton Reveals New Plans

Many new methods it has worked out to promote greater interest in B-N piston pins are revealed by the Burgess-Norton Mfg. Co. New service station signs to be used during the coming year are among the new ideas being shown.

Elite Brings Out Four New "Reliables"

Four new jacks are being shown by the Elite Mfg. Co., Ashland, Ohio. These are additions to the Company's popular line of "Reliable Jacks."

REVEALS A NEW PIEL PRODUCT

G. Piel Co. Introduces Its Ford Outfit

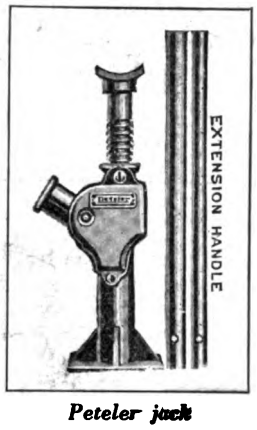
Members of the trade are being introduced to the G-Piel motor testing valve outfit for Fords, which is a recent addition to the line of G-Piel products, manufactured by the G. Piel Co., Inc., and sold by the Edward A. Cassidy Co., Inc., New York city. This consists of the new, improved G-Piel motor testing valve, a pedal, and necessary pulley and connecting cable for immediate installation. It is made of steel throughout, and has a positive locking device.

Other G-Piel products exhibited at Booth 159 are the G-Piel muffler cut-out and G-Piel pedal. The muffler cut-out is made of two parts, the valve tongue and its seat being so constructed that when the cut-out is open, the line to the muffler is completely shut off and the correct angle is obtained for deflecting the exhaust gases freely without a possibility of back pressure. The G-Piel pedal is made entirely of steel and is strong enough to operate any cut-out spring. It is so designed that by releasing one screw it can be changed to lift or pull in any direction desired.

NEW ENGLAND TUBE ON HAND

Exhibits Former Coe-Stapley Products

Those products formerly sponsored by the Coe-Stapley Mfg. Co., West Haven, Conn., are now being brought out by its successor, the New England Tube & Stamping Co. Included among the devices offered for the coming year are: the Ace windshield cleaner, Peteler jack, Coe-Stapley grease gun, Whirlwind pump, Little Giant pump and C-S special pump.



Peteler jack

The Ace windshield cleaner as exhibited is made of polished aluminum, with rustless steel spring. It fits all two-piece windshields.

Peteler jacks are equipped with 36-inch extension steel handles. Swivel lifting post permits jack to be placed under the load from any horizontal angle.

Paul Rubber Now Supplying Tireometer

Paul Rubber Co., Salisbury, N. C., is now in a position to supply the trade with Tireometer valves, the product of the corporation of that name at Charlestown, W. Va. The device, registering the exact pressure during and after inflation, is to be marketed by the Paul company.

Dutch Brand Products Win New Friends

Complete line-up of its Dutch Brand products is shown by Van Cleef Bros., Chi-



Dutch Brand Sure-Seal

cago, in space No. 43-44. Included among these are the chemical specialties for which the Company is noted, such as automobile polish, ball bearing compound, carbon remover, enamels, radiator seal compound, tire

CHRISTMAS TIME IS BUYING TIME—WHAT'S ON YOUR SHELVES?

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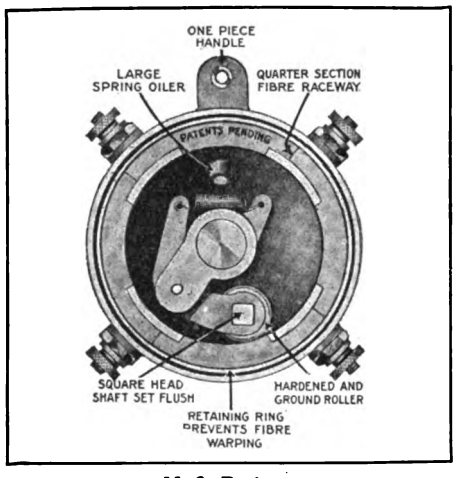
JOIN IN THE CHORUS—ASK 'EM TO BUY FOR CHRISTMAS

fluid, valve grinding compound, top coating and gasket cement.

M & R TIMER IN NEW BOX

McCulloch Shows Popular Device

Well known to the trade, the M & R timer for Ford cars, trucks and tractors is being shown by the McCulloch Mfg. Co., Boston, Mass. Raceway of this device is made in four sections from naturally seasoned rock grain fibre. Retaining ring binds the four-piece raceway and, in combination



M & R timer

with fibre washer, fitted around contact post where it goes through shell, keeps the raceway absolutely rigid. Oiler is spring top type, and self-closing. The timer is being put out in a new type box.

BRIDGEPORT BRASS PRESENT

Its Exhibition Is of Educational Value

Complete development of its No. 16 automobile pump is shown by the Bridgeport Brass Co., Bridgeport, Conn., in spaces 60-61. This is one of the four exhibits displayed by the Company in mahogany glass frame cases. Case No. 1 shows the development of sheet brass and brass rod from copper and zinc; and the development of sheet bronze from copper and tin. Another case shows the No. 16, Ace, and Crown pumps all fitted with the new heavy certified malleable iron foot piece. The fourth case is devoted to motorcycle pumps, oil and grease guns and other of the Company's products.

KEYSTONE TOOL ADDS TO LINE

Offers Three Products of Great Interest

Attention is being directed by the Keystone Reamer & Tool Co., Millersburg, Pa., upon its Keystone transmission bushing reaming outfit. This insures correct alignment of the Ford transmission bushings and consists of a fixture or jig, and a set of specially designed expansion and adjustable reamers. The jig is a grey iron casting upon which is mounted the necessary equipment.

Another addition to the list of Keystone products is found in the six adjustable reamers with adjustable pilots. These are designed for accurate reaming of two holes in exact alignment in the replacement of piston pins in automotive engines. Pilots are adjusted on the same taper as the blades, thereby, insuring uniformity. These reamers are built in 12 sizes ⅝-inch to 1½ inches.

The Keystone adjustable main bearing reamer for Fords has also just been placed on the market. This is an inserted blade reamer adjusted by two units. It will adjust ⅛ of an inch. The body is of tool steel and the blades of a semi-high-speed steel.

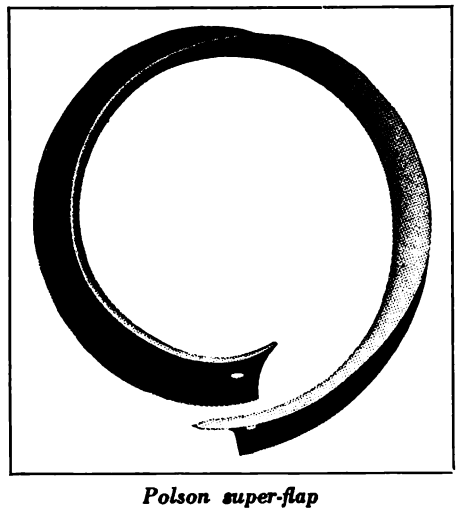
POLSON SHOWS ITS LATEST

Adds Blow-Out Patch, Flap, and Belt

Most recent additions to the activities of the Polson Rubber Co., Cleveland, Ohio, are revealed in the Polson Good-Luck blow-out patch, Polson Super "V" belt, and Polson Super tire flap. These, together with the Company's regular line are being shown in Space No. 7.

The Polson Good-Luck blow-out patch has rubber ends and is individually molded to correct form. It is made wide enough to fit all tires.

Super "V" belt is individually molded and correctly shaped. The Polson Super



Polson super-flap

flap is constructed of strong, high-grade frictionized fabric, vulcanized in molds to correct form.

EXHIBITS ITS "RELIABLE" LINE

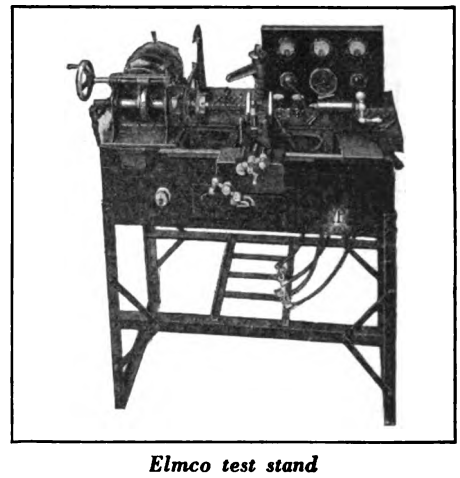
Conant & Donelson Displays Its Tools

Its familiar "Reliable" line of tools is exhibited by the Conant & Donelson Co., Conway, Mass. These include taps, dies, reamers, screw plates and similar tools that have established themselves in public favor. More recent developments in the way of new products will be revealed later in the year.

ELMCO EQUIPMENT POPULAR

Test Stands Made Feature of Display

Refinements to its line of Elmco electric automotive equipment, rather than the introduction of any entirely new products are noted in the exhibit of the Electric Machine Corp., Indianapolis, Ind. Conspicuous is the Elmco Universal



Elmco test stand

test stand, and the Elmco Junior test stand.

The first mentioned combines in one machine all the elements required to test the numerous and various types and sizes of generators, starting motors, magnetos, coils and cut-outs, for either electrical or mechanical faults. The Junior test stand acts as a means of testing Ford generators, starting motors, and armatures when used in connection with 110-volt alternating current and also 6-volt cut-outs.

Other items included in the Company's exhibit are, the Elmco armature tester, Elmco ignition tester, Elmco coil tester, and Elmco Liberty test stand. The last mentioned is designed to give a careful test to all units in the Ford electrical system.

NEW LUBRICATOR MAKES BOW

Rose Introduces High Pressure System

Rose pumps, Rose grease guns and a new item, the Rose high pressure lubricating system for all cars, particularly Fords, form the exhibit of the Frank Rose Mfg. Co., Hastings, Neb. The Rose lubricator is made from high-grade seamless steel tubing. Plunger rod is made from solid screw stock containing flat threads that will not strip, it is said. Plunger is constructed of solid steel, covered by double cup washers. The device is equipped with nine inches of flexible double basket weave hose. It is 1½ inches in diameter and 22 inches long, including hose and handle.

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WITH THE WHOLESALERS AND RETAILERS

IN THE TRADE

EASTERN STATES

NEW YORK—BROOKLYN.—Thirty-three automobiles were lost when fire totally destroyed the garage of Angelo San Philipo at 521 Carroll street. Damage is estimated at $50,000.—S. Tuersky has leased the garage of the W. & L. Auto Garage Co., Inc., for a term of fifteen years. The building is situated on a plot 200 x 100, at 232-252 48th street.

NEW YORK.—M. Steiker, of Paterson, N. J., has purchased the one-story garage, 135 x 120, at Bryant and Whitlock avenues, from I. Langner Holding Company.—James J. Crowe has sold the lease of the Aberdeen Garage, at the northwest corner of 177th street and Jerome avenue, to Harry Furman.

MIDDLE WEST

INDIANA—SULLIVAN.—E. E. Russell Auto Co. has purchased a two-acre plot located at the north end of the Dixie Bee concrete highway. A service station will be erected.

ILLINOIS—CARLINVILLE. — Lard, Trees & Shepherd has leased and taken possession of the Carlinville Motor Sales Co. on North Broad street. The firm has also purchased the stock and business of J. C. Kempf, local Ford dealr.

LINCOLN.—Langellier Motor Co. has started moving its office equipment from the Odd Fellows building on McLean street, and the service department from the Salmons building on Broadway, to its new home one block north of the Chicago & Alton station on Chicago street. The new location is the Ryan & Purinton garage building which has been occupied by Peifer Brothers. Numerous improvements have been made in the Chicago street garage. They include a steam heating plant, rearrangement of the front of the building, and decoration of the interior south side. The service department for Ford cars only, is to occupy the north half of the garage, while the accounting, sales and parts departments are to be located in the south side of the building.

MICHIGAN — BANGOR. — Wm. Henry and W. S. Smith have purchased the G. G. Squires Garage.

STURGIS.—Baird & Collins have secured the distributing agency for Dort motor cars.

WISCONSIN—CHIPPEWA FALLS. —A new garage building will soon be constructed for the Chippewa Valley Auto Co.

CONOVER.—George Dobbs is having a garage erected.

GAY MILLS.—Young-Mook Garage has been taken over by O. A. Sherwood and Nelson & Young. As a result, the name of the concern has been changed to Buick Garage.

GREEN BAY.—A garage will be erected for the Brown County Motors, Inc.

KAUKAUNA.—Otto Hass has sold his battery business on Wisconsin avenue to Roman Foegen.

MARINETTE.—Harry A. White is having a garage erected on Hall avenue.

MENOMONIE.—A garage, 56 x 176, is being constructed for Edgar V. Johnson.

STEVENS POINT.—An addition to the garage of the F. & G. Auto Parts Co., Clark street and Strongs avenue, has been started. The new part, to be constructed of brick and concrete blocks, will be 35 x 102 in size, with storage capacity for 40 cars. It will adjoin the present structure on the west with frontage on Clark street. With the new

(Continued on page 1270, first column)

CHANGES IN RETAIL PERSONNEL

O. C. Stephenson has been named manager of the used car department of the Tri-State Motor Sales Co., Maxwell-Chalmers dealer in Memphis, Tenn.

S. Whittle, formerly connected with the Barker Motor Co. and more recently with Armour & Co., has been appointed manager of the Georgetown branch house recently opened by the Central Texas Motor Co., Durant and Star distributer for Austin, Tex.

W. J. Boshell has been made manager of the second retail sales store to handle automobile accessories being opened by the Western Auto Supply Co. at Kansas City, Mo.

J. W. Pierce has been named manager of the Taylor branch of the Austin, Tex., Durant and Star agency. He will locate his headquarters at the Bell Motor Co. in Taylor.

J. W. Wright has assumed the management of the H. & D. Garage located on North Main, Hutchinson, Kan.

James S. Shelden, sales manager of the San Antonio Cadillac Co., San Antonio, Tex., for the past year and a half, has been promoted to the position of general manager of the Company, succeeding R. H. Croxton.

N. Reynolds, part owner of the West Side Garage, located at Madison, Wis., was killed in an automobile accident.

ACTIVITIES OF THE WHOLESALERS

Imes Brothers, distributer of Dodge Brothers cars for Topeka, Wamego and Manhattan, have leased a building at Junction City, Kan., preparatory to opening another branch at that place. Lloyd White will assume temporary management of the new station.

Waterloo Co., located at Waterloo, Ia., has completed arrangements to establish a distributing center in Des Moines for northeastern Iowa deliveries of Overland and Willys-Knight cars. The president of the Iowa company, R. J. Clemons, recently inspected the territory and registered his approval of the establishment of the new agency.

Louis C. Gill has been appointed resident manager in Minneapolis for the Joy Bros. Motor Car Co. of St. Paul, Minn., Packard distributer. For some time he has been handling the wholesale business of the concern in Minnesota and Wisconsin. He also had been special tire representative in Chicago for the B. F. Goodrich Rubber Co.

Fogarty and Woodburn, of Newburgh, N. Y., has opened salesrooms at 103 Broadway and will distribute the Peerless eight in that territory.

Z. C. Cummings has been made Franklin distributer in Tarboro, N. C., and vicinity.

Samuel H. Grossman, of Harrison, N. J., former Lincoln distributer for Bergen county and surrounding New Jersey territory, has secured the agency for the sale of Peerless cars.

Charles F. Henning has secured the distributing agency for Dort cars in Mount Vernon, N. Y., and surrounding parts of the state.

Samuel Murray, connected with the Atlanta branch of the Ford Motor Co. for many years, has been named assistant manager. He formerly held the position of purchasing agent and was head of the sales department.

E. O. Merchant Co. has been appointed northwestern distributer for Transport trucks. The concern has established its quarters in Minneapolis, Minn.

Harry A. Goff, of Central Valley and Highland Falls, N. Y., has contracted for the distribution of the Peerless in Orange county and surrounding territory.

T. Rowe, district manager for the Everyday Piston Ring Co., Inc., located at East Rochester, N. Y., has taken on territory in Minnesota and North and South Dakota. His headquarters will be established in Minneapolis.

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IN THE TRADE

(*Continued from page 1269, second column*)

addition, the company will be able to store 75 to 80 cars. The repair department will remain in the rear and the entrance will be through the new addition. A furnace has been installed. A gas pump will soon be added in front of the establishment at 306-10 Clark street.

IOWA—DUBUQUE.—A garage, to cost $60,000, will be erected for Besky's Motor Co.

MISSOURI—AMORET.—Fire totally destroyed the Amoret Garage. Loss is estimated at $10,000.

ALBANY.—Leland Blodgett has purchased an interest in the Hardin-Branham Garage and in the Buick and Chevrolet agency. He will be associated with J. Branham and C. M. Phelps.

BETHANY.—Hammack Motor Company's property and stock at Ridgeway has been purchased by the Crossan Motor Co., with which A. C. Flint and Lawrence Crossan are actively connected. The firm will also take over and continue to conduct the authorized Ford agency and garage.—J. Adams and Rex Carter have opened a tire and accessory and oil business in the Noll building south of Hotel Bethany. In addition to their new business they also expect to deal in used cars.

CARTHAGE.—Passley & Solomon Garage at the northwest corner of Fourth and Lyon streets, has been purchased by R. L. Maynard and R. L. Cathers. The new firm will be known as Cathers & Maynard.

CHAFFEE.—Work is progressing on the garage being erected for the Chaffee Motor Co. The structure, 60 x 130, will be constructed of brick and hollow tile.

CLINTON.—Lingle Auto Co. has been appointed Chevrolet dealer.

DE SOTO.—Service Garage, of which J. B. Huskey is proprietor, has been opened at the corner of Main and Boyd streets.

EXCELSIOR SPRINGS.—A garage will be erected on the property located on St. Louis avenue recently purchased from the Anhousen-Busch Brewing Co. by E. C. Hedges.

HOLT.—A concrete floor is being added to the garage building of Isley Brothers.

KANSAS CITY.—A steam boiler in the Southside Tire and Repair Shop, at 206 Westport avenue, exploded, causing a damage estimated at $1,500.

KING CITY.—Byron Smith has purchased the stock and shop fixtures of the Amble Inn Garage recently sold under foreclosure.—A general automobile repair shop has been started by C. T. Bagby in the building recently vacated by F. C. Lawson.

LANCASTER.—Lancaster Ford agency has been purchased by Grover Wilson and Harry D. Hall.

LONE JACK.—A garage building for E. Thomas has recently been completed.

MEMPHIS.—W. A. Fryrear has secured the Motor Inn Garage situated on the north side of the square.

PALMYRA.—G. F. Losson has opened a garage in the Best warehouse, east of the Methodist church.

PORTAGEVILLE.—J. H. King has been appointed Dort motor car dealer.

SHELBINE.—T. E. Hawkins is to construct a new building, next to the Big-Four Garage, to be occupied by George Mason's Auto Electric Shop.

ST. LOUIS.—Stanley Epstein has sold the business and equipment of the garage at 4390 Olive street, operated by the Newstead-Olive Garage, to J. M. Lederer and Co. who has leased the building and will use it as a showroom and garage.

SARCOXIE.—Hickman, Rawlings, McFall Co. has purchased the Gilbert Wild building on the east side of the square, now occupied by the L. O. DePriest of the Sarcoxie Garage. The former concern recently bought the Ford agency from Carpenter & Keith, the purchase including the building on south Sixth street, known as the Frank Wild building. The Company found that the building did not afford the necessary space for the successful operation of its business, so negotiations were started with Wild for the Sarcoxie garage building.

UNIONVILLE.—Frazier Motor Co. has moved its fixtures, Ford cars and accessories to new quarters in the Fowler building on East Main street.

KANSAS—ANTHONY.—E. Loughead, owner of the Hudson-Essex garage, has moved from the building at the corner of Steadman and Jennings into new quarters on West Main. He will occupy these in conjunction with the Fox Auto Top Co. Homer Boswell will operate a garage and repair shop at the location vacated by Loughead.

BAXTER SPRINGS.—Nine cars, a truck and two motorcycles were destroyed when the Baxter Garage at 1223 East Twelfth street burned. J. McBride is the proprietor of the garage. The loss is estimated at approximately $15,000.

BELOIT.—An automobile paint shop has been opened at the corner of Second and Hersey avenue by W. R. Dowers.

ROSALIA.—William Boehme, connected with the McClure Motor Co. as salesman for the past two years, will open a new motor concern to be known as Boehme Motor Co. within the next few days at the Clayton building. The new store will be a branch of the Kansas City Ford Motor Co. and will distribute Ford and Lincoln cars as well as Fordson tractors. A repair shop, parts department and salesroom will be maintained.

ELLIS.—Battery department of the G. & F. Garage has been taken over by C. G. Weichert.

ELMONT.—Chester Jackson is having a garage building constructed on the A. Jackson property directly across from Gilmore's store.—Equipment for a service station is being installed by W. S. Abbott in the building recently vacated by the City Garage.

ESBON.—Ralph Wallace has traded his half interest in the Service Garage building to Robert Finch for Colorado land. Wallace still retains his interest in the business and tools.

FREDONIA.—Charles Higginbottom has taken over the local agency for Mac-Dry batteries and will locate with his brother, L. H. Higginbottom, who has the K-W battery agency.

GREAT BEND.—A salesroom for Durant and Star cars has been opened at 2011-2013 Twelfth street, west of the Santa Fe Trail Garage, by the Reinecke Motor Co.

HALSTEAD.—L. M. Winter, of Valley Center, will open a Ford agency in the new building on East Second street, owned by O. Hinshaw.

LANGDON.—Robert Sutherland has leased and taken charge of the garage of C. A. Wendling.

MELVERN.—W. McMullen has purchased the King Garage and has taken charge.

PAOLA.—Pauser Motor Co., of which W. M. Pauser is proprietor, has taken over the Ford agency for the greater part of Miami county. Headquarters of the concern have been located in the Charles Griffith building, from which it will distribute Ford cars and Fordson tractors.

SALINA.—Another branch of the Mac-Dry Battery Company of Kansas City has been established here. Part of the storage room at the Andrus-Hudgens Motor Co. has been leased and a shop equipped. J. L. Shoemaker is in charge of the business and Riley Garrett is the battery engineer at the shop.

TOPEKA.—Topeka Chevrolet Sales Co. has taken over the Chevrolet agency formerly handled by the Brunkow-Fields Motor Co. The new concern has located at 910 West Sixth avenue, with Carl W. Linge in charge.

WASHINGTON.—O. V. Boston has moved his Exide Battery Station and Repair Shop to the building recently vacated by Harry Frager.

WHITE CLOUD.—White Cloud Garage, formerly owned by W. H. Van Doran, has been leased by Fancher and Simmons. C. E. Hendren has been placed in charge of the repair department where he will do general repair work on any make of automobile.

WICHITA.—E. A. Finch, of Kansas City, will open a tire shop at 1510 East Douglas.

NEBRASKA—CLARKSON.—Anton Prazsk will open a repair shop in the Modrow Garage.

HARTINGTON.—Frank Foecke has purchased the Harry Lange building into which he will move the Electric Service Station.

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THE car owner figures that the dealer with a stock of many different brands hasn't much conviction about tires.

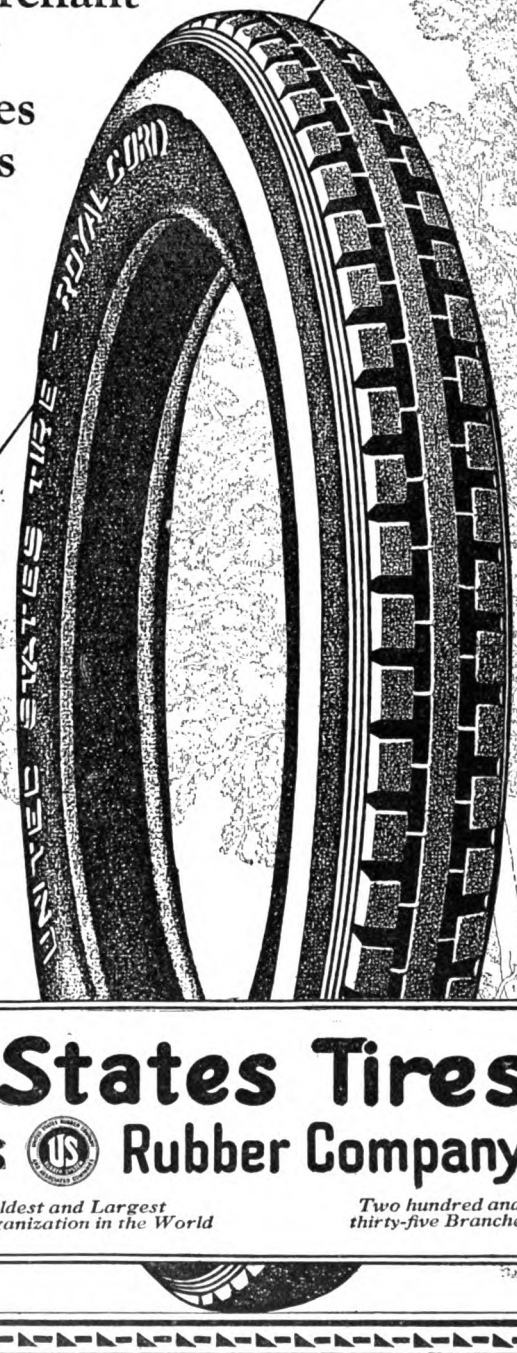
And having pretty definite convictions himself, prefers doing business with a merchant who has.

One who concentrates on a single line that gives him a tire for every motoring need under a quality banner.

And a definite loyal following that has never stopped growing.

United States Tires are good tires.

The U. S. Sales Relationship is a good relationship.



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United States Tires

United States Rubber Company

Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

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HAVELOCK.—Aubrey and Frank Pickard have leased the building at the corner of O and 13th street and have opened a garage.

LOUISVILLE.—Work will soon be started on the garage and repair shop being erected for Charles Deitrich on upper Main street.

OMAHA.—Fred S. Peterson has established a garage at 24th and Camden avenue.

PAPILLION.—A tire and accessory store will be opened by F. E. Miller, manager of the branch of the Steven National Chain Stores.

TECUMSEH.—An automobile paint shop will be opened by D. Gregory north of the Hotel Hopkins.

NORTHWEST

MINNESOTA—ST. PAUL.—Construction of a garage and parking station will soon be started by the City Motor Supply Co. at Eighth and Sibley streets. The building is to cost $100,000 and will store 300 motor cars. The new structure will be 150 feet square, of brick and concrete fireproof construction, with two stories and basement. Wash racks, oil stations and lockers will provide modern equipment and cars will be moved from the main floor on an incline, no elevators being used.

SOUTHWEST

ARKANSAS—CONWAY.—Theodore Smith has purchased lots on which he expects to erect a large building to house his Ford agency and garage business.

OKLAHOMA—BARTLESVILLE.—John S. Freeman and Albert Perkins have secured a distributing franchise for Paige and Jewett cars.

HOBART.—Removal from the east side of the public square to 307 South Washington street has been completed by the Hobart Battery Co.

KINGFISHER.—Fire in the Dunlap & Morton Garage caused considerable damage to cars and trucks stored there, also burning the greater part of the interior of the garage.

LAWTON.—Lawton Oldsmobile Motor Co., operated by J. R. Stevens, has taken over the Oldsmobile agency and parts distributing station. Salesrooms and service station will be located with the Duff-Shaw Garage at 509-511 Fifth street.—Malone Motor Co. has taken over the Witten Brothers Garage. Ford cars and Fordson tractors will be distributed.

OKLAHOMA.—Griffith Motor Co. has been formed to handle the Wills Sainte Claire car in Tulsa and surrounding territory.—Kelly-Springfield tires will be distributed by Phillips & Wallace. The firm will operate from headquarters located at 420 North Hudson avenue.

OKMULGEE.—Oklahoma Tire & Supply Co. has made arrangements to enlarge its present space by taking over the 40 feet now occupied by McKan's bakery. The partition will be removed to provide the additional space. The interior will be painted and decorated and modern fixtures installed.

PICHER.—A battery store, to be known as the B. C. Battery Station, has been opened by M. Coonred at 209 East Second street.

TULSA.—Present quarters of the Standard Parts Co. at 803 South Main will be enlarged and a line of bearings added.—James Neilson, manager of the Tulsa Peerless Co., has secured the building at 1225 South Main from which he will distribute Peerless cars.—Removal into its new home on South Main street will soon be completed by the Ryan Motor Co.

Stanley Thomas, with the Thomas Motor Co., Studebaker agency, has secured the building now occupied by the Evans Howard Co., at Fourth and Elgin.—A garage to cost $50,000 is being erected on the South East corner of Tenth and Boston for W. C. Elliott. Norval & Dial, Dodge dealer, has secured a long-time lease of the entire building which it will use as a sales and service station.—An automobile accessory station has been opened at 903 South Main street by C. E. Walters and D. Delemater. Firestone tires, Dodge platform spring and a complete line of automobile accessories will be handled.

New quarters at 213 East Second street have been opened by the Perram Auto Supply Co., formerly located at Fifth and Boulder.—Ray L. Strum has secured the Maxwell-Chalmers agency. He will operate from the old Lincoln stand at 607 South Boulder.—Salesrooms will be maintained at 215 South Detroit for Gramme Bernstein trucks and the Stephens Salient Six by C. R. Jones and H. L. Levi. Morris Hersstein and H. P. Lockare have been added to their sales force.—Tulsa Motor Co., Pierce-Arrow dealer, will shortly move to new quarters now under construction at Eleventh and South Main streets.

WELNETKA.—L. P. Burton has purchased the interest of his partner, W. W. Johnson, and has changed the name of the company to Burton's Garage.

TEXAS—AUSTIN.—Hughes Bros. Tire Service has moved from 1009 Congress avenue to larger quarters at 110 East Seventh.

BEAUMONT.—Ohmstede Machine and Welding Works, located at 215 Wall street, has installed a crankshaft grinder, grinding not only crankshafts but pistons, piston pins, valves and the like.—Lee Carroll and J. P. Evans have been appointed Star and Durant dealers for territory including Beaumont and vicinity.

BRENHAM.—H. G. Simmons has secured the Dodge agency for Washington county. He will locate at his former place of business, the old Texas Garage, where damage from the recent fire is rapidly being repaired.

BRECKENRIDGE.—A $22,000 garage and filling station is being constructed for the Bennett Motor Co.

CEDAR BAYOU.—Tompkins Garage building, 34 x 70, is being made 15 feet longer. A corrugated iron roof will be added.

CHILDRESS.—Sam Avary Auto Supply Co., on the west side of lower Main street, has been purchased by J. F. Sparkman.

CLEBURNE.—Ray Chappelle and A. B. Deats have purchased the Victory Service Station from W. Roper.

PACIFIC COAST

WASHINGTON—ABERDEEN.—Frank Smith and F. Caldwell have opened the C. & C. Ignition Repair Co.

CENTRALIA.—C. M. Carter, proprietor of the Carter Garage, has secured the Maxwell agency for Lewis county.

CHEWALAH.—Frank Ferry has sold the Chewalah Battery Station to the Chewalah Auto Co.

COLTON.—Fred. Klein has purchased the Klein Garage from his father, J. F. Klein.

LYNDEN.—Distribution of the Liberty car for Whatcom county will be handled by A. A. Baumann.—A concrete garage is being erected for the Lynden Motor Co.

CALIFORNIA—BERKELEY.—F. G. Young has assumed sole control of Higgins & Young, located at 2121 Haste street, Durant agency and repair shop.—Gray & Pearce Service Co. has been opened at 2911 Shattuck avenue, by Howard E. Gray, former repair shop superintendent for the Mack International Truck Co., San Francisco, and S. E. Pearce. The new concern will specialize on truck repairs and maintenance.—New quarters have been opened at San Pablo avenue and Cowper street by the Berthelsen Garage & Repair Co.

BYRON.—R. W. Netherton has sold the Highway Garage to L. M. Reynolds.

CENTERVILLE.—A fireproof garage is being erected for the Rose Garage Co., of Niles, at Broadway and Walton boulevard. A sales agency, repair shop and service station will be housed in the new building.

CERES.—Distributing agency for Ford and Lincoln cars has been secured by Clifford Strait. He has located in the Doolittle building.

DEL REY.—A. Mills has purchased a third interest in Bunn & Bentley, Ford and Fordson dealer.

KING CITY.—A garage and machine shop is being erected at Pearl and First streets for Harry Condon. An accessory sales department will be installed.

OAKLAND.—Downtown Battery Co., located at 320 Fourteenth street has been appointed Zenith carbureter service station.

VAN NUYS.—A brick store building will be erected at Sherman Way and Leesdale street for the Reliance Auto & Supply Co.

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"Our First Carload of Earls Was Sold in Three Days"

By C. A. Earl

Success in launching any motor car in a new community at this time of the year is convincing evidence that the car must be right in quality, size and price and that a market can be developed for it wherever it is not already represented.

It was particularly gratifying to me, therefore, to receive the following brief letter from Mr. F. W. Scharfenstein, manager of Scharfenstein Motors Company, Inc., our new Earl distributors in New Orleans.

"I want to take this opportunity," Mr. Scharfenstein wrote, "of expressing our pleasure at the success we have had during our first week in introducing the Earl line in New Orleans.

"Our first carload was received and sold within three days, and we had orders booked ahead for an additional carload.

"We have never experienced anything like this success with a product as new as the Earl is in our territory. We are looking forward to some very good business with the Earl line."

Every day brings new accessions to the Earl organization of distributors and dealers because they recognize it as the right car, at the right price, with the right dealer discount. If there is no Earl dealer in your city, let me send you the facts about the quality Earl line and our attractive Earl contract.

C. A. Earl
President and General Manager

EARL MOTORS, INC.

JACKSON MICHIGAN

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INCORPORATIONS

NEW YORK.—Colonial Auto Painting & Trimming Co., Manhattan, N. Y. Capital $5,000. Incorporators: M. Schwartz, A. B. B. Bieler, J. Schwartz.—Fort Washington Automobile Club, Manhattan, N. Y. Capital $50,000. Incorporators: J. Marsa, A. Rich, L. Marsa.—P. & F. Auto Supply Co., Manhattan, N. Y., has changed its name to Pedersen & Flanagan.

Rainbow Taxi Co., Manhattan, N. Y. Capital $5,000. Incorporators: P. Ashil, I. B. Ashil.—S. H. and P. Garage, Manhattan, N. Y. Capital $15,000. Incorporators: E. Lemberger, L. Nathan.—Stutz Motor Car Co. of America, Manhattan, N. Y., has issued $1,500,000 7½ per cent debenture bonds.

United Speedometer Repair Company, Manhattan, N. Y. Capital $10,000. Incorporators: L. Friedlander, D. Nudelman, E. G. Friedlander.

Standard Oil Co., Manhattan, N. Y., has increased its capital from $75,000,000 to $225,000,000.

Fisto Spring Cover Corp., Bronx, N. Y. To manufacture cases for automobile springs, motor car specialties, etc. Capital $100,000. Incorporator: S. B. Howard.

Alwin Garage, Brooklyn, N. Y. Capital $15,000. Incorporators: A. Wolfson, I. Cohen, S. Wolfson.—Public Manufacturing Co., Brooklyn, N. Y. To make fenders and automobiles. Capital $500,000. Incorporators: S. C. Whitbeck, H. P. Griffin, W. S. Teinken.

Throop Auto Supply Co., Brooklyn, N. Y. Capital $10,000. Incorporators: M. Wolkowitz, I. H. Wolkowitz, C. Wolkowitz.

Walsh & Hall, Albany, N. Y. To sell automobiles. Capital $5,000. Incorporators: H. H. Walsh, E. L. Hall, J. L. Walsh.

Instant Tire Service Co., Binghamton, N. Y. Capital $5,000. Incorporators: R. M. Fleming, D. E. Carson, P. E. Waxler.

Moon Distributing Company, New Rochelle, N. Y. Capital $50,000. Incorporators: W. M. Belford, O. H. Cacciola, A. J. Belford.

C. and P. Tire Company, Poughkeepsie, N. Y. Capital $5,000. Incorporators: P. S. Potter, F. S. Quinterro.

Boise Chevrolet Sales Company, Seneca Falls, N. Y. To deal in automobiles and furniture. Capital $25,000. Incorporators: B. D. Boyce, E. S. Cox, C. L. Garnett.

Quinn Motors, Troy, N. Y. Capital $15,000. Incorporators: E. L. Quinn, T. R. Gannon, E. G. Quinn.

NEW JERSEY.—Commuters Transfer Corp., Jersey City, N. J. Capital $100,000.

PENNSYLVANIA. — Motor Parts Supply Company, Philadelphia, Pa. Capital $50,000.

DELAWARE. — Denmar Specialty Company, Dover, Del. To manufacture and sell radiator caps and other automobile parts. Capital $150,000.—Nolenz, Inc., Dover, Del. To deal in gasoline, oil and electric fixtures. Capital $500,000.—Wendland Wheel Corp. for Vehicles, Dover, Del. Capital $500,000. Incorporators: E. E. McCloud, R. Elliott, G. Schott.

American Turn-Auto Corp., Wilmington, Del. To manufacture automotive products, etc. Capital $27,500,000.—Baker Steam Products, Inc., Wilmington, Del. To manufacture and deal in steam motor cars, trucks, tractors, unit cars, etc. Capital $1,000,000.—Marvel Sales Corp., Wilmington, Del. To conduct garages. Capital $50,000. Incorporators: C. D. Heinz, H. G. Reese, O. E. Sessler.

Motor Fuel Corp., Wilmington, Delaware. To conduct garages, service stations, etc. Capital $5,000,000.—National Auto Tourist Hotels Corp., Wilmington, Del. Capital $600,000.—New Ton Motor Truck Corp., Wilmington, Del. To manufacture automobiles. Capital $1,000,000.

Universal Gear Shift Corp., Wilmington, Del. Capital $3,000,000.

MASSACHUSETTS.—R. K. Manufacturing Company, Boston, Mass. To deal in automobile accessories. Capital $150,000.

CONNECTICUT.—The Nash LaFayette Co., Hartford, Conn. To deal in automobiles. Capital $100,000.

KENTUCKY.—Perry Motor Co., Hazard, Ky. Capital $10,000. Incorporators: W. G. Jenkins, J. E. Jones, J. W. Craft.

OHIO.—The Cleveland Motor Club Co., Cleveland, O. Capital $500. Incorporators: C. G. Shaughnessy, H. A. Shibley.

Auto Road Service Co., Hamilton, O. Capital $25,000. Incorporators: George Critchfield, James Critchfield.

INDIANA. — National Motor Supply Corp., Muncie, Ind. To manufacture automobiles and radio fixtures. Incorporators: H. O. Bell, Robert W. Magga, George C. Stetter, Cyrus J. Stafford, P. A. Wachtell, W. S. Hallowell, L. M. Shoemaker.

ILLINOIS. — Chicago Battery Co., Chicago, Ill. To manufacture and deal in electric batteries and parts, automobiles, etc. Capital $1,500. Incorporators: Charles H. Holmes, Henry Dusing, Ralph G. Carpenter.—Germandt Motor Corp., Chicago, Ill., has increased its capital from $100,000 to $300,000.—Independence Auto Sales Company, Chicago, Ill., has increased its capital from $15,000 to $30,000.

Charles Ross & Company, Chicago, Ill. To manufacture and deal in motor-driven vehicles and accessories. Capital $20,000. Incorporators: H. J. Carle, G. H. Wagner, Charles Ross.

Standard Tire Service Co., Chicago, Ill. To deal in tires, supplies, etc. Capital $10,000. Incorporators: Elizabeth Tharsen, C. W. Boxwell, S. A. Tharsen.—Weis & Sulzer, Chicago, Ill. To conduct a garage business. Capital $20,000. Incorporators: B. and F. Weis, L. and J. Sulzer.—Eagle Paint & Trim Co., Chicago, Ill. Capital $6,000. Incorporators: Charles Vance, L. Vance, William E. Mooney.

Bender's U-Drive-It System, Inc., Decatur, Ill. To deal in, rent and store motor vehicles. Capital $10,000. Incorporators: D. C. Bender, A. F. Delahunty, R. L. Crawford.

Elgin Used Car Exchange, Inc., Elgin, Ill. To deal in and exchange cars, accessories, etc. Capital $30,000. Incorporators: Orlo E. Salisbury, C. P. Wing, Harry M. Hintz.

Pontiac Buick Co., Pontiac, Ill. To deal in trucks, cars, accessories, etc. Capital $10,000. Incorporators: H. E. Torrence, Carl B. Nelson, C. L. Market.

MICHIGAN.—Aldrich Auto Co., Inc., Battle Creek, Mich. Capital $40,000. Incorporators: Charles Green, Thomas Zelinsky, Claire L. Aldrich.

WISCONSIN.—West End Auto Repair Co., Madison, Wis. Capital $6,000. Incorporators: M. H. Delaney, E. P. Crary, Mariece Crary.

Ogren Motor Co., Milwaukee, Wis., has increased its capital from $500,000 to $1,000,000.

MISSOURI.—K. C. Piston Ring Co., Kansas City, Mo. Capital 2,200 shares no par value.

Carr Street Scale & Filling Station, St. Louis, Mo. Capital $5,000.

NEBRASKA.—The Malmo Auto Co., Malmo, Saunder Co., Neb. Capital $10,000. Incorporators: G. D. Walker, Leonard Urban, G. G. Hohl.

SOUTH DAKOTA.—Tackabury-Ross Company, Lead, S. D. To handle automobiles. Capital $25,000. Incorporators: K. E. Ross, R. F. Tackaberry, Marie M. Ross.

OKLAHOMA.—Auto Tire Protecting Company, Shawnee, Oklahoma. Capital $25,000. Incorporators: E. W. Austin, E. Lee Austin, W. L. Chapman.

The W. S. Rush Motor Co., Billings, Okla. Capital $50,000. Incorporators: W. S. Rush, Edward Spiers, B. J. Bodowitz.

The Midco Tire Co., Tulsa, Okla. Capital $25,000. Incorporators: E. W. LaGrant, C. N. Rawson, C. Kelly.

TEXAS.—The Studebaker Corporation of America, Dallas, Texas. To conduct an automobile business in Texas. Capital $100,000.

The Luthy Battery Manufacturing Company, San Antonio, Texas. Capital $6,000. Incorporators: J. O. Luthy, G. A. Duerler, Jr., W. Kringel.

CALIFORNIA.—B. Graves Autobody Co., San Francisco, Cal. To manufacture and deal in automobile bodies. Capital $25,000. Incorporators: B. Graves, Peter Eberle, S. Bacigalupi, Alexander Scholtz.

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The Coachbilt

ANDERSON

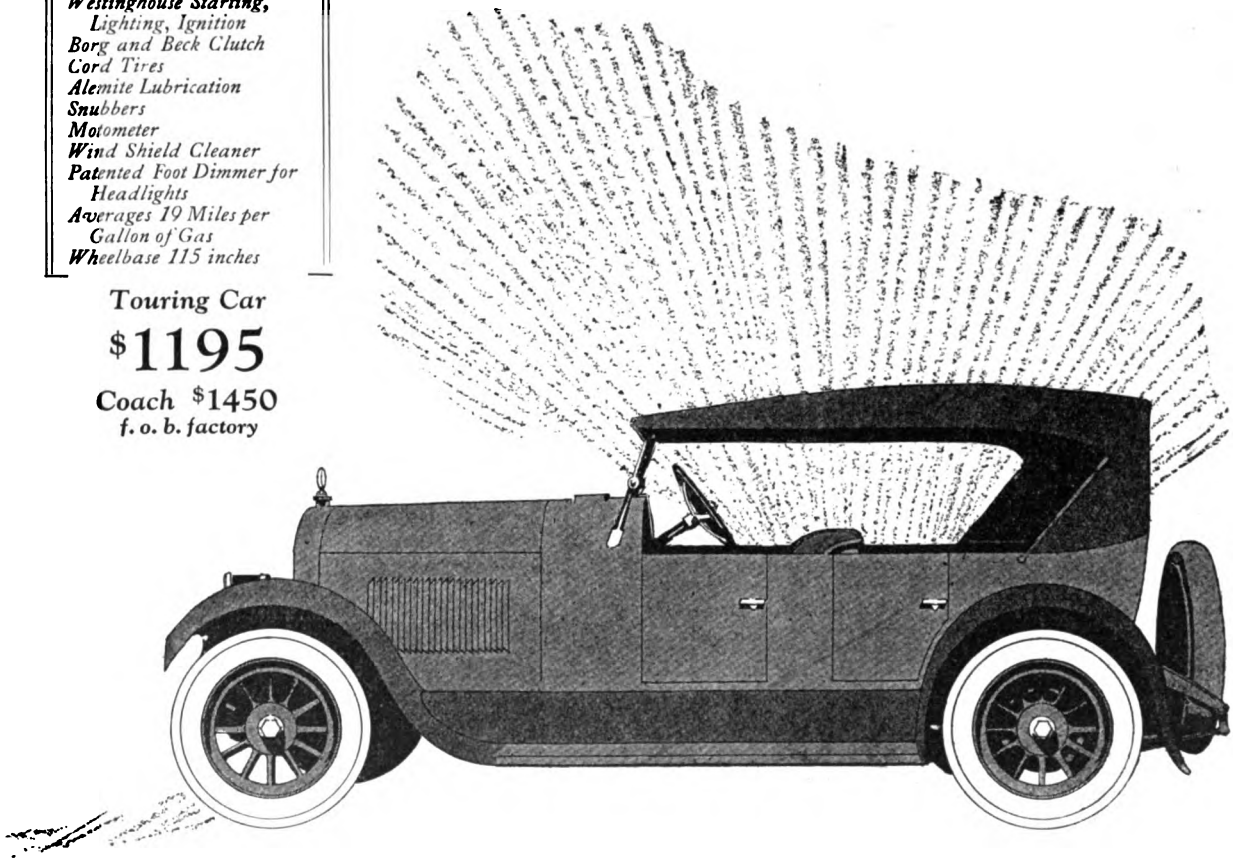
ALUMINUM SIX

The world's lowest priced six cylinder car equipped with a coachbilt aluminum body.

SPECIFICATIONS:

Coachbilt Anderson Aluminum Body
6 Cylinder Red Seal Continental Motor
Westinghouse Starting, Lighting, Ignition
Borg and Beck Clutch
Cord Tires
Alemite Lubrication
Snubbers
Motometer
Wind Shield Cleaner
Patented Foot Dimmer for Headlights
Averages 19 Miles per Gallon of Gas
Wheelbase 115 inches

Touring Car
$1195
Coach $1450
f. o. b. factory



Anderson Motor Company, Rock Hill, South Carolina

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CALENDAR

Houston, Tex., Nov. 8-18.—South Texas Fair.

Buenos Aires, Argentina, Nov. 9-19.—Annual Show, Automovil Club Argentino.

Brussels, Belgium, Nov. 10-Dec. 19.—Automobile Show, Palais de la Cinquantenaire.

Jersey City, N. J., Nov. 11-18.—Third Annual Show, auspices of the Hudson County Automobile Trade Assn., Fourth Regiment Armory; Fred W. Payne, manager.

Los Angeles, Cal., Nov. 11-19.—Automobile and Accessories Show, auspices of the Motor Car Dealers' Assn. of Los Angeles, Praeger Park, Washington and Grand avenues; Burt Roberts, manager.

Philadelphia, Pa., Nov. 13.—Pennsylvania Section of the American Institute of Electrical Engineers; Meeting on Motor Buses.

Chicago, Ill., Nov. 13-18.—Annual Meeting and Show of the Automotive Equipment Assn., Annex to the Coliseum.

Chicago, Ill., Nov. 14-15.—Semi-Annual Convention, Factory Service Managers, auspices of the National Automobile Chamber of Commerce, La Salle Hotel.

Milwaukee, Wis., Nov. 14-16.—Third Annual Convention of the National Tire Dealers' Assn., Hotel Pfister.

New York, N. Y., Nov. 16.—Meeting Metropolitan Section Society of Automotive Engineers; Regulations Governing Use of Rural Highways.

Harrisburg, Pa., Nov. 20-21.—Annual Convention of the Pennsylvania Automotive Assn.; L. H. Hagerling, secretary-manager.

Louisville, Ky., Nov. 20-25.—Closed Car Week, auspices of the Louisville Automobile Dealers' Assn.

Cincinnati, O., Nov. 22-29.—Second Annual Automobile Accessory and Radio Exposition, auspices of the National Automobile Chamber of Commerce.

Bridgeton, N. J., Nov. 25-Dec. 2.—Second Annual Automobile Accessory and Radio Exposition, auspices of the Cincinnati Automotive Trade Assn., Martin Dye building; J. W. Acton, manager.

London, England, Nov. 29-Dec. 4.—London (Olympia), Cycle and Motorcycle Show, auspices of the British Cycle Motors, Warwick Road, Coventry.

Los Angeles, Cal., Nov. 30.—250-Mile Race, Los Angeles Speedway.

Pasadena, Cal., December.—Automobile Show, auspices of the Motor Car Dealers' Assn.; E. C. Lindley, secretary.

New York, N. Y., Dec. 3-9.—Eighteenth Annual Automobile Salon, Hotel Commodore.

St. Louis, Mo., Dec. 6-8.—Third Annual Meeting, American Petroleum Institute, Statler Hotel.

Toledo, Ohio, Dec. 6-8.—Annual Convention, Ohio Automotive Trades Assn.

New York, N. Y., Dec. 7-13.—National Exposition of Power and Mechanical Engineers, Grand Central Palace.

New York, N. Y., Dec. 14.—Meeting Metropolitan Section Society of Automotive Engineers; Air Cooling in Automotive Engines.

Paris, France, Dec. 15-Jan. 2.—Aeronautical Salon, Grand Palace, auspices of the Chambre Syndicale des Industries Aeronautiques, 9 Rue Anatole de la Forge.

Philadelphia, Pa., January.—Passenger Car Show, auspices of the Philadelphia Automobile Trade Assn., Commercial Museum; Louis C. Block, manager.

New York, N. Y., Jan. 8-13.—Second National Automobile Body Builders' Show, auspices of the Automobile Body Builders' Assn., 12th Regiment Armory.

New York, N. Y., Jan. 9-12.—Society of Automotive Engineers, Annual Meeting.

Oakland, Cal., Jan. 13-20.—Fifth Annual Show under auspices of Motor Car Dealers' Division of Alameda County Automobile Trade Assn.

Chicago, Ill., Jan. 15-19.—Thirteenth American Good Roads Congress and Fourteenth National Good Roads Show.

Cleveland, O., Jan 20-27.—Cleveland Automobile Show, auspices of the Cleveland Automobile Manufacturers' and Dealers' Assn., New Public Auditorium; Herbert Buckman, manager.

THE BIG SHOWS

NEW YORK, N. Y., JAN. 6-13.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Grand Central Palace.

CHICAGO, ILL., JAN. 27-FEB. 3.—National Automobile Show, auspices of the National Automobile Chamber of Commerce, Coliseum.

***York, Pa., Jan. 23.**—Annual Automobile Show, auspices of the Automobile Dealers' Assn., Overland Garage; A. H. Geesey and H. Schroeder, managers.

Chicago, Ill., Jan. 27-Feb. 3.—Annual Automobile Salon, Drake Hotel.

Chicago, Ill., Jan. 29-31.—Annual Meeting of the Automotive Electric Service Assn., Congress Hotel.

Ann Arbor, Mich., Jan. 29-Feb. 3.—Automobile Show, auspices of the Washtenaw County Auto Dealers' Assn.; Jos. Thompson, secretary.

Chicago, Ill., Jan. 31.—Meeting and Dinner, Society of Automotive Engineers, Congress Hotel.

Portland, Ore., February.—Annual Automobile Show, auspices of the Portland Automobile Dealers' Assn.

Atlanta, Ga., February.—Annual Southern Automobile Show, auspices of the Atlanta Automobile Assn., Atlanta Auditorium; Virgil W. Shepard, manager.

Hartford, Conn., February.—Automobile Show, auspices of the Hartford Automobile Dealers' Assn., State Armory; Arthur Fifoot, manager.

Troy, N. Y., Feb. 3-10.—Ninth Annual Automobile Show, auspices of the Troy Used Car Sales Corp., State Armory; Frank M. Baucus, manager.

Minneapolis, Minn., Feb. 3-10.—Annual Automobile Show, auspices of the Minneapolis Automobile Trade Assn.; W. R. Wilmot, manager.

Lansing, Mich., Feb. 5.—Automobile Show, auspices of the Lansing Automobile Dealers' Assn.; M. L. Garlock, manager.

Charlotte, N. C., Feb. 5-10.—Annual Automobile Show, auspices of the Charlotte Automotive Trade Assn., Made-in-Carolinas Exposition building.

Cincinnati, O., Feb. 7-14.—Annual Automobile Show, auspices of the Cincinnati Automobile Dealers' Assn.

Kalamazoo, Mich., Feb. 12.—Automobile Show, auspices of the Kalamazoo Auto Dealers' Assn.; O. H. Boylan, manager.

Flint, Mich., Feb. 12.—Automobile Show, auspices of the Flint Auto Dealers' Assn.; Ralph R. Knight, manager.

Grand Rapids, Mich., Feb. 19.—Automobile Show, auspices of the Passenger Car Dealers' Assn; F. R. Lusk, manager.

Mt. Clemens, Mich., Feb. 19.—Automobile Show, auspices of the Macomb County Dealers' Assn.; O. R. Dickerson, manager.

Louisville, Ky., Feb. 19-24.—Fifteenth Annual Show, auspices of the Louisville Automobile Dealers' Assn.

Brooklyn, N. Y., Feb. 24-Mar. 3.—Annual Automobile Show, auspices of the Brooklyn Motor Vehicle Dealers' Assn., 23rd Regiment Armory.

Des Moines, Ia., Feb. 25-March 5.—Fourteenth Annual Automobile Show, Passenger Cars and Accessories only, auspices of the Des Moines Automobile Dealers' Assn., Coliseum; Dean Schooler and C. G. Van Vliet, managers.

Saginaw, Mich., Feb. 26.—Automobile Show, auspices of the Saginaw Auto Dealers' Assn.; Guy S. Garber, manager.

Syracuse, N. Y., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Syracuse Automobile Dealers' Assn.

Springfield, Mass., Feb. 26-Mar. 3.—Annual Automobile Show, auspices of the Springfield Automotive Dealers' Assn.

Muskegon, Mich., Feb. 28.—Automobile Show, auspices of the Automobile Business Assn.; John C. Fowler, manager.

Bay City, Mich., Mar. 5.—Automobile Show, auspices of the Bay City Auto Dealers' Assn.; George L. Weiler, manager.

Newark, N. J., Mar. 10-17.—Annual Automobile Show, auspices of the Newark Auto Assn.; C. E. Holgate, manager.

Boston, Mass., Mar. 10-17.—Passenger Car, Truck and Accessory Show, auspices of the Boston Automobile Dealers' Assn., Mechanics Building; Chester I. Campbell, manager.

*Tentative.

HOUSE ORGAN KEYNOTES

Success is largely a matter of specialization. Mozart determined to compose the greatest of all sonatas and succeeded. He stuck to one thing. Rodin gave up painting to specialize on sculpture and carved for himself a place with the greatest of all ages. Luther Burbank specialized on crossing plants to obtain more and better varieties. Today we enjoy his many new fruits and Burbank is famous. A salesman can succeed the same way. By concentrating his efforts on one line he can do more and better work.—*Durant Success.*

Have you ever noticed that the big men in industry today have a personality that invariably includes a pleasing smile? Their countenance mirrors pleasure in being able to serve to the best of their ability, and the result is, it becomes contagious with those who come in contact with them.

Contrast the difference in the employe who smiles occasionally, with the one who goes about his work with a surly and displeasing expression. The one breeds cheerfulness; the other, discourtesy and dissatisfaction. Smiles pay big dividends in your success and mine.—*Cadillac Clearing House.*

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With New Features
FOR 1923

There is real profit in an Ajax Franchise.

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PUBLISHER'S OBSERVATIONS

IT'S ALL AUTOMOBILE BUSINESS

AUTOMOBILE men ought to stand together. Were there a greater community of interest in the industry as a whole, many affairs might progress more smoothly, while the backward and forward swings of the pendulum of commerce might become in some degree a regulating influence rather than a cause of alternate profligacy and distress.

The lack of co-ordination is brought vividly to mind this week by the discussion elsewhere in these pages of the heroic efforts of the Automotive Equipment Association to elevate the business of its members to the plane where it properly seems to belong. Not in a long time has the industry witnessed a better example of cooperative effort than the merchandising campaign of the A. E. A. Yet to most of those not directly affected this effort has been a matter of foreign interest. In fact, its value, it is suspected, may not be wholly apparent even to some of those most directly influenced, strange though it may appear.

¶ Ostensibly this campaign is work by and for an organization composed entirely of jobbers in automobile accessories and supplies, endorsed with varying degrees of enthusiasm by the manufacturers of such products. To some, it may appear to be merely a case of reinforcing a class of business that has suffered a good deal by changing business conditions. But is it possible to view it only in that restricted light? May it not be at least conceded that the enhanced sale of accessories and supplies, through whatever channels, is of vital interest to automobile manufacturers and dealers?

Consider that the merchandising campaign of the A. E. A. is devoted wholly to the "after market." The after market is the demand that arises when a new car is sold and continues until it reaches its last resting place in the junkman's yard. For five to ten years, perhaps more, of useful activity, every motor vehicle is productive of demand for replenishment, for replacement, for improvement. A large and exceedingly active division of the automobile industry is devoted to that branch, but this represents by no means a separate industry.

¶ But more especially, failure to recognize the integral character of the supply business has done tremendous harm to the industry as a whole, through the encouragement of separate outlets to an unnecessary degree. Let not the value of specialization becloud the issue. Let not the enterprise of the men who have established sound and profitable retail supply businesses alter the circumstances. It is a fact that the industry, through establishing a cleavage between automobile sales and supply sales, has unconsciously permitted its strength to be sapped away through needless duplication of effort.

What has been the result? In hard times dealers handling cars exclusively, have suffered, while dealers in supplies have traveled in more comfort. But at the turn of the tide, prosperity has returned more quickly to the former class, and the revival of sales in new cars has brought seeming prosperity to "automobile" dealers, but as suddenly has bereft dealers in supplies of their sustaining volume of trade, since the market for replacements and improvements naturally runs low when new cars are being bought freely.

Is it not obvious, then, that had these two outlets been more frequently combined, dealer mortality, in both classes of trade might have been lower and the influence of the "business cycle" less adverse? So it would seem.

¶ What has happened has been a product of natural causes, of course. Seeking to sell the greatest possible number of cars, the automobile manufacturer has drifted toward the encouragement of specialization, even to the point of exclusive dealerships. Similarly, the equipment and supply manufacturer, being forced to establish his own wholesale distribution, has sought retail outlets where he could find them. The result has been a segregation of the retail business beyond the point of most satisfactory economic balance.

The departmentalizing of the business would have been better—has been better in those instances where it has been carried out with signal success. Its most noteworthy advantage, however, would have been the sustaining of interest in the consumer from the moment of his original purchase right on through his successive purchases of succeeding cars.

¶ From the standpoint of the car maker, a great weakness has developed through the inability of the dealer to keep in touch with customers up to the time when they are ready to replace their first cars with new ones. From the standpoint of the accessory and supply trade, units of sales have been so small and the business as a whole so spotty that in many instances it has held a lasting attraction only for men of exceptional trading ability, while for the most part, the retail element has been inexperienced, commercially short-lived, and unreliable.

There would be fewer ups and downs in the retail automobile business, and fewer "ins and outs," in its personnel were there less diversity of interest in it. Both elements would prosper did the established automobile dealer pay more attention to his accessory and supply business. But it is quite likely that the automobile manufacturer, of the two, would gain more by such a community of interest than the manufacturer of accessories.

Comparative saturation of initial demand, plus the longer life of the average car, makes it apparent that the dealer must have some interest in the consumer beyond his sales commission if he is destined to survive. That interest is still his for the taking.

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Parsons Window Regulator



The Most Advanced Window Regulator on the Market

Here is a brand new idea in automobile window regulators.

See the *new* method of transmitting the mechanical action—through a set of gears. *No* chains or anything to get out of order.

Absolutely trouble-proof, simple, compact and so easy to install that anyone can do it in less than five minutes.

Locks positively at any point. Can be used for all doors of any car on the market.

We are in production now. Already adopted by some of the largest automobile makers.

Let us show you a sample and quote you attractive prices.

Write at once for complete details.

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Independent — Progressive — Practical
Manufacturers of high grade automobile hardware

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Oldsmobile *in Troy, N. Y.*

"We have sold in the neighborhood of two hundred and fifty Model 43-A Oldsmobiles since that model came into production and it might interest you to know that the first one to be taken in trade by us was taken in today on a coupe. All the rest are still owned by the original owners with the exception of one which was traded in on a much higher priced car."

—OLDSMOBILE SALES AND SERVICE COMPANY
Q. H. BALL

That's a record that means money to the dealer — not only because of the sales he has already made, but because of the sales these two hundred and fifty satisfied owners will bring him.

Oldsmobile dealers all over the country are making money because they have a line that *sells*. It's a complete line, including fifteen passenger cars ranging in price from $955 to $2025 — and a highly successful one-ton truck at $1095 for the chassis.

And the liberal General Motors financing plan makes it easy to do business.

How is your business? Do you have to have more than one franchise in order to offer a reasonably complete line? Finding a lot of "sales resistance"? Is the financing of your business bothering you? Then investigate thoroughly the Oldsmobile franchise.

Write, wire, or phone.

OLDS MOTOR WORKS, LANSING, MICHIGAN
Division of General Motors Corporation

OLDSMOBILE

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS

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CAR AND MODEL	TOURING			SPORT OR ROADSTER			TWO-DOOR CLOSED TYPE†		SEDAN†			ENGINE						Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
	Price	Seats	*Added Equipment	Price	Seats	*Added Equipment	Price	Seats	Price	Seats	*Added Equipment	Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.											
(SEE FOOTNOTES)	**FOUR-CYLINDER PASSENGER CARS**																											(SEE FOOTNOTES)
Ford	$ 393	5	Starter—Dem. Rims	$ 364	2	Starter—Dem. Rims	$ 530	2	$ 595	5	Starter—Dem. Rims	3¼x4	Own	L	H	T	...	tiol	Own	Own	Own	Own	Own	T	3.64	30x3½	100	Ford
Star	443	5	Starter—Dem. Rims	414	2	Starter—Dem. Rims	580	2	645	5	Starter—Dem. Rims	3½x4¼	Con	L	C	P	...	Til	A-L	A-L	Own	War	Tim	S	4.87	30x3½	102	Star
Gray	490	5		490	2				760	5		3⅜x4	Own	L	H	T	...	Sco	Wes	Wes	Own	Det	Tim	C	3.9	30x3½	100	Gray
Chevrolet "Superior"	525	5		510	2		850	4	860	5	C, V	3½x4	Own	H	H	P	...	Z-H	Rmy	R-AL	Own	Own	Own	Q	3.77	30x3½	103	Chevrolet "Superior"
Overland	525	5		525	2		795	2	875	5	N	3⅜x4	Own	L	H	T	...	Til	Con	A-L	B&B	Own	Own	C3	4.5	30x3½	100	Overland
Dort	865	5	P	865	2	P	1,020	2	1,070	5	C, P, V	3½x5	Lyc	L	H	T	...	Car	Con	Bos	Dlf	Own	Fln	F	4.66	31x4	108	Dort
Dodge Brothers	880	5	C, P	850	2	C, P	930	2	1,195	5	C, N, P, V	3½x4½	Own	L	H	P	...	Stw	N-E	N-E	Own	Own	Own	3	4.16	32x4	114	Dodge Brothers
Buick Four	885	5	B, D, P	865	2	B, D, P	1,175	3	1,395	5	B, C, D, N, P, V	3⅜x4¾	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	S	4.67	31x4	109	Buick Four
Maxwell	885	5	C, K, P	885	2	C, K, P	935	2	1,335	5	C, D, K, P, T	3⅜x4½	Own	L	H	T	...	Stw	A-K	A-L	Own	Own	Own	S	4.56	31x4	109	Maxwell
Durant Four	890	5	P, Z	890	2	P, Z	1,365	4	1,365	5	C, P, V, Z	3½x4¼	Own	H	H	P	...	Til	A-L	A-L	Own	War	Adm	S	4.33	31x4	109	Durant Four
Gardner	895	5	C, H, P	895	2	C, H, P	1,095§	2	1,345	5	C, H, N, P, T, V, a	3½x5	Lyc	L	H	T	...	Car	Wes	Wes	B&B	Mec	Fln	S	4.8	32x4	112	Gardner
Nash Four	935	5		915	2		1,275§	5	1,545	5	V	3⅜x5	Own	H	H	P	...	Shb	Del	Del	B&B	Own	Own	S	4.5	33x4	112	Nash Four
Piedmont "4-30"	970	5										3½x5	Lyc	L	H	T	...	Car	Del	Dyn	B&B	G-L	Tim	S	4.25	32x3½	116	Piedmont "4-30"
Oldsmobile Four	975	5	C, D, P	1,075	4	C, D, K, P, Z	1,375	5	1,595	5	C, D, N, P, V	3¼x5¼	Own	H	H	P	...	Zen	Rmy	A-L	B&B	War	GMC	S	4.66	32x4	115	Oldsmobile Four
Kelsey (friction drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	Own	Own	Own	S	4.5	32x3½	111	Kelsey (friction drive)
Kelsey (gear drive)	985	5	P, Z, c	1,195	5	D, H, P, Z, c			1,450	5	D, P, U, V, Z	3½x5	Gry	H	H	T	...	Sco	Bos	Bos	B&B	Det	S-P	S	4.75	32x4	111	Kelsey (gear drive)
Dixie Flyer	995	5	D, G, H, O	1,095	4	D, E, G, H, J, L, O, Q	1,395	3	1,395	5	D, G, H, J, L, N, O, V	3½x5	H-S	L	H	T	...	Str	Eis	Dyn	B&B	G-L	Per	3	4.75	32x4	112	Dixie Flyer
Essex	1,045	5	B, H				1,245§	5				3⅜x5	Own	N	H	T	S	Own	Bos	Bos	Own	Own	Own	S	4.66	32x4	108½	Essex
Crow-Elkhart "L-55"	1,095	5	B	1,145	4							3½x5	Lyc	L	H	T	...	Zen	Con	Dyn	Hoo	Mun	Per	S	4.25	32x3½	117	Crow-Elkhart "L-55"
Earl	1,095	5	C, D, E, H	1,485	2	C, E, H, J, L, Z	1,395§	4	1,795	5	C, E, H, N, T, V	3⅛x5¼	Own	L	H	T	...	Sco	Con	A-L	B&B	Own	Own	S	4.87	32x4	112	Earl
Elcar Four	1,095	5	C, D, H, O, P, Z, b	1,095	2	C, D, H, O, P, Z, b	1,345	3				3½x5	Lyc	L	H	T	...	Str	Del	Del	B&B	Mun	Sal	S	4.5	33x4	118	Elcar Four
Halladay	1,095	5		1,095	2		1,990	3	2,085	5		3½x5	Own	L	H	T	...	Zen	A-K	Wes	B&B	G-L	Fln	S	4.75	32x4	115	Halladay
Hupmobile	1,150	5	C, P	1,150	2	C, P	1,335	2	1,785	5	C, N, O, P, V	3¼x5½	Own	L	C	T	...	Str	A-K	Wes	Own	Own	Own	S	4.87	32x4	112	Hupmobile
Saxon	1,195	5	D, P, Z	1,295	5	C, K, P, W, Z	1,795	4	1,795	5	C, P, U, V, Z	3½x5	Gry	H	C	T	...	Str	Wag	Wag	Dlf	Cov	Spk	T	4.75	32x4	112	Saxon
Willys-Knight	1,235	5	B, C, O	1,235	2	B, C, O	1,795	4	1,950	5	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	4.44	32x4	118	Willys-Knight
Willys-Knight	1,435	7	B, C, O						2,195	7	B, C, G, N, O, U, V	3⅝x4½	Own	S	C	T	...	Til	A-L	Bjr	Own	Own	Own	S	5.12	32x4½	124	Willys-Knight
R & V Knight	1,665	5	A, H				2,385	4	2,475	5	A, H, N	3⅜x5	Own	S	C	T	...	Str	Wag	Wag	B&B	B-L	Sal	S	4.7	32x4	116	R & V Knight
Templar	1,985	5	A, C, H, I, Q	2,175	4	A, C, H, I, J, L, Q, a	2,650	4	2,785	5	A, C, H, I, N, U, V	3¾x5½	Own	H	C	P	...	Str	Sim	Bjr	B&B	Det	U.S.	S	4.4	32x4	118	Templar
Frontenac	2,000	4	C, F, H, Q	2,000	2	C, F, H, Q			2,750	4		3½x5½	Own	H	C	T	...		Del	Del			Own	S	4.41	32x4½	120	Frontenac
Stearns-Knight	2,250	5	C, H, I	2,250	2	C, H, I	3,150	4	3,450	5	C, H, I, V	3¾x5⅝	Own	S	C	P	...	Ray	A-K	Wes	Own	Own	Own	C	4.5	34x4½	125	Stearns-Knight
H. C. S. "IV"	2,475	5	B C H 2J K¹ L O Q Zb	2,475	2	B C D H 2J K¹ L O Q Yb	3,250	4	3,475	5	B C H 2J K¹ L O U V Zb	3¾x5½	Wei	H	H	P	...	Str	Del	Del	B-L	B-L	Own	S		32x4½	120	H. C. S. "IV"
Stutz	2,640	6	H, J, L, O, Q, b	2,790	4	H, J, L, O, Q, b	3,490	4	4,450	5	H, J, L, N, O, U b	4½x6	Own	T	H	P	...	Str	Del	Rmy	WrG	Own	Own	S	Opt	32x4½	130	Stuts
Handley-Knight	2,650	7	C, D, G, H, J, K, P				3,450	4	3,450	7	C, G, H, J, K, N, O, P, U	4½x4½	Own	S	C	T	...	Til	A-L	A-L	WrG	WrG	Tim	S	4.9	32x4½	125	Handley-Knight
duPont	3,200	5	B, G, H	3,000	2		3,800		4,000			3½x5½	Own	L	H	P	...	Y-T	Eis	Wes	B-L	B-L	Col	S	4.45	32x4½	124	duPont
Roamer "4-75-E"	3,485	4	A, D, G, H, J, L, P, Z	3,785	2	A, D, G, H, J, L, P, Z			4,650	4	A G H J L N P U V Z	4¼x6	Dus	R	C	P	...	Str	Spl	Wes	B-L	B-L	Tim	F	3.77	32x4½	128	Roamer "4-75-E"
Mercer Four	3,950	6	G, 2I, O, P, Z, c	3,950	4	G, 2I, L, O, P, Z, c	4,850	4	5,250	7	G, 2I, N, O, P, T, U, Z	3¾x6¾	Own	L	C	P	...	B&B	Eis	Wes	Own	Own	Own	S	3.87	32x4½	132	Mercer Four
Leon Rubay							5,100	4	5,200	6	G, R, U, Z	2¾x5¼	Own	H	V	P	...	Str	Bos	Bos	Own	Own	Own	S	5.1	32x4	118	Leon Rubay
	SIX-CYLINDER PASSENGER CARS																											
Studebaker Light Six	975	5	B, C, D, b	975	2	B, C, D, b	1,225	3	1,550	5	B, C, D, G, N, b	3½x4½	Own	L	C	P	T	Str	Opt	Opt	Own	Own	Own	S	4.55	32x4	112	Studebaker Light Six
Columbia Light Six	985	5	H, J, K	985	2	H, J, K	1,295	3	1,395	5	H, J, K, V	3½x4¼	Con	L	C	P	...	Str	A-K	A-L	B&B	Dur	Tim	S	....	31x4	115	Columbia Light Six
Dort	990	5	P	990	3	P	1,145§	3	1,195§	5	C, P, V	3½x4¼	Fal	H	H	T	...	....	Bos	Bos	Det	Own	Fln	L	4.66	31x4	115	Dort
Cleveland	995	5	D	1,260	5	C D E H J K¹ L T W X Z	1,295§	5	1,495	5	C, D	3¼x4½	Own	H	C	P	...	Str	Bos	Bos	Own	Own	Own	S	4.45	32x4	112	Cleveland
Hanson Light Six	995	5	H, J, K, P									3½x4¼	Con	L	C	P	...	Mar	Del	Del	B&B	Det	Tim	S	4.66	31x4	114	Hanson Light Six
Jewett	995	5	B	995	3	B	1,445	4	1,465	5	B, C, V	3½x5	Own	L	H	P	...	Str	A-K	Rmy	Lng	War	Tim	S	4.43	31x4	112	Jewett
Oakland	995	5	C, P	1,165	4	C D H K P T V W Z	1,185§	2	1,545	5	C, N, O, P, T, V	2½x4¾	Own	H	C	P	...	Mar	Rmy	Rmy	Own	Mun	GMC	S	4.66	32x4	115	Oakland
Elgin "K-1"	1,125	5	C, D	1,165	4	C, D, H, K, M, Z	1,645	4	1,645	5	C, H, N	3½x4¼	Fal	H	H	T	...	Str	Wag	Wes	B&B	Mec	Col	C	5.09	33x4	118	Elgin "K-1"
Chalmers	1,185	5	C, J, K, P, T, Z	1,185	2	C, J, K, P, T, Z	1,585§	5				3½x4½	Own	L	C	P	...	Str	Rmy	Own	Own	Adm	Sal	S	5.12	32x4	117	Chalmers
Anderson "41"	1,195	5	B, C, D, H, O, P				1,450§	4				3½x4½	Con	L	C	P	...	Zen	Wes	Wes	B&B	Dur	Sal	S	4.62	32x4	114	Anderson "41"
Buick	1,195	5	B, C, D, P	1,175	2	B, C, D, P	1,935	5	1,985	5	B C D G N O P R T U V	3¾x4½	Own	H	H	P	...	Mar	Del	Del	Own	Own	Own	L	4.4	32x4	118	Buick
Columbia Challenger	1,195	5					1,995	4	1,995	5		3½x5	Rut	L	H	P	...	Str	A-K	A-L	B&B	Dur	Adm	C	4.75	32x4	115	Columbia Challenger
Moon "6-40"	1,195	5	B	1,445	5	B, c	1,585	4	1,695	5	B, N, V	3½x4¼	Con	L	C	P	...	Str	Del	Del	B&B	WrG	Tim	S	4.45	31x4	115	Moon "6-40"
Nash Six	1,240	5	D, R	1,645	4	D F H 2I 2J K Q R W Yb			2,040	5	C, D, N, R, T, U, V	3½x5	Own	H	H	P	...	Mar	Del	Del	B&B	Own	Own	S	4.5	33x4	121	Nash Six
Studebaker Special Six	1,275	5	B, C, D, G, P, T, b	1,250	2	B, C, D, G, P, T, b	1,875	4	2,050	5	B, C, D, G, N, P, T, b	3½x5	Own	L	H	P	...	Str	Opt	Opt	Own	Own	Own	S	4.33	32x4	119	Studebaker Special Six
Velie "58"	1,275	5	D, H, P	1,275	2	D, H, P	1,795	5	1,795	5	D, H, N, P, V	3½x4¼	Own	H	H	T	...	Str	A-K	Wes	Doo	Dur	Own	S	4.67	32x4	115	Velie "58"

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Continued

SIX-CYLINDER PASSENGER CARS—Continued

(SEE FOOTNOTES)

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carburetor	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
Piedmont "6-40"	$1,285	5					$1,795	4	$1,795	5	E, J, K, N, O, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Spk	S	4.45	32x4	122	Piedmont "6-40"
Davis "71"	1,295	5	E, J, K, O, Z, c									3⅛x4¼	Con	L	C	P		Str	Del	Del	B&B	War	Tim	S	5.1	31x4	114	Davis "71"
Chalmers	1,345	7	C, J, K, P, T									3¼x4½	Own	L	C	T		Str	Rmy	Rmy	Own	Own	Adm	S	5.12	32x4	122	Chalmers
Crow-Elkhart "H-6"	1,345	5		$1,395	4				2,095	7	B, G, N	3¼x5	H-S	L	H	P		Str	Con	Dyn	B&B	Mun	Col	S	4.25	33x4	117	Crow-Elkhart "H-6"
Grant	1,385	5	C, D, E, H, I, O, P, a, b	1,385	2	C, D, E, H, I, O, P, a, b	1,895	4	1,945	5	C D E H I N O P T V a b	3⅛x4½	Own	H	H	T		Str	A-K	Bjr	B&B	Dur	Col	S	4.6	32x4	116	Grant
Nash Six	1,390	7	D, R				1,890	4	2,190	7	C, D, N, R, T, U, V	3¼x5	Own	H	H	P		Mar	Del	Del	B&B	Own	Own	S	4.5	34x4½	127	Nash Six
Barley	1,395	5	C, D, H, P, Z, b				1,850	5	C, D, H, P, V, Z, b			3⅛x4¼	Con	L	C	P		Str	Del	Del	B&B	Ful	Col	S	4.58	32x4	118	Barley
Courier	1,395	5	C, P, Z	1,495	4	C, D, H, K, P, T, Z, b	2,065	3	2,165	5	C, N, P, T, V, Z	3⅛x4¼	Own	H	H	T		Str	A-K	Wes	B&B	Mun	Col	S	4.6	32x4	116	Courier
Elcar	1,395	5	C, D, H, O, P, Z, b	1,395	2	C, D, H, O, P, Z, b	1,975	3	1,995	5	C D H N O P T U V Z b	3⅜x4½	Con	L	H	P		Str	Del	Del	War	War	Sal	S	4.5	33x4	118	Elcar
Liberty	1,395	5		1,575	5	C, D, G, K, O, T, Z	1,695§	2	2,095	5	C, D, G, K, T, V	3⅛x5	Own	L	H	T		Str	Wag	Wag	B&B	Det	Tim	S	4.8	32x4	117	Liberty
Buick	1,435	7	B, C, D, O, P, R, T, V	1,675	4	B C D G K O P R V W Y Z	1,895	4	2,195	7	B C D G N O P R T U V	3⅜x4½	Own	H	H	P		Mar	Del	Del	Own	Own	Own	L	4.7	33x4½	124	Buick
Paige "6-44"	1,465	5	A, B, C, D	1,465	2	A, B, C, D	1,995	4	2,245	5	A, B, C	3¼x5	Own	L	H	P		Str	A-K	Rmy	B&B	Own	Sal	S	4.75	32x4	119	Paige "6-44"
Auburn	1,475	5	D, H, O, Z	1,895	4	D E G H J K O W Y Z	2,275	4	2,345	5	D, G, H, O, V, Z	3⅜x4½	Con	L	H	P		Str	Rmy	Rmy	B&B	G-L	Sal	S	4.75	32x4	121	Auburn
Columbia "Elite"	1,475	5	H, L	1,475	4	H, L	2,295	4	2,350	5	H	3⅜x4½	Con	L	H	P	U	Str	A-K	A-L	B&B	Dur	Tim	C	4.16	32x4	115	Columbia "Elite"
Jackson	1,485	5	A, H, S, Z	1,685	4	A, G, H, J, K, S, Z, a, c	2,985	4	2,935	5	A, G, H, J, K, S, V, Z	3¼x4½	Con	L	H	P		Str	Rmy	A-L	B&B	Cov	Sal	S	4.75	32x4½	121	Jackson
Reo	1,485	7	B, C, D, P, Z	1,645	5	B C D F G H K P U W Z b	1,835§	4	1,885§	5	B C D K N P S T V Z	3⅞x5	Own	N	H	P		Ray	N-E	N-E	Own	Own	Own	S	4.7	33x4	120	Reo
Rickenbacker	1,485	5	C, K, b				1,885	4	1,985	5	C, K, V, b	3½x4¾	Own	L	C	P		Str	A-L	Sim	Own	Own	Own	S	5.1	32x4	117	Rickenbacker
Anderson "40"	1,495	5	A, C, D, G, H, O, P, Z	1,945	4	A C F G H 2I 2J K O P Y	1,995	4	1,995	5	A, C, G, H, O, P, Z	3⅜x4½	Con	L	H	P		Ray	Rmy	Rmy	B&B	Dur	Sal	S	5.0	33x4	120	Anderson "40"
Chandler	1,495	5	B, C, D, H, Z	1,745	4	B C D H 2J L W X Z	1,995	4	2,375	7	B, C, D, H, V, Z	3½x5	Own	L	C	P		Ray	Bos	Bos	B&B	Own	Own	S	4.4	33x4	123	Chandler
Haynes "55"	1,495	5	D, H, K¹, O, P, R	1,545	2	D, H, K¹, O, P, R	2,095§	3	2,395	5	D G H K¹ N O P R U V	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55"
Paterson	1,550	5	H, Z				2,595	4	2,595	5	H, Z	3¼x4½	Con	L	H	P		Str	Del	Del	B&B	Dur	S-P	S	4.5	32x4½	120	Paterson
Hudson	1,575	7	B, H	1,525	4	B, H	1,625	5	2,295	7	B, H, T, U, V	3½x5	Own	L	C	P	S	Own	Bos	Bos	Own	Own	Own	S	4.45	34x4½	125½	Hudson
Mitchell	1,590	5	A, C, H, W, Z, b	1,850	5	A C D F H I K T V W Z b	2,050	4	2,275	5	A, G, N, U, Z	3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	L	4.41	32x4	120	Mitchell
Halladay	1,595	5		1,595	2		2,295	3	2,395	5		3¼x5	Rut	L	H	P		Str	A-K	Wes	B&B	G-L	Spk	S	4.75	33x4	118	Halladay
Hanson "66"	1,595	5	G, P, Z	1,695	4	G, P, Z	2,475	4	2,585	5	G, H, P, U, Z	3⅜x4½	Con	L	H	P		Mar	Del	Del	B&B	Det	Tim	S	4.66	32x4	121	Hanson "66"
Stephens	1,625	6		1,595	4		2,000§	5	2,550	7	C, D, N	3¼x4½	Own	H	H	T		Til	A-L	A-L	B&B	Mec	Tim	S	4.9	33x4½	122	Stephens
Sayers	1,645	5	A, C, D, Z	1,645	2	A, C, D, Z			2,645	5	A, C, D, G, N, T, Z	3¼x4½	Con	L	H	P		Str	Del	Del	B&B	G-L	S-P	S	4.75	33x4	119	Sayers
Durant Six	1,650	5	C, G, P, Z	1,600	2	C, G, P, Z	2,250	4	2,400	5	C, G, N, P, V, Z	3¼x4½	Ans	H	H	P		Ray	A-L	A-L	Own	War	Tim	S	5.11	32x4½	123½	Durant Six
Kline Kar	1,690	5	B, H, P, Z	1,890	2	B, C, D, G, H, P, W, Z	2,750	4	2,790	5	B C G H N P T U V Z	3⅜x4½	Con	L	H	P		Ray	Con	Wag	B&B	G-L	S-P	3	4.75	33x4	121	Kline Kar
Westcott "B-44"	1,690	5	H, O, P, Z, c	1,890	5	E H 2I 2J K¹ O P T X Z c			2,890	5	E 2I 2J K¹ N O P T U V X	3⅜x4½	Con	L	H	P		Ray	Del	Del	B&B	WrG	Tim	S	5.1	32x4½	120	Westcott "B-44"
Davis "63"	1,695	4	E, J, K, O, S, V, c				2,095	4				3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	War	Tim	S	5.09	32x4	120	Davis "63"
Lexington "23"	1,695	5		2,045	5	A C D F 2I 2J M W Y Z	2,145§	5	2,545	5	U V	3¼x4½	Ans	H	H	P	T	Ray	Con	G&D	Ans	WrG	Own	S	5.1	32x4½	123	Lexington "23"
Studebaker Big Six	1,750	7	B, C, D, G, O, P, S, T, b	1,835	4	B C F G H 2I K O P T Y b	2,550	5	2,750	7	F G 2I 2J K N O P T V Y b	3⅞x5	Own	L	H	P		B&B	Opt	Opt	Own	Own	Own	S	3.7	33x4½	126	Studebaker Big Six
American	1,785	5	A, C, D, G, H, T, Z, b	1,885	4	A C D G H K T W Z b			2,485	7	A C D G H N T U Z b	3½x5	H-S	L	H	P		Str	A-K	G&D	B&B	B-L	Sal	S	4.5	33x4½	127	American
Moon "6-58"	1,785	7	B	1,885	5	B, D, X			2,485	7	B, N, U, V	3⅜x4½	Con	L	H	P		Str	Del	Del	B&B	B-L	Tim	S	5.09	32x4½	128	Moon "6-58"
Case "X"	1,790	5	A, D, H, O, P, Z, b	1,750	3	A, D, H, O, P, Z, b	2,480	4	2,575	5	A, D, H, N, O, P, V, Z, b	3⅜x4½	Con	L	H	P	T	Ray	Del	Del	Own	Own	Col	S	5.09	32x4½	122	Case "X"
Jordan "MX"	1,795	5	B, C, O, Z	2,150	4	B, C, F, O, Y, Z	2,485	5	2,485	5	B, C, G, O, T, U, V, Z	3½x4¾	Own	L	H	P		Str	Del	Del	Det	Det	Tim	S	4.42	32x4	120	Jordan "MX"
Bay State	1,800	5	C, G, H, P	1,800	3	C, G, H, P	2,400	4	2,500	5	C, G, H, P, V	3⅜x4½	Con	L	H	P	T	Str	Del	Del	B&B	WrG	Col	S	4.6	32x4	121	Bay State
Kissel (Standard)	1,885	5										3¾x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (Standard)
Haynes "55" Sport	1,895	5	F H 2I 2J K P R T V W Y b	1,895	2	F H 2I 2J K P R T V W Y b	2,195	3	2,695	5	F H 2I 2J K N P R V Y b	3½x5	Own	L	H	P		Ray	Kin	L-N	War	Own	Own	S	4.11	32x4½	121	Haynes "55" Sport
Franklin "10"	1,950	5	A, B, D, G, O, P	1,900	2	A, B, D, G, O, P	2,750	3	2,850	5	A, B, D, G, O, P, T, V	3¼x4	Own	H	C	A		Own	A-K	N-E	B&B	Own	Own	E	4.73	32x4	115	Franklin "10"
Case "W"	1,990	7	A, D, H, O, P, Z, b	1,950	4	A, D, H, O, P, Z, b	2,480	4	2,975	7	A, D, H, N, O, P, V, Z, b	3⅝x5¼	Con	L	C	P	T	Ray	Del	Del	Own	Own	Col	S	4.45	34x4½	129	Case "W"
Mitchell	1,990	7	A, C, H, W, Z, b									3½x5	Own	L	H	P	T	Str	Rmy	Rmy	B&B	Own	Own	C	4.41	32x4½	127	Mitchell
Westcott "D-48"	1,990	7	H, O, P, Z, c	2,190	7	E H 2I 2J K¹ O P T X c						3½x5¼	Con	L	H	P		Ray	Del	Del	WrG	WrG	Tim	S	4.45	32x4½	125	Westcott "D-48"
Pilot "6-50"	2,000	5	C, D, E, G, H, O, Z	2,100	4	C, D, E, G, H, O, Z	2,950	4	3,000	5	C D E G H N O T U V Z	3¼x5	H-S	L	H	P		Til	Con	Bjr	B&B	Mun	Col	S	4.67	32x4½	126	Pilot "6-50"
Comet "C-53-2"	2,150	5	D, I, Z	2,150	2	D, I, Z	2,800	4	2,950	5	D, G, I, U, V, Z	3½x5¼	Con	L	H	P		Str	Wag	Wag	B&B	Mun	Tim	S	4.08	33x4½	125	Comet "C-53-2"
Paige "6-66"	2,195	7	A, B, C, D, G, O, P	2,245	4	A, B, C, D, G, O, P	3,100	5	3,155	7	A, B, C, G, O, P, U	3¾x5	Con	L	H	P	T	Ray	A-K	Rmy	Lng	War	Tim	S	4.43	33x4½	131	Paige "6-66"
Roamer "6-54-E"	2 285	4	A, B, G, H, P, Z	2,750	4	A, B, G, H, J, L, P, Z	3,285	3	3,585	5	A B G H J L N P U V Z	3½x5¼	Con	L	H	P		Str	Spl	Wes	B&B	G-L	Tim	C	4.45	32x4½	128	Roamer "6-54-E"
Waltham	2,350	5		2,350	2		3,050	4	3,250	5		3½x5	Rut	L	H	P		Str	Bos	G&D	B&B	WrG	Tim	S	4.67	32x4	120	Waltham
National	2,375	7	A, B, C, H, O	2,475	4	A, B, C, H, O	3,725	4	3,825	7	A B C G H N O S U V	3½x5¼	Own	H	C	P		Ray	Del	Wes	B&B	B-L	Col	S	4.08	32x4½	130	National
Kissel (de Luxe)	2,385	7	F, G, H, 2J, L, O, X	2,385	4	F, G, H, 2J, L, O, X	2,975	4	3,075	6	F, G, H, 2J, L, O, X	3⅞x5½	Own	L	H	P		Str	Rmy	Rmy	War	War	Own	S	4.25	32x4½	124	Kissel (de Luxe)
Haynes "75"	2,395	7	A, D, G, H, K¹, O, P, R, Y	2,395	2	A C D H 2J K¹ L O P T W	3,095	5	3,395	7	A D G H K¹ N O U V Y a	3⅝x5 1/16	Own	L	C	P	T	Str	Kin	L-N	War	Own	Own	S	4.6	33x5	132	Haynes "75"
R & V Knight	2,475	7	A, C, G, H, Q, T, W, b, c	2,475	4	A, C, G, H, Q, T, W, b, c	3,000	4	3,105	5	A, C, G, H, N, Q, T, U, b	3½x4½	Own	S	C	T		Str	Wag	Wag	B&B	B-L	Tim	S	4.9	32x4½	127	R & V Knight
Packard Single-Six	2,485	5	C, G, H, O	2,485	2	C, G, H, O	3,175	4	3,275	5	C, G, H, O, U, V	3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.3	33x4½	126	Packard Single-Six
Holmes	2,500	7	A, B, C, E, G, H, P	2,500	4	A, B, C, E, G, H, P	3,300	4	3,600	6	A, B, C, E, G, H, N, P, V	3½x4¼	Own	H	H	A		Str	Eis	Dyn	B-L	B-L	Tim	E	4.9	34x4½	126	Holmes
Packard Single-Six	2,685	7	C, G, H, O						3,525	7	C, G, H, O, U, V	3⅝x5	Own	L	C	P	T	Own	Del	A-K	Own	Own	Own	S	4.66	33x4½	133	Packard Single-Six
Stearns-Knight	2,700	5	C, D, H, I, Z	2,700	4	C, D, H, I, Z	3,350	4	3,700	7	C, D, H, I, V, Z	3⅝x5	Own	S	C	P		Ray	A-K	Wes	Own	Own	Own	C	4.9	34x4½	130	Stearns-Knight

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AUTOMOBILE TOPICS' TABLE OF PASSENGER CAR SELLING POINTS—Concluded

CAR AND MODEL	TOURING Price	Seats	*Added Equipment	SPORT OR ROADSTER Price	Seats	*Added Equipment	TWO-DOOR CLOSED TYPE† Price	Seats	SEDAN† Price	Seats	*Added Equipment	ENGINE Size	Make	Valves	Cam Drive	Cooling	Cool'g Con.	Carbureter	Ignition	Lighting	Clutch	Gearset	Rear End	Rear Springs	Gear Ratio	Tires	Wheelbase	CAR AND MODEL
(SEE FOOTNOTES)												SIX-CYLINDER PASSENGER CARS—Continued																(SEE FOOTNOTES)
Ace "C"	$2,975	5	D, Z	$2,975	2	D, Z			$4,500	5	D, F G, N, T, U, X, Z	3⅝x5½	Con	L	C	P		Str	A-K	A-L	WrG	Ful	Sal	S	3.5	33x4½	123	Ace "C"
Marmon	3,185	7	A, B, C, G, P, R, T, c	3,435	4	A, B, G, H, P, R, Y	$3,985	4	4,385	7	A, B, G, P, R, U, V	3⅜x5⅛	Own	H	H	P		Str	Del	Del	Own	Own	Own	T	4.1	32x4½	136	Marmon
Noma "1-D"	3,200	6		3,100	4				5,500	5		3½x5¼	Con	L	H	P		Zen	Del	Del	B&B	Det	Tim	S	4.45	32x4½	128	Noma "1-D"
Premier	3,250	7	A, B, C, D, G, P	3,300	4	A, B, C, D, G, P, Y	4,300	4	5,100	7	A, B, D, G, N, P, T, U	3⅜x5½	Own	H	H	P	T	Str	Del	Del	B&B	Own	Tim	S	4.58	32x4½	126¾	Premier
Winton "40"	3,400	7	A, B, C, G, P, Z	3,600	4	A, B, C, G, H, 2I, P, X, Z	4,000	4	4,550	7	A B C G N P T U V Z	3⅜x5¼	Own	L	C	P		Ray	Del	Del	War	War	Tim	S	4.58	33x5	132	Winton "40"
Mercer Six	3,750	6	G, H, O	3.750	4	G, H, J, L, O			5,000	6	G, H, O, T, U	3¾x5	Own	H	H	P		B&B	Eis	Wes	Own	Own	Own	S	3.77	32x4½	132	Mercer Six
Ogren	3,750	5		3.750	4		4,500	4	4,800	5		3⅝x5¼	Con	L	C	P		Ray	Bos	Bos	B-L	B-L	Col	S	4.1	33x5	134	Ogren
Sterling-Knight	3,800	7	B C D E G I O S V W Y Z	3,800	4	B C D E G I O S V W Y Z	4,600	4	4,800	7	B C D E G I O S V W Y Z	3¾x5¼	Own	S	C	P		Ray	Sen	Wes	Own	Own	Tim	C	4.45	33x5	134	Sterling-Knight
Fox	3,900	5	A C D G H I J L O T Z b				4,900	3	4,900	5	A G H I J L N O T U V	3⅜x5	Own	H	H	A		Zen	Sen	Wes	B-L	B-L	Tim	S	4.6	32x4½	132	Fox
Dorris "6-80"	3,950	7	A, G, O, Z, b	3,950	4	A, G, O, Z, b	4,985	4	5,750	7	A, D, G, O, U, Z, b	4x5	Own	H	H	P		Str	Bos	Wes	Own	WrG	Tim	S	4.08	33x5	132	Dorris "6-80"
Ambassador	4,500	7	A E G H 2I 2J K O Q W Y Z	4,500	4	A E G H 2I 2J K O Q W Y			6,500	5	A E G H 2I 2J K N C Q Z	3⅝x5¼	Con	L	C	P		Str	Bos	Wes	B-L	B-L	Tim	S	4.45	32x4½	136	Ambassador
Pierce-Arrow	5,250	7	A B C E G M O P S V X Z	5,250	4	A B C E G M O P S V X Z	6,850	3	7,000	6	A B C E G M N O P S U V	4x5½	Own	T	H	P	T	Own	Del	Del	Own	Own	Own	S	4.28	33x5	138	Pierce-Arrow
Leach	5,500	5							5,500	5		3¾x5¼	Own	H	S	P		Ray	Del	Del	B-L	Own	Tim	S	4.23	32x4½	134	Leach
McFarlan	6,300	7	A C D E G H 2I J M O X Z	6,300	4	A C D E G H 2I J M O X Z	7,500	4	7,500	7	A E G H 2I J M O U V X Z	4½x6	Own	T	H	P		Ray	S-W	Wes	B&B	B-L	Tim	S	3.50	33x5	140	McFarlan
Stevens-Duryea	6,800	7	A, B, G	6,900	4				8,900	7		4¼x5½	Own	L	H	P	T	Str	Ber	Wes	Own	Own	Own	3	3.94	35x5	138	Stevens-Duryea
Locomobile	7,600	7	A, B, E, G, 2I, Q, T, Z	7,600	4	A, B, E, G, 2I, Q, T, X, Z			11,000	7	A B E G 2I Q T U V Z	4½x5½	Own	T	H	P		B&B	Del	Wes	Own	Own	Own	3	3.8	35x5	142	Locomobile
Rolls-Royce	10,900	5	B, D, G, H, 2I, 2J, L, Z	10,900	2	B, D, G, H, 2I, 2J, L, Z			12,900	7	B D G H 2I 2J L U V Z	4½x4¾	Own	L	H	P		Own	Bos	Own	Own	Own	Own	L	3.25	33x5	143½	Rolls-Royce
EIGHT-CYLINDER PASSENGER CARS																												
Oldsmobile "47"	1,375	5	C, D, P, T	1,675	4	C F H K P Q T V W Z b	1,875	4	2,025	5	C, D, N, P, T, V, Z	2⅞x4½	Own	L	H	P		Joh	Del	Del	B&B	War	GMC	S	5.1	32x4	115	Oldsmobile "47"
Oldsmobile "46"	1,735	7	C, D, G	1,735	4	C, D, G			2,635	7	C, D, G, N	2⅞x4¾	Own	L	H	P		B&B	Del	Del	Own	War	GMC	S	4.92	33x4½	122	Oldsmobile "46"
King	1,795	7	A, B, G, H, P, R, b	1,795	2	A B G H I L O P R W b	2,400	4	2,550	7	A B C D G H N O P R V b	3x5	Own	L	C	T		B&B	A-K	Wes	Det	Own	Col	L	4.88	32x4½	120	King
Standard	2,395	7	A, D, G, O, P	2,395	4	A, D, G, O, P	2,750	4	3,200	7	A, D, G, N, O, P, V, a	3¼x5	Own	L	H	P		Zen	Spl	Wes	B&B	G-L	Own	S	4.46	34x4½	127	Standard
Wills Sainte Claire	2,475	5	B, C, J, K, O, P, Z	2,575	4	B, C, J, K, O, P, Z	3,275	4	3,475	7	B C G J K O P T U V	3¼x4	Own	H	V	T	TL	Zen	Del	Del	Own	Own	Own	S	4.9	32x4½	121	Wills Sainte Claire
Apperson	2,645	7	A, D, E, G, H, O	2.620	4	A, D, E, G, H, O	3.625	4	3,695	7	A C D E G H N O T V	3¼x5	Own	L	H	T		Joh	Rmy	Bjr	Own	Own	Own	3	4.25	34x4½	130	Apperson
Cole	2,685	7	A B G H 2I 2J M N O X	2.685	4	A B G H 2I 2J M N O X	3,385	4	3,685	7	A B G H 2I 2J M N O U X	3½x4½	Nor	L	S	P	T	Joh	Del	Del	Nor	Nor	Col	S	4.7	33x5	127¼	Cole
Peerless "23"	2,990	7	A B C D G H O P T V Z b c	2,990	4	A B C G H O P T V Y Z b c	3,400	4	3,900	5	A B G H O P T U V Y Z b	3¼x5	Own	L	H	P		B&B	Del	Del	Own	Own	Tim	S	4.9	33x5	128	Peerless "23"
Cadillac	3,150	7	A, B, C, D, G, P, T	3.150	4	A, B, C, D, G, P, T, X	3,925	5	4,100	5	A, B, C, D, G, P, T, V	3½x5½	Own	L	C	P	T	Own	Del	Del	Own	Own	Tim	P	Opt	33x5	132	Cadillac
Lincoln	3,800	7	A, B, C, D, G, O, P, T, Y, Z, a	3.800	4	A B C D G O P T Y Z a	4,400	5	4,900	7	A B C D G O P T U V Z a	3⅝x5	Own	L	C	P	U	Str	Del	Del	Own	Own	Tim	S	4.58	33x5	136	Lincoln
LaFayette	4,090	7	A B C D G H I O T V Z	4,090	4	A B C D G H I O T V Y Z	5,500	4	5,500	7	A B C D G H I O T U V Z	3¼x5¼	Own	L	C	P	U	Joh	Del	Del	Own	Own	Own	S	4.58	33x5	132	LaFayette
Daniels	4,350	5	A, D, G, I, O, P, R, Z, a	4,350	2	A, D, G, I, O, P, R, Z, a	5,350		6,000		A D G I O P R U V Z a	3½x5¼	Own	L	H	P		Zen	Del	Del	Own	Own	Tim	S	4.8	33x5	132-8	Daniels
Cunningham	6,300	7	A B E G H I J M O Q X Z	5,800	4	A B E G H I J M O Q X Z	7,150	4	7,650	6	A B E G H J M C U V X Z	3¾x5	Own	L	H	P	T	Str	Del	Del	Own	Own	Tim	3	4.23	33x5	142	Cunningham
Duesenberg Str. Eight	6,500	5	B F G H I J L O 2Q S Z b	6,500	4	B F G H I J L O 2Q S Y b	7,800	4	7,800	7	B F G H I J L N O R V Y b	2⅞x5	Own	H	V	P	T	Str	Del	Del	Own	Own	Own	S	4.6	33x5	134	Duesenberg Str. Eight
TWELVE-CYLINDER PASSENGER CARS																												
Packard Twin-Six	3,850	7	A, C, D, G, O, Z	3.850	2	A, C, D, G, O, Z	5,240	4	5,400	7	A, C, D, G, O, U, Z	3x5	Own	L	C	P	T	Own	Del	Bjr	Own	Own	Own	S	4.36	35x5	136	Packard Twin-Six

KEY TO SYMBOLS

EQUIPMENT: (*Note—Items included in list price, in addition to following equipment, universally standard with few exceptions: speedometer, ammeter, oil gauge, hand tire pump, horn, demountable rims, tools, spare rim and carrier, and cord tires.) **A**—power tire pump; **B**—theft lock; **C**—windshield wiper; **D**—cowl lights; **E**—front bumper; **F**—bumpers front and rear; **G**—clock; **H**—heat indicator; **I**—spare tire; **J**—spare wheel; **K**—disc wheels; **K1**—disc wheels optional; **L**—wire wheels; **M**—wheels optional; **N**—car heater; **O**—snubbers or shock absorbers; **P**—pressure chassis lubricating system; **Q**—spotlight; **R**—gasoline gauge (dash); **S**—glove box; **T**—mirror; **U**—vanity and smoking sets; **V**—sun visor; **W**—windshield wings; **X**—trunk rack; **Y**—trunk and rack; **Z**—color option or special color; **a**—tilting steering wheel; **b**—rear signal; **c**—permanent top.

†**CLOSED MODELS:** Regular closed models listed except where lower priced closed types are included in the line. Latter are distinguishable by symbol §. ‡ **Two-Door.** ‖ **Four-Door.**

ENGINE: **Ans**—Ansted; **Con**—Continental; **Dus**—Duesenberg; **Fal**—Falls; **Gry**—Gray; **H-S**—Herschell-Spillman; **Lyc**—Lycoming; **Nor**—Northway; **Rut**—Rutenber; **T-H**—Teetor-Hartley; **Wei**—Weidely.

VALVES ARRANGED: **H**—in head; **L**—at side; **N**—side and head; **R**—horizontal; **S**—sleeve; **T**—opposite.

CAMSHAFT DRIVE: **C**—chain; **H**—helical gear; **S**—spur gear; **V**—vertical shaft.

COOLING: **A**—air; **P**—pump; **T**—thermo-syphon.

COOLING CONTROL: **D**—declutching fan; **S**—radiator shutters; **T**—thermostatic; **U**—thermostatic and shutters.

CARBURETER: **B&B**—Ball & Ball; **Car**—Carter; **Eag**—Eagle; **Hol**—Holley; **Joh**—Johnson; **Mar**—Marvel; **Ray**—Rayfield; **Shb**—Schebler; **Sco**—Scoe; **Stw**—Stewart; **Str**—Stromberg; **Til**—Tillotson; **Y-T**—Yale & Towne; **Zen**—Zenith; **Z-H**—Zenith or Holley.

IGNITION and LIGHTING: **A-K**—Atwater-Kent; **A-L**—Auto-Lite; **Ber**—Berling; **Bos**—American-Bosch; **Bjr**—Bijur; **Con**—Connecticut; **Del**—Delco; **Dyn**—Dyneto; **Eis**—Eisemann; **G&D**—Gray & Davis; **Kin**—Kingston; **L-N**—Leece-Neville; **N-E**—North East; **Rmy**—Remy; **Scn**—Scintilla; **Sim**—Simms; **Spl**—Splitdorf; **S-W**—Splitdorf & Westinghouse, 18 plugs; **USL**—U. S. Light & Heat; **Wag**—Wagner; **Wes**—Westinghouse; **R—AL**—Remy or Auto-Lite.

CLUTCH and GEARSET: **Ans**—Ansted; **B&B**—Borg & Beck; **B-L**—Brown-Lipe; **Cov**—Covert; **Det**—Detroit; **Dif**—Detlaff; **Doo**—Dooley; **Dur**—Durston; **G-L**—Grant-Lees; **Hoo**—Hoosier; **Lng**—Long; **Mec**—Mechanics Machine; **Mun**—Muncie; **Nor**—Northway; **War**—Warner Corp.; **WrG**—Warner Gear; **Ful**—Fuller.

REAR END: **Adm**—Adams; **Col**—Columbia; **Fln**—Flint; **GMC**—General Motors Corp.; **Per**—Peru; **Sal**—Salisbury; **S-P**—Standard Parts; **Spk**—Spacke; **Tim**—Timken; **U.S.**—United States; **W-M**—Weston-Mott.

REAR SPRINGS: **C3**—three-point cantilever; **C**—cantilever; **F**—full cantilever; **L**—floating cantilever; **E**—elliptic; **S**—semi-elliptic; **3**—three-quarter elliptic; **Q**—one-quarter elliptic; **P**—platform; **T**—transverse.

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The New "Carry a Spare" Twin-Package



This Is One of the Finest Selling Ideas We Have Ever Given You

NOT only a new belt, but a new package—a package that will help you sell a spare every time you sell a fan belt.

This is a de luxe twin-package—two belts in each. The belts are held together by narrow gold bands—easy to tear apart. Belt number one in the new orange wrapper is ready to put on the car. Belt number two is the spare. It is attractively sealed in a transparent glassine envelope for the convenience of the motorist.

The metallic finish that adds so much to the appearance of the new belt is a result of the new process of manufacture. It is an engineering achievement, giving the belt greater resistance to heat, oil and water.

When you suggest that a customer "Carry a Spare," this new package puts the idea over doubly strong. Sell your customer the "Carry a Spare" idea, then you won't have to tear the package apart and you will be selling *two* belts instead of one—double profit!

Put ONE on the car and the OTHER in the tool box



L. H. GILMER COMPANY, Philadelphia

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It Makes NEW Records for Long Wear

The NEW GILMER Super-Service FAN BELT

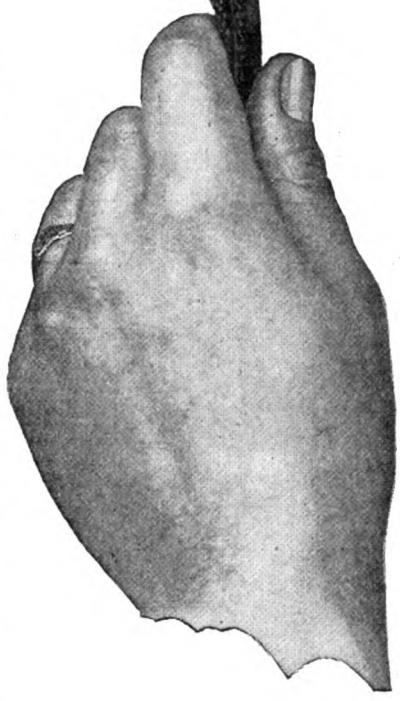
"SUPER-SERVICE" exactly describes this newest Gilmer Belt. It is designed for those motorists who want the utmost in fan belt service and are glad to pay a trifle more to get it.

The Gilmer Super-Service Fan Belt is manufactured on a new principle, in a new way. It is light in construction, wonderfully flexible, and the toughest belt that ever drove a fan. It grips the pulley without slippage and insures a cool motor under severe conditions.

Original Gilmer merchandising ideas accompany these new belts. They are packed ten to a carton —a new carton with exceptionally good display value. They are grouped by numbers and the proper belt for each car is shown on a handy chart. Order a small representative stock and you will be delighted with the turnover.

The new Super-Service Belts, together with the original Gilmer Belts, give you a satisfactory assortment to meet all demands. Get in touch with your jobber immediately. Write him to-day about these new belts.

L. H. GILMER COMPANY, Philadelphia



LIST PRICES
For Ford Cars, 60c
For all other cars, 90c

Gilmer
SUPER-SERVICE
FAN BELT



It's a Gilmer Product— you can depend on it

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Have You a Ten Minute Man?

NO successful treasure hunter is worth more to you than the clerk who spends ten minutes a day looking up War Department ads.

For there is treasure a plenty in these. They announce Surplus Property sales that spell tremendous savings and quick deliveries.

The things you need are among them. All you have to do is LOOK. Then write for catalog. Then attend the sale.

Don't overlook a single ad. If you do, you may overlook a saving of great proportions. Your clerk can look them up and then route the publication through the various departments.

It's only a ten minute job—or less. And big dividends await your taking. If you want to know more about the sales, ask Major J. L. Frink, Chief, Sales Promotion Section, Office, Director of Sales, Room 2515 Munitions Bldg., Washington, D. C.



Send for this booklet: The story of War Department Sales

ARTMENT

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A Message to Dealers—

Nine out of every ten motor car manufacturers who equip with heaters have chosen Perfection.

The car engineer can't be fooled. He buys quality and dependability—not just price.

Wise dealers have learned that business is not built on price alone—that turnover is more important than long discounts—and that selling satisfactory accessories builds a growing business.

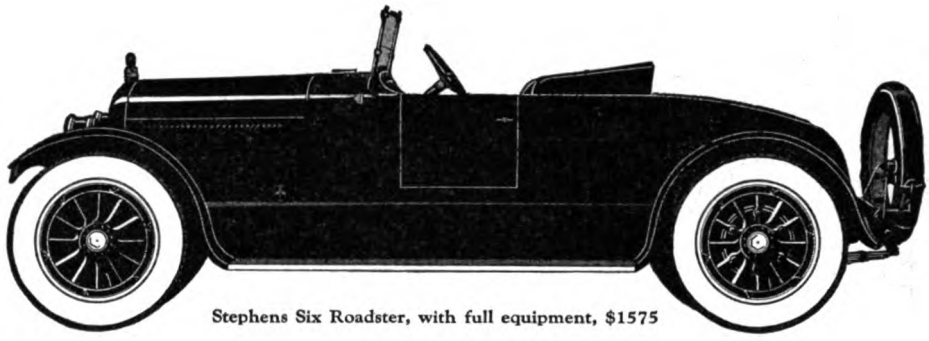
In the heater field Perfection Heaters are recognized as the standard of value and as having proven satisfactory by years of service on several hundred thousand cars.

If you are not handling Perfection Heaters write now for more information.

The PERFECTION HEATER & MANUFACTURING COMPANY
6545 CARNEGIE AVENUE CLEVELAND, OHIO

PERFECTION
MOTOR CAR
HEATERS

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Stephens Six Roadster, with full equipment, $1575

You Don't have to Guess about 1923

A complete new line for 1923—20,000 satisfied owners—an experienced organization—ample financial resources—two giant factories—low fixed charges—a long dealer discount—

And that's only half the story of why the Stephens franchise is the most attractive distributor or dealer proposition now open to the trade in any territory where the Stephens is not represented. Substantial business men can have the whole story by asking for it. Write or wire or telephone Moline today.

R. W. Lea
Vice-President and General Manager

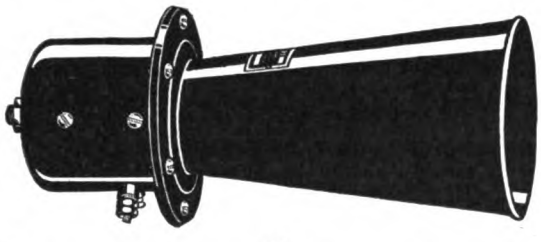
STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

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2 Announcements of Genuine Importance to Every Dealer in Accessories

The New KLAXON-8 7.50



A sturdy, dependable Horn, combining the good qualities of the Klaxon-12A with an extremely moderate price. A truly wonderful signal, even when considering the remarkably low price at which it is sold. Whether you wish this signal for city or country use, the Klaxon-8 fills every requirement. And back of the splendid tone quality you have the assurance that when an emergency arises the Klaxon-8 will always be ready—and will get action.

The ~~$7~~ KLAXON-5, Now 5.50



OWNERS of the smaller cars—Fords, Chevrolets, Maxwells, etc.—have found the Klaxon-5 sturdily satisfactory. It's a mighty well-toned instrument, made with all the care that is shown in the manufacture of signals costing many times its low price of $5.50.

Use the Coupon →

Genuine Klaxons Made Only By

KLAXON

Company :: Newark, N.J.

KLAXON
Company :: Newark, N.J.

Gentlemen:
Please send us booklet "Selling Automobile Horns Instead of Keeping Them" —and full information concerning the Klaxon line.

Lines now handled

.....

.....

.....

Name .....

Street .....

City .....State.....

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Oil Cooling As Important As Water Cooling

YOU wouldn't think of cooling your cylinders by using hot water. Yet you expect hot oil, from a heated crankcase, to cool your engine bearings. It is just as important to the life of your engine that cool oil carry away the heat of the bearings as it is for cool water to carry away the heat of the cylinders.

The Courier Dry Sump System keeps the oil stored in an oil-cooling tank completely separate from the engine. This tank is air-cooled by the forward motion of the car, just as the water in your radiator is. This principle of lubrication forces oil to every engine bearing surface, from there it drops down to the crankcase, whence it is pumped back to the tank to be screened and filtered; then cooled and sent on a return trip through the engine. The engine stays sweet-running; it has the satisfactory purring that denotes perfect lubrication. In addition there is impressive economy—for the dry sump system uses the same oil over and over again, without the oil losing its original color or lubricating qualities.

In the Courier Six, not only the engine, but the chassis receives fresh, cool oil at all times. Its lubrication is practically automatic. Pressing a plunger on the dash forces oil to the chassis bearings, springs, spring shackles, steering connections, axles, etc.

Every motorist knows the important part that correct lubrication occupies in the smooth running and long life of his car. Courier engine and chassis lubrication are two great sales features. When combined with the custom coach-work, the bright finishes and dashing appearance of the car, they make a compelling appeal to car buyers. Courier dealers really have something exceptional to sell. and they are selling it with good advantage to themselves.

Dealers who can properly represent the distinctive and individual Courier Six are invited to write for literature and information.

THE COURIER MOTORS COMPANY
SANDUSKY, OHIO.

COURIER

THE MOST COMPLETELY AND CONVENIENTLY LUBRICATED CAR IN AMERICA

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No Off Winter For Republic Dealers

"More tires will be sold at retail during the coming winter than during any previous winter—Cheap tires will be replaced. Owners will return to quality brands."
J. W. O'Meara, "Tires," Sept. 22.

Especially is this analysis true in the small car field. Republic production schedules and sales prove its accuracy. There is a growing demand for Republic quality by the small car owner.

And to answer this demand comes the new Republic Cord. Sized to be interchangeable with fabrics, (30 x 3½ to 34 x 4 inclusive), priced only slightly above a good fabric, it is finding the ready market we knew it would.

Be prepared for this winter business,—and be prepared *right* with Republics. Get in touch with our nearest branch for plans and prices *today!*

REPUBLIC TIRES

THE REPUBLIC RUBBER COMPANY
YOUNGSTOWN, OHIO
New York, Philadelphia, Minneapolis, Atlanta, Chicago, Kansas City, Cincinnati, Pittsburgh

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Sandy's "One-Way Pockets"

TIGHT-WAD—*A man who has accumulated money and keeps it. The significant thing is—he has it.*

SANDY MacManus was a true descendant of a line famous for the invention of the "one-way pocket." This meant something to the ambitious demonstrator who yearned to become a full fledged salesman. Sandy had the money. Most dealers long ago had become reconciled to Sandy's fixed idea of keeping it. The ambitious demonstrator simply saw the money and he knew that here was a sale involving neither trade-in nor financing. How could he turn the key that would cause those fishhooks on the inside of Sandy's pocket to lie down?

Thus it came about that Sandy was picked up once or twice on a Saturday afternoon, when walking back from one of his excursions into the country. His new friend was simply riding in a car borrowed from the boss and "gosh" how he wished he had the money to buy it. But: costs so much to buy—so much for tires and gas—so much for maintenance, depreciation, etc., etc. Sandy could not figure why any one should even want such a car, and mildly respected the young man for having the strength to resist the impulse. So without knowing it, he acquired that familiarity with figures which breeds contempt.

In the course of a couple of weeks the young man disclosed that he, just as Sandy, was watching the Suburban real estate situation. He had smoked out some prospects that served to increase Sandy's respect. In fact, he had discovered things that Sandy had only been able to guess at, because Sandy had only his few hours on Saturday, while the young fellow could dash miles of an evening.

That planted the seed and Sandy's own intensive nature cultivated it. The cost of the car, and of its operation were known; they had been dropped into Sandy's ear in a way that inspired his confidence. Against this cost Sandy figured the profits which he knew he could get from land deals in the territory thus opened up. Simple mathematics, with the answer always—plus.

Sandy MacManus—and he is a real person, although that is not his name—now owns an automobile. He has discovered that it is a real asset to his one-way pockets.

This is one of a series of messages addressed to every man who sells automobiles

The Packard Electric Company

WARREN, OHIO

MANUFACTURERS OF PACKARD AUTOMOTIVE CABLES

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The Crowded Field

A Passing Glance is Sufficient

Fourteen four-cylinder touring cars sell for $975 or less today.

Eleven fours and 20 sixes range in price from $975 to $1,375.

Above $1,375, but under $3,500 ten fours, 58 sixes and nine eights are offered.

A second glance shows that 70 models are listed by 64 manufacturers at prices between $1,000 and $2,000. Twelve are fours, 55 sixes, and three eights.

AUTOMOBILE TOPICS'
Table of Passenger Car Selling Points
(Copyrighted)

Proves that price classification is better than an alphabetical guide to the automobile market. It affords a true sales comparison.

The table appears on page 1281 of this issue. It is revised to date from information supplied directly by the manufacturers. Every issue is printed from new plates to ensure legibility.

AUTOMOBILE TOPICS
The Trade Authority
1790 BROADWAY NEW YORK CITY

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Super Quality Batteries

The Best Battery Plan Ever Offered to Dealers

THE YALE Battery proposition offers the wide-awake dealer a genuine opportunity to get a larger share of the battery sales in his local field and build up a permanent, profitable business.

Here's what it offers you. A super-quality battery with all the best features. A price list that will get you the business of car owners in every class. A profit-margin that enables you to make real money on every sale. A range of sizes that covers all requirements—with five sizes that serve 90% of your customers. A guarantee that really means something—"They MUST Satisfy". A chain of high grade distributors who give prompt shipments and liberal co-operation to dealers.

This is, without doubt, the biggest and broadest battery proposition ever offered dealers. No other battery sales plan gives you so many opportunities to make money and establish a paying business.

And no other battery offers the car owner so many advanced features that mean a powerful, reliable and durable starting, lighting and ignition service.

YALE Batteries are built and backed by some of the leading men in the automobile battery business—men who not only know how to build a real battery, but also, what kind of a contract helps make distributors and dealers successful, and the kind of a guarantee that insures YALE Battery users full value and satisfaction.

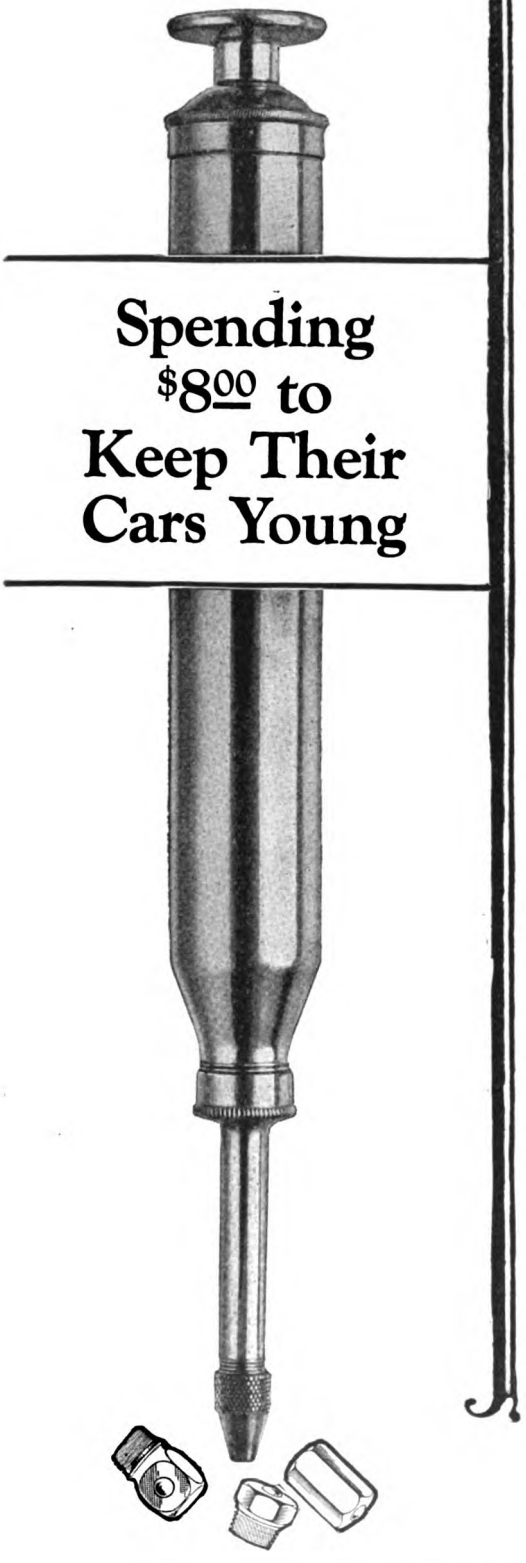
Take on the YALE Line

The YALE Distributor and Dealer organization is growing fast and making money. Some desirable districts are still open. Write or wire us about your territory, at once.

YALE

Yale Storage Battery Company, Indianapolis Ind. U.S.A

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Spending $8.00 to Keep Their Cars Young

THOUSANDS of motorists are doing it. Thousands more, with money in their pockets and desire in their minds, are going to. $8.00 is a popular price.

SAAL OIL SHOOTER

makes the job of lubricating easy and clean. A heavy, molasses-like oil is used instead of grease. Oil is the only effective lubricant for bearings. *There's no substitute for it.* Engineers and mechanics are unanimous on this point.

A great, nation-wide advertising campaign back of this Oil Shooter is sending car owners into stores where they can get this $8.00 system which frees them from grease and the grimy, tiresome mess that accompanies the lubricating job.

Handy package goods! No order picking! No installation sheets! Truly a practical piece of merchandise. Why not get in line for the big profits that are to come?

Your Jobber Will Give You Full Information

H. G. SAAL COMPANY

1800 Montrose Avenue
CHICAGO, ILL.



RETAIL PRICE—

Complete Set [Oil Shooter with holster and 42 fittings]	Saal Oil Shooter Complete set for Ford Cars and Trucks
$8.00	$5.00

Anywhere in the United States

There is no Substitute for Oil as a Lubricant

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The New AMERICAN
is warranted
for 25,000 Miles
-the distance around the World



Good for an average of three years or more this is the broadest motor-car guaranty ever issued and a definite assurance of the quality and workmanship behind the New American (Model D-66).

Under the terms of this warranty any purchaser can drive the New American a full 25,000 miles—or the distance around the world—and if in the course of this mileage any part breaks under the normal use or wear the factory *will make it good.*

This warranty is represented by a signed certificate issued to the purchaser of every car and providing, incidentally, for periodical inspection by the dealer at intervals not exceeding three months.

Just how we are able to put this remarkable warranty into effect is stated in detail on the reverse side of this page.

LIST PRICES

5 Passenger Touring Car.....	$1785	4 Passenger Sport.....	$1885
7 Passenger Touring Car.....	1850	7 Passenger Sedan.....	2485

F. O. B. PLAINFIELD, N. J.

American

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Why we can warrant the new American for 25,000 miles

Since the announcement of the American 25,000-mile Warranty we have been flooded by inquiries and comment. "How can you do it?" asks one, "when other manufacturers almost never guarantee their cars for more than ninety days?" "Great!" says another, "it had to come if motor cars are to be considered anything but playthings." And—"What is there about the New American," asks still another, "that makes it possible to guarantee your car for the distance around the world?"

We are going to answer these questions right here:—

First, an analysis of service reports on more than 4,000 American cars now on the road shows that claims for the replacement of defective parts registered with the factory over a period of years average less than one-sixth of one per cent—or $3.24 per car.

This applies to cars of previous models, whereas the *New* American (Model D-66) is decidedly sounder in construction and more substantially built than earlier Americans. It is the final expression of the American idea in automobile engineering and construction.

Secondly, in laying out the New American it has been built with an eye, first of all, to durability and serviceability. Part by part, from the 66-H.P. Herschell-Spillman motor to the double-duty Salisbury rear axle, the units entering into its construction have been selected for strength and endurance.

Built around a deep section frame of channel steel (8 inches deep) re-inforced by ample cross-member supports, the American chassis is a model of structural solidity and stability.

Running boards are of steel (not wood) serving as a truss to strengthen the frame.

Fenders are of heavy gauge metal in unit with frame providing extra rigidity.

Springs are *all-alloy* steel, comprising 436 square inches of actual spring surface (about 125 inches more than usual).

At all moving points in motor, transmission and axles bearing surfaces are over ample.

The motor is of the three point suspension type with rear supporting arms of special strength. The valve mechanism is entirely enclosed and operated by a single camshaft. Camshaft and cams are forged in one piece from open hearth steel, annealed, rough machined and rough ground, carbonized, finish machined, case hardened and finish ground. The crank shaft is drop forged from open hearth steel, heat-treated, machined and balanced to a degree. All main and connecting rod bearings are bronze backed and babbit lined.

Rear axle drive shafts are of special chrome nickel steel, heat-treated and Brinnell tested.

These are just a few of many reasons why the New American stands up in service and why we, as the manufacturers of this sturdy well-built car, do not hesitate to undertake to make good any breakage or damage due to defective material or workmanship that may occur until the car shall have been driven a full 25,000 miles.

Automobile merchants will appreciate the sales force of this remarkable warranty—backed by a car that is good enough to be *guaranteed for the distance around the world.*

Let us tell you more about the American 25,000 mile warranty and our fifty-fifty contract for dealers. A postal will bring you full particulars.

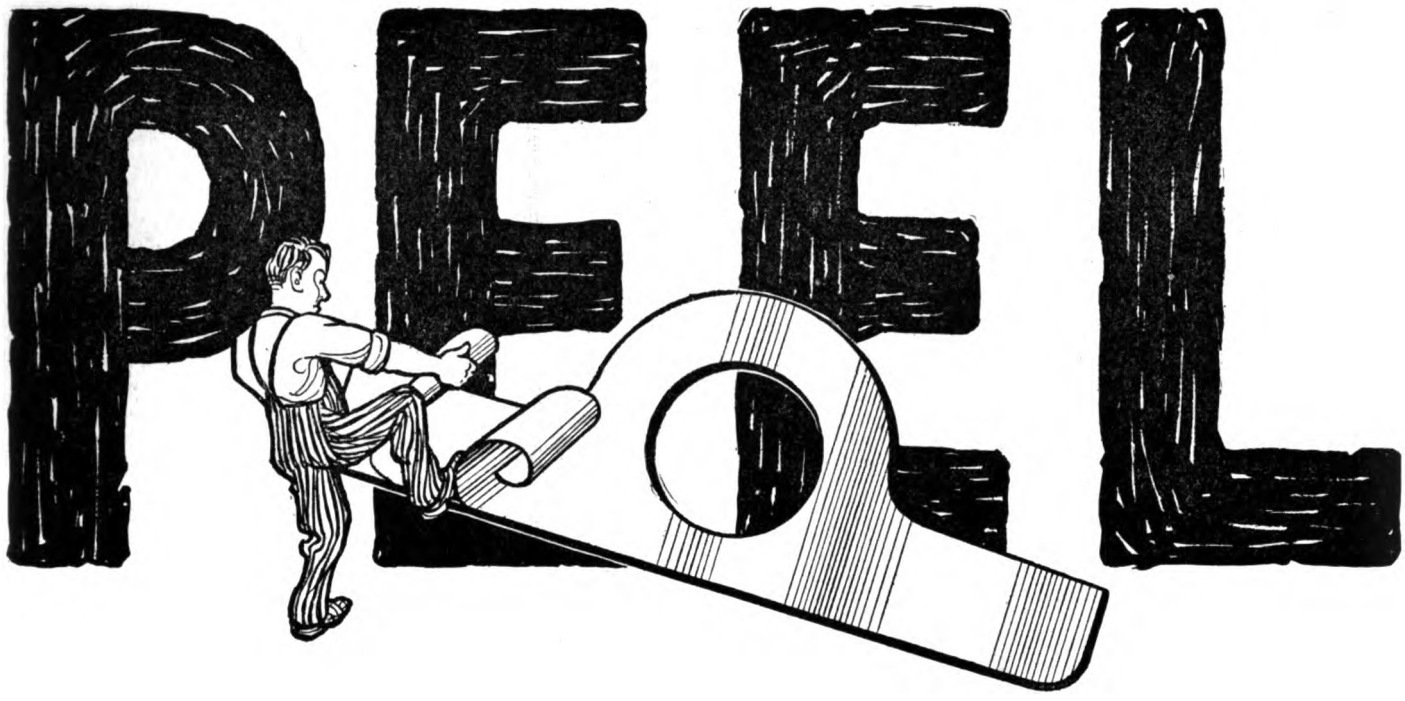
AMERICAN MOTORS CORPORATION

OF NEW JERSEY

Factory and Sales Offices **PLAINFIELD, N. J.**

American

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The main thing about Laminated Shims is the PEEL. If you don't believe it PEEL off your coat and go out in the shop and assemble two or three connecting rod bearings with old fashioned shims; wipe off the perspiration and PEEL a couple of Laminated Shims. Then realize how often that simple PEEL will lead the ordinary service mechanic to make a true bearing adjustment instead of just slapping on the cap anyhow—*it's the PEEL that counts!*

LAMINATED SHIM COMPANY, INC.,
14th ST. & GOVERNOR PL.,
LONG ISLAND CITY, N. Y.

Detroit.....DIME BANK BUILDING
St. Louis.....MAZURA MFG. CO.

LAMINUM

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HAYES

THE WORLD'S BEST — THEY STAND THE TEST

Trade HAYES WOOD, WIRE & STEEL WHEELS Mark



The *Standardized* Wheel

From the infancy of the automotive industry the Hayes Wheel Company has been making the best wheels possible to produce.

No matter what type of wheel is required, wood, wire or steel, Hayes builds it and builds it as fine as long specialization can accomplish. The industry has not only standardized on Hayes wheels, but Hayes wheels have been standardized for the industry—the rims, the lugs, the bolts, the hubs, are interchangeable for different types of Hayes wheels.

To manufacturers or motorists it is a satisfaction to have the advantage of a wheel that is not only made better, but that has the additional advantage of interchangeability of a standardized line, which materially reduces manufacturing costs. These savings are passed on to the ultimate consumer.

HAYES WHEEL COMPANY *of New York,* JACKSON, MICHIGAN

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried in Principal Cities

(62)

WHEELS

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Introducing

THE LÉON RUBAY Voitures de Ville

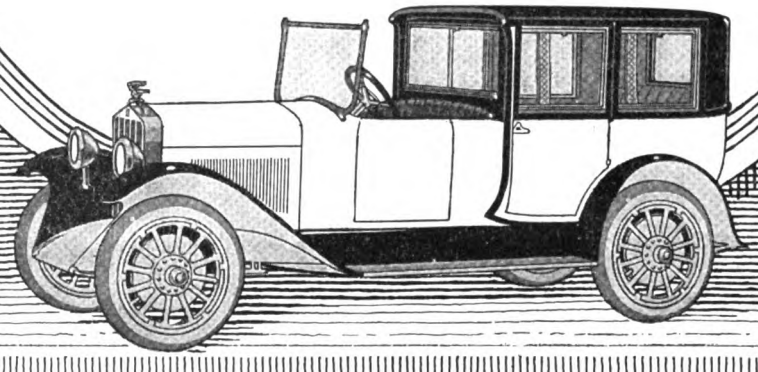
Brougham Coupe Cabriolet
Sedan Berline

THE Voiture de Ville is a familiar sight in the capitals of Europe. It is the approved conveyance for the man of affairs and for the woman of fashion. It is designed for city streets, for dense traffic, for personal convenience, for economy of operation. It is appropriate, distinctive, ideally suited to its purpose.

It is to meet the demand in American cities for an appropriate town conveyance that The Rubay Company has designed and produced its Voitures de Ville along European lines. The Léon Rubay is entirely French designed and built with the exact craftsmanship for which that nation is noted. The best of American engineering skill has adapted the design to American standards.

The Rubay motor is the high speed type, with long stroke and small bore, developing a wide range of power. It is extremely flexible, getting away and picking up speed immediately. It develops only such power as is needed; from ten or twelve horse for city use, to thirty-eight or forty for fast suburban driving or climbing hills. The *four wheel brakes* add a tremendous factor of safety in congested traffic.

The Léon Rubay Voitures de Ville will be exhibited for the first time at the New York Salon, December third to ninth. Dealer representation is invited



THE RUBAY COMPANY
CLEVELAND, OHIO.

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PREST-O-PLATE Logic:

1-The *life* of the battery is *in* the plates.

2-The *longest-lived* plates are PREST-O-PLATES.

Hence: The longest-lived battery has PREST-O-PLATES. It's a PREST-O-LITE, the best all-around, all-weather battery. Investigate it with any PREST-O-LITE Service Station, and see for yourself.

To Dealers: We have a better battery proposition — more profit for you — more and better satisfied customers. Write us.

To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

Write us for open territory.

THE PREST-O-LITE COMPANY, INC.
Main Office and Factory, Indianapolis
New York Office: 30 East 42nd St. Pacific Coast Office and Factory: 599 Eighth St., San Francisco
In Canada: Prest-O-Lite Company of Canada, Limited, Toronto

Oldest service to motorists

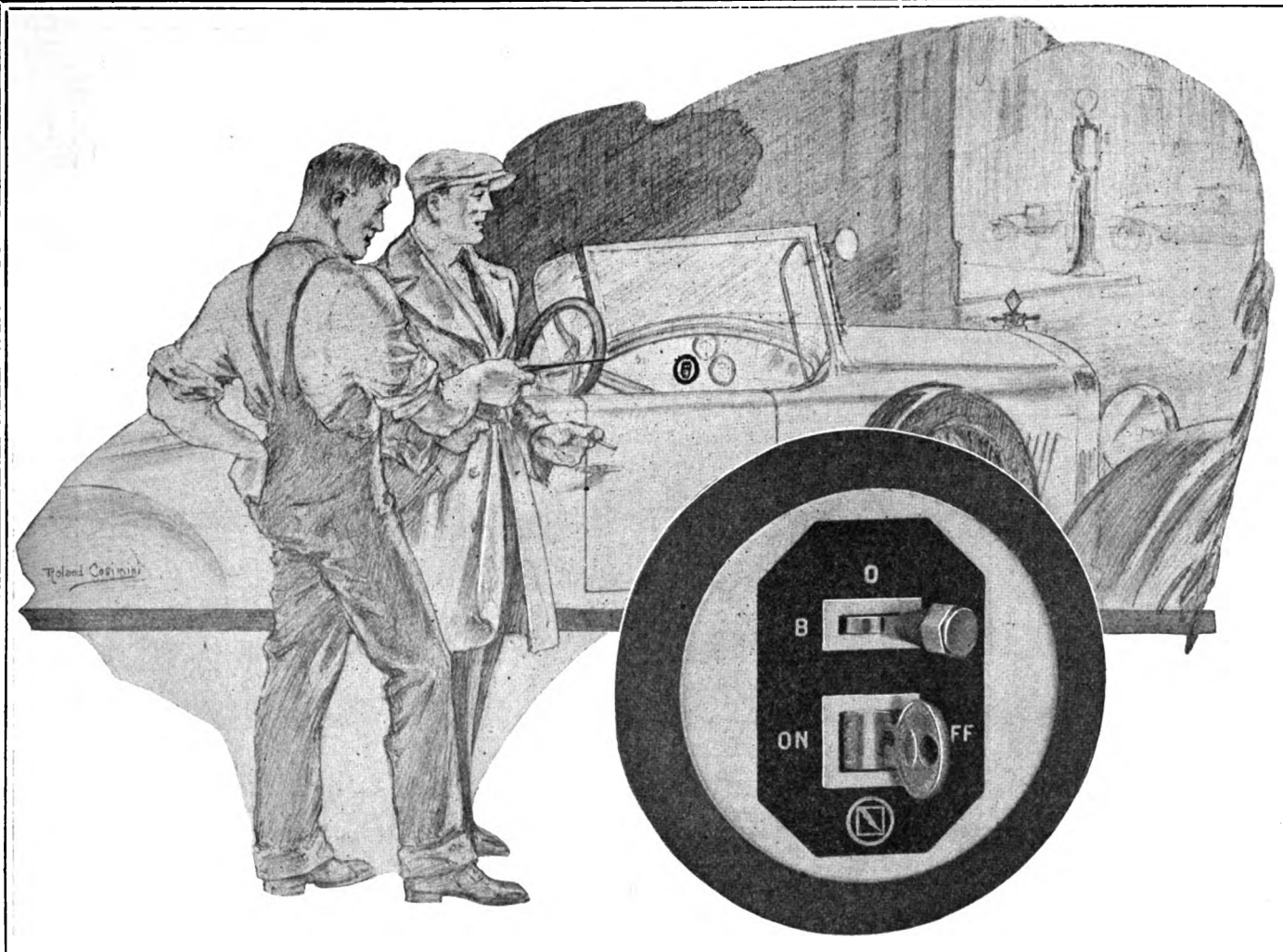


"INSIDE THE BATTERY"

An unusual book explaining how a battery is made, how it works, and how to take care of it. We have a free copy for you. Write for it.



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Show it—they'll buy it

A Switch that combines beauty and mechanical excellence with rare merchandising qualities—

The 190-Y Replacement Switch

Handsomely finished beveled aluminum and black enamel face plate, size to cover space taken by regular round type switch.

Fitted with studs long enough for either wood or metal dash.

Switch block of CETEC, a high dielectric of great mechanical strength. Toggle action (crosswise) for ignition and lights. Pin tumbler lock (with changes) for ignition.

Designed to replace practically any round type switch, the 190-Y eliminates the need for carrying a large assortment of slow movers.

Packed in individual cartons with wiring diagram

Price $4.50

CONNECTICUT TELEPHONE & ELECTRIC COMPANY
Meriden Connecticut

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FORGINGS and CASTINGS

OF

VANADIUM

(The Master Alloy)

STEEL

HAVE

UNSURPASSED

STRENGTH — TOUGHNESS
RESISTANCE TO SHOCK AND FATIGUE

Let our Metallurgical Department
help you solve your steel problems

VANADIUM CORPORATION of AMERICA
120 BROADWAY NEW YORK

Detroit: 849 Book Bldg.

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Repeat Orders

The Sign of a Standard



Sprayed in through the spark plug vents, Motor-Kleen enters the pores of the carbon, disintegrating it into a finely pulverized powder which is blown out the exhaust.

GOOD workmen regard certain tools and products as standards.

Many carbon removers are on the market but Motor-Kleen is fast being universally recognized as the standard.

Most dealers are abandoning their policy of stocking three or four carbon removers to handle Motor-Kleen only.

They, as well as their customers, recognize steady repeat orders as the sign of a standard.

Guaranteed to contain no acids, alkalies or ether.

MOTOR-KLEEN CORPORATION
Factory and General Office
218 Skillman Avenue Long Island City, N. Y.

Pint can (will clean 16 cylinders) $1.00
Spray (assuring correct measure and distribution within the cylinder) ..... .30

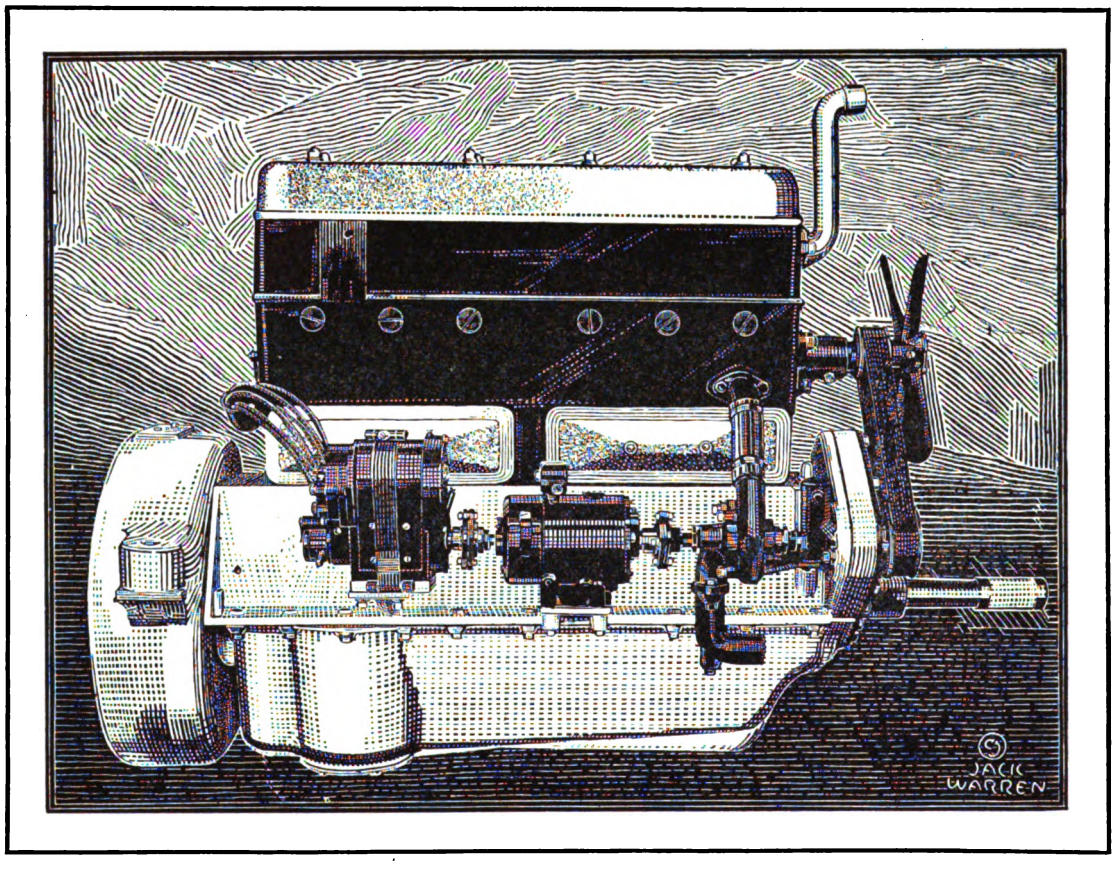


MOTOR-KLEEN
TRADE MARK
The Scientific Carbon Remover

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MERCER

four and six cylinder motor cars



IT is a fact, easily proved among your own circle of business friends, that few fine cars are capable of the trustworthy year-in-year-out performance of a Mercer.

The steady acceptance and growing recognition of this fact are directly due to the manufacturing practice and design which enter into the making of Mercer cars.

Against increased cost of production and prevailing tendencies toward cheaper construction, Mercer has religiously held to its high standards of workmanship and to the use of only the finest materials.

Because Mercer cars afford an unusual measure of satisfaction to the men and women who drive them, the Mercer franchise affords an exceptional opportunity for distributors who understand the real meaning of service economy and owner good-will. A request for the details of our dealer plan does not obligate you in any way.

MERCER MOTORS CO. MERCER MOTOR CARS **TRENTON, N. J.**

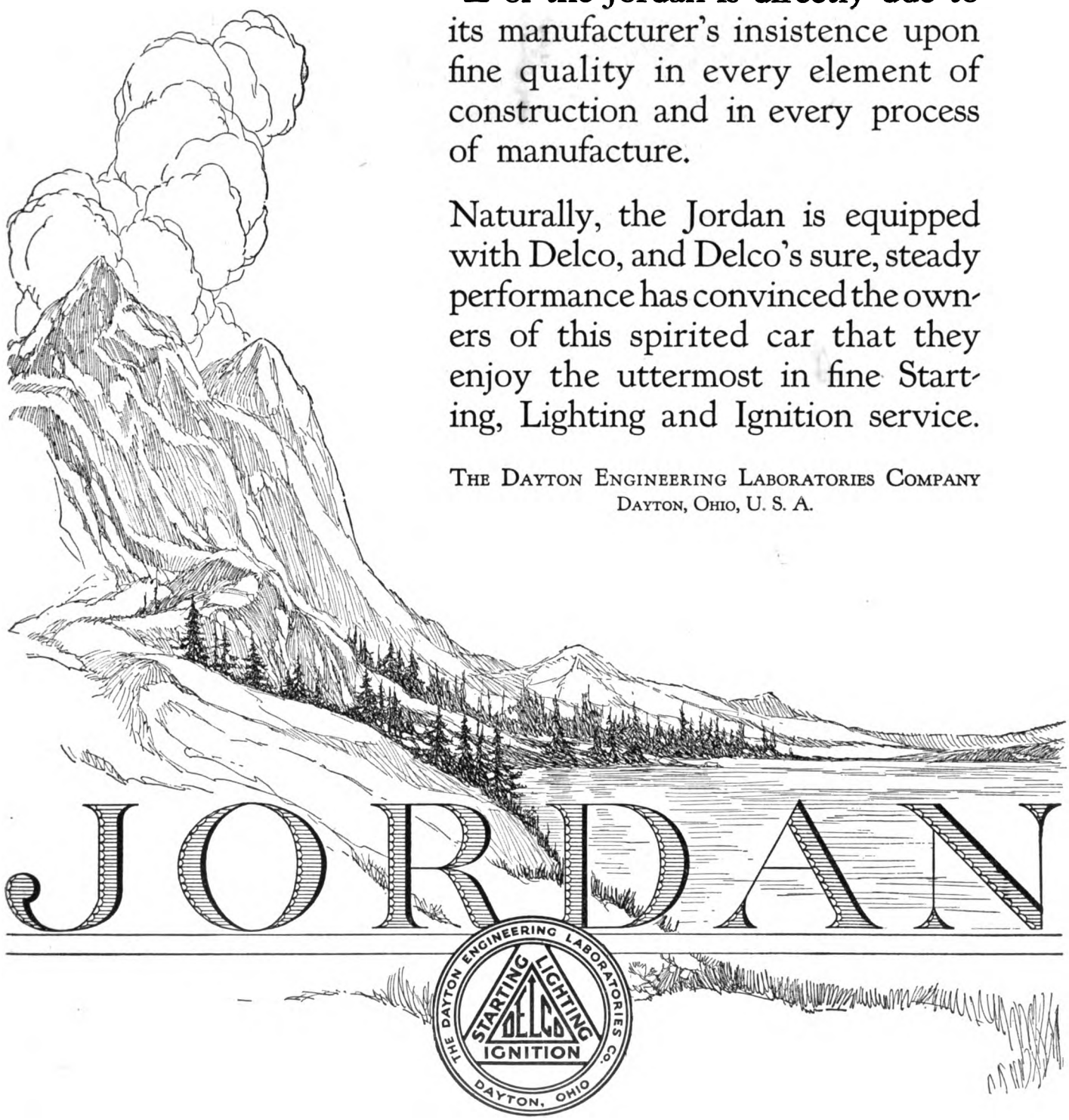
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Delco

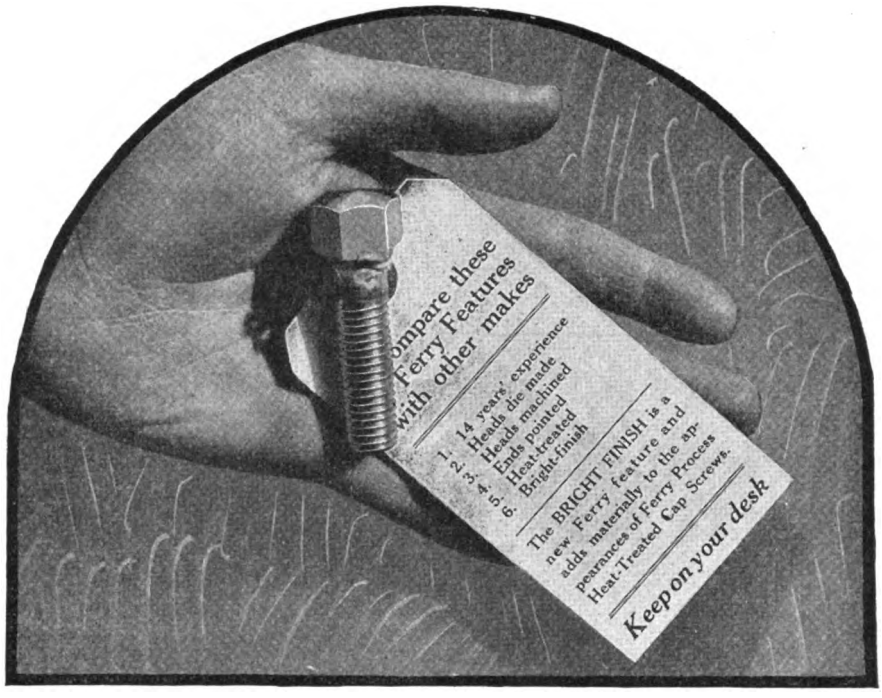
THE exhilarating power and speed of the Jordan is directly due to its manufacturer's insistence upon fine quality in every element of construction and in every process of manufacture.

Naturally, the Jordan is equipped with Delco, and Delco's sure, steady performance has convinced the owners of this spirited car that they enjoy the uttermost in fine Starting, Lighting and Ignition service.

THE DAYTON ENGINEERING LABORATORIES COMPANY
DAYTON, OHIO, U. S. A.



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Ferry Bright-Finished, Heat-Treated Cap Screws

Upset Cap Screws Must Be Heat-Treated!

Engineers know that all cold headed Cap Screws, or other similar upset products, must be heat-treated to eliminate all stresses and strains found in the material during this operation in order to give a dependable and uniform product.

Proper heat treatment guarantees uniformity of material. Ferry Process Screws are heat-treated at no extra cost. Don't experiment! Demand Ferry Heat-Treated products.

For over fourteen years we have been heat-treating our Cap Screws—the pioneers in this field. And today, Ferry Bright-Finished, Heat-Treated Cap Screws are unequalled for quality and workmanship.

Let us quote you prices on your requirements.

The Ferry Cap & Set Screw Co., Cleveland, O.

FERRY

PROCESS SCREWS

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"I Want a NEW Battery—Bone Dry!"

Customer: "Can you fix me up with a really *new* battery which you have had in stock Bone Dry? I don't want a battery that was filled and charged at the factory and has been wearing out ever since. I want a *new* battery!"

Dealer: "I've got the battery you want. It's this Willard Battery with Threaded Rubber Insulation. I'm glad you came here, because no other battery on the market is shipped and stocked Bone Dry. Other batteries have moisture in them—the moisture causes the plates to wear away through chemical action. This Willard Threaded Rubber Battery never had a drop of moisture in it. It's *brand new* clear through."

If you sell batteries, or passenger cars, you can offer this exclusive battery advantage to your customers by recommending the Bone Dry Willard Battery with Threaded Rubber Insulation.

WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio
Made in Canada by the Willard Storage Battery Company of Canada, Limited, Toronto, Ontario

Willard THREADED RUBBER BATTERY

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Regarding the New Arrangement for Service on Timken, Hyatt and New Departure Bearings

UNDER a new arrangement, which became effective October 1, 1922 the Bearings Service Company will maintain service on Timken Bearings only in the following cities:

Timken

Atlanta	*237 Peachtree St.*
Boston	*1107 Commonwealth Ave.*
Chicago	*2021 Michigan Ave., S.*
Detroit	*4159 Cass Ave.*
Los Angeles	*1156 S. Grand Ave.*
Minneapolis	*1115 Hennepin Ave.*
New York City	*230 W. 56th St.*
San Francisco	*1800 Van Ness Ave.*
Seattle	*321 E. Pine St.*
Kansas City	*2435 McGee St.*
Dallas	*2005 Main St.*
Cleveland	*7026 Euclid Ave.*
Denver	*1257 Broadway*
Indianapolis	*521 N. Meriden St.*
Philadelphia	*721 N. Broad St.*
St. Louis	*3300 Locust St.*
New Orleans	*755 St. Charles St.*
Omaha	*1812 Harney St.*
Toronto	*489 Yonge St.*
Buffalo	*1372 Main St*

THE Bearings Service Company, until January 1st, 1923, and after that date The Timken Roller Bearing Service and Sales Company, will distribute Hyatt and New Departure Bearings as authorized distributors of these products, in the following cities:

Timken, Hyatt, New Departure

Pittsburgh	*117 S. Highland Ave.*
Portland	*24 N. Broadway*
Brooklyn	*1408 Bedford Ave.*
Fresno	*2120 Tuolumne St.*
Milwaukee	*145 Oneida St.*
Winnipeg	*327 St. Mary's Ave.*
Salt Lake City	*64 W. 4th St. S.*
Baltimore	*1041 Cathedral*
Newark	*458 Broad St.*
Oklahoma City	*1116 N. Broadway*
Richmond	*1309 W. Broad St.*
Birmingham	*613 S. 20th St.*

ON and after October 1st, 1922, United Motors Service Inc., in its 20 branches will service Hyatt and New Departure Bearings and act as the service department of the Hyatt Roller Bearings Company and The New Departure Manufacturing Company.

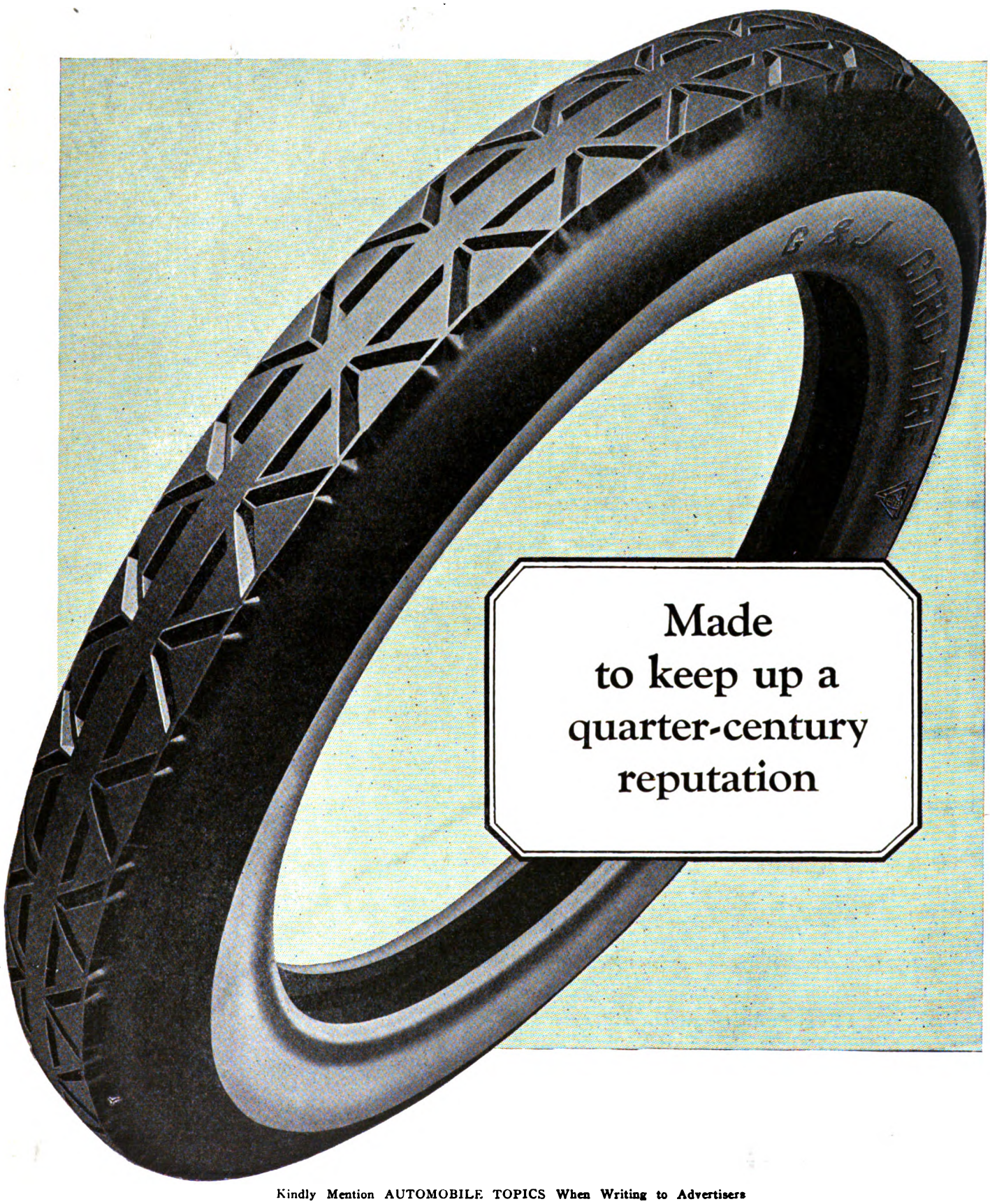
UPON the dissolution of the Bearings Service Company, December 31st, 1922, a new concern, to be known as The Timken Roller Bearing Service and Sales Company will maintain service on Timken Tapered Roller Bearings through direct branches located at the same addresses in all the 32 cities where the Bearings Service Company is now so represented.

Bearings Service Company

General Offices: Detroit, Michigan *Branches in Principal Cities*

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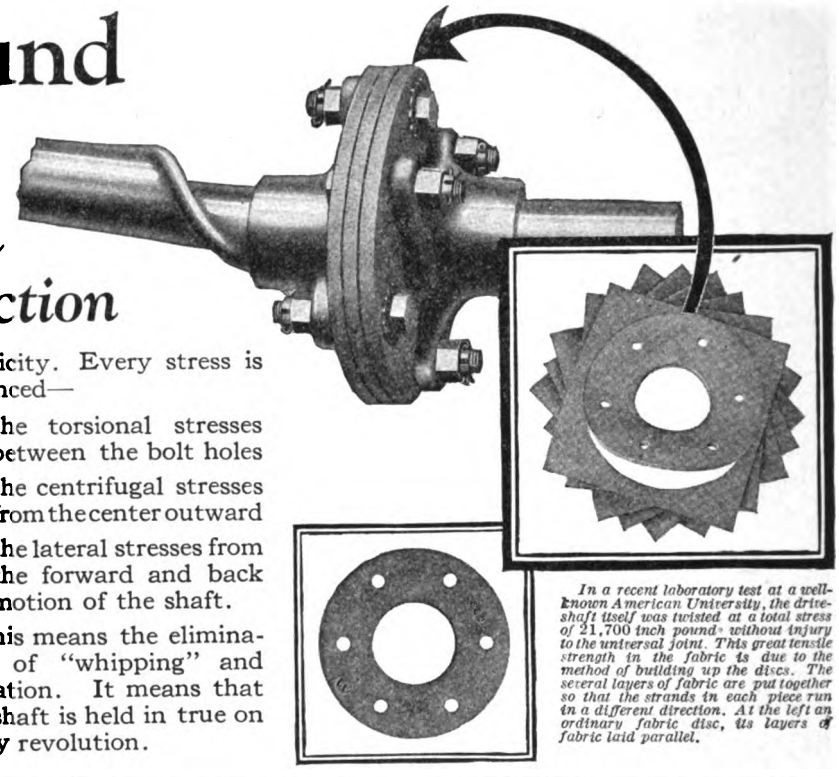
G&J Cord Tires



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A 21,000 Pound Twist

An Experiment with Fanwise Construction



In a recent laboratory test at a well-known American University, the drive-shaft itself was twisted at a total stress of 21,700 inch pounds without injury to the universal joint. This great tensile strength in the fabric is due to the method of building up the discs. The several layers of fabric are put together so that the strands in each piece run in a different direction. At the left an ordinary fabric disc, its layers of fabric laid parallel.

Why more and more manufacturers are switching to the Thermoid-Hardy Universal Joint

UNDER tremendous strain, the two-inch steel propeller shaft was actually twisted—yet the flexible fabric universal joint remained intact. This was the remarkable result of a test made at a well-known American University with the Thermoid-Hardy disc of Fanwise Construction.

The Thermoid-Hardy Universal Joint has been adopted as standard equipment by more than 75 manufacturers of passenger cars, trucks and tractors. Its Fanwise Construction means not only tremendous strength and long wearing qualities, but also freedom from vibration and "whipping" of the shaft.

The two diagrams above tell the story. At the left is an ordinary disc, its layers of fabric laid parallel. The three black holes are the driving bolts—the three white ones the driven. Notice that the left-hand driving bolt is the only one that can pull in the direction of the strands of cotton. The other two must pull on a bias. This stretches the whole disc out of true, causing vibration and "whipping" of the entire shaft.

In contrast, examine the Thermoid-Hardy patented Fanwise Construction. Notice how the disc is built up with the strands of each layer of fabric running in a different direction. Each sector is of uniform strength and elasticity. Every stress is balanced—

—the torsional stresses between the bolt holes

—the centrifugal stresses from the center outward

—the lateral stresses from the forward and back motion of the shaft.

This means the elimination of "whipping" and vibration. It means that the shaft is held in true on every revolution.

Fast replacing metal universals

So flexible that it cushions every shock of the road—yet strong enough to withstand a 21,000 pound twist! Capable of going 60,000 miles without adjustment, lubrication, or attention of any kind—yet built to stand the hardest service on the heaviest trucks!

The Thermoid-Hardy disc type of universal joint marks another forward step in automobile construction. Metal universals that need constant attention and that transmit every shock of the road are fast being displaced.

You should have this book—sent free to any engineer or dealer

We have prepared a book, "Universal Joints—Their Use and Misuse," that treats the whole subject from all its angles—the mechanical principles involved, construction, lubrication, processes of manufacture, tests for strength, and records of performance. Send for your copy today.

LIST OF USERS

American British Mfg. Co.
Allis Chalmers Mfg. Co.
Anderson Motor Co.
The Autocar Co.
Available Truck Co.
Barley Motor Car Co. (Roamer)
Crow-Elkhart Motor Corp.
Jas. Cunningham Son & Co.
Dart Truck & Tractor Corp.
The Dauch Mfg. Co.
Diamond T Motor Car Co.
Doane Motor Truck Co.
Elgin Motor Car Corp.
Elgin Street Sweeper Co.
Fageol Motors Co.
Fifth Ave. Coach Co.
H. H. Franklin Mfg. Co.
Garford Motor Truck Co.
Gramm-Bernstein Motor Truck Co.
Handley Knight
Hawkeye Truck Co.
Hendrickson Motor Truck Co.
Highway Motors Co.
Holt Mfg. Co.
Indiana Truck Co.
International Harvester Co. of A., Inc.
International Motor Co.
Jackson Motors Corp.
Kelsey Motor Co.
Kentucky Wagon Mfg. Co., Inc.
Kenworthy Motors Corp.
King Motor Car Co.
King Zeitler Co.
Lakewood Eng. Co.
Larrabee-Devo Motor Truck Co.
Lexington Motor Co.
Locomobile Co.
Menominee Motor Truck Co.
Mercer Motors Co.
Moreland Motor Truck Co.
McFarlan Motor Co.
Nelson & LeMoon
E. A. Nelson Automobile Co.
Nelson Motor Truck Co.
D. A. Newcomer Co.
O'Connell Motor Truck Co.
Oliver Tractor Co.
Oneida Motor Truck Co.
Packard Motor Car Co.
Parker Motor Truck Co.
Patriot Motors Co.
Reliance Motor Truck Co.
Reo Motor Car Co.
Reynolds Motor Truck Co.
Root & Van Dervoort Eng. Co.
Sanford Motor Truck Co.
Southwark Fdy. & Mach. Co.
Sprague Electric Co.
Stoughton Wagon Co.
Studebaker Corp.
Stutes Mar Tractor Co.
Templar Motors Co.
Tioga Steel & Iron Co.
Towmotor Co.
Traffic Motor Truck Corp.
Transport Truck Co.
Twin City Four Wheel Drive Co., Inc.
United Motors Co.
Walter Motor Truck Co.
Ward La France Truck Corp. Inc.
Watson Products Corp.
Geo. D. Whitcomb Co.
Wichita Motors Co.
H. E. Wilcox Motor Co.
J. C. Wilson Co.
Willys-Overland, Inc.
Zeitler & Lamson Truck & Tractor Co.

THERMOID RUBBER COMPANY

Sole American Manufacturers

Factory and Main Offices: Trenton, N. J.

New York Chicago Los Angeles Detroit Cleveland Kansas City Seattle Atlanta Boston London Paris Turin

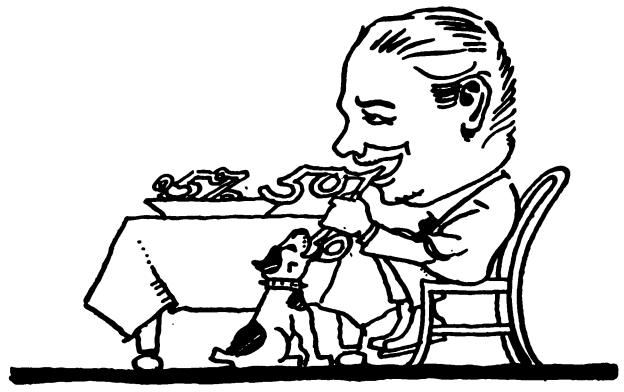
THERMOID-HARDY UNIVERSAL JOINT

Fanwise Construction for strength

Makers of "Thermoid Hydraulic Compressed Brake Lining" and "Thermoid Crolide Compound Tires"



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Discount Eaters

How Empire Has Removed This Evil To Make Your Profits Free and Clear

The dealer who has scraped to earn his 5% "for cash" often finds that this expected profit has been eaten up by tax and freight charges.

Empire Tires are sold to you Tax and Freight Paid—a vast advantage, which is set forth in

EMPIRE PROFIT POINTER
No. 4. Tax and Freight Paid

Glowing discounts become insignificant when wiped out to a great extent by tax and freight charges. That the dealer may have his full profit, Empire Tires are offered Tax Paid—F.O.B.—Destination.

SOMETHING TO BE SERIOUSLY CONSIDERED when you buy tires. Yet it is only one of the features of the new Empire dealers' proposition. We invite comparison in appearance, size, weight, endurance and profit to the dealer.

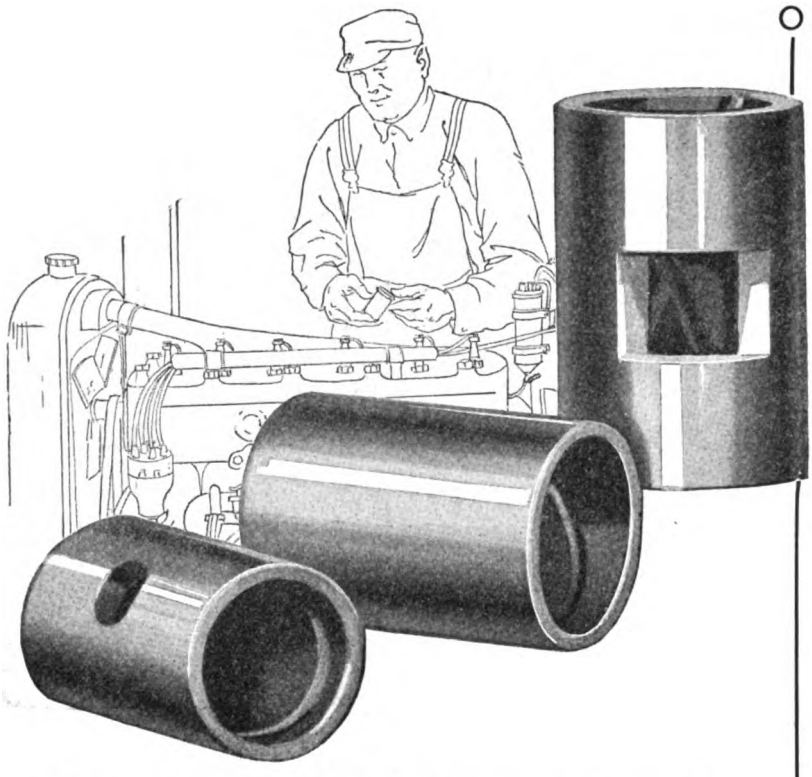
Write Today Dept. ET-5



Empire Tire & Rubber Corporation

FACTORIES TRENTON, N.J. U.S.A. MAIN OFFICES

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Bushing Replacement of Positive Quality

Automotive service everywhere, so far as new bushings are concerned, is given a constant and dependable high character by the application of Bunting Standard Bushings carried in stock at the factory and all Bunting branches and by the leading auto parts jobbers. Bunting Standard Bushings are completely machine finished ready for assembly.

Standard Piston Pin Bushings for all leading automobiles, trucks, tractors and motors are shown on list No. 19.

THE BUNTING BRASS & BRONZE COMPANY
753 Spencer Street - Toledo, Ohio

NEW YORK CITY: Grand Central Palace, Vanderbilt 7300.
CHICAGO: 722 So. Michigan Ave., Wabash 9153.
CLEVELAND: 1362 E. 6th Street, Main 5991.
SAN FRANCISCO: 198 Second St., cor. Howard, Douglas 6245.
BOSTON: 36 Oliver Street, Main 8488.

Write your nearest Distributor

ALABAMA—Birmingham, Birmingham Bearing Co. **CALIFORNIA**—Fresno, Chanslor & Lyon Co., Piston Service Co. Los Angeles, Chanslor & Lyon Co., John Diehlman & Co. Oakland, Chanslor & Lyon Co. San Francisco, The Automotive Parts Co., Bryce Howatson, Bunting Branch, 193 Second St., cor. Howard; Chanslor & Lyon Co., Patterson Parts Co., Triangle Parts Co. San Jose, Farmers Job Shop. Santa Anna, Kinslow Machine Works. Stockton, Automotive Parts Co., W. L. Maxwell Co. **COLORADO**—Denver, Denver Gear & Parts Co., Wm. Dominick, Albert Lang. **WASHINGTON, D. C.**—Baxmuro Eng'r. Co., National Service & Supply Co., Inc. **GEORGIA**—Atlanta, Automobile Piston Co. Savannah, Motor Cylinder Grinding & Machine Co. **IDAHO**—Twin Falls, E. J. Stepken Cylinder Grinding Co. **ILLINOIS**—Chicago, Beckley, Ralston Co., Bunting Branch, 722 So. Michigan Ave.; Clawson & Bals, E. D. Kimball & Co., Lammert & Mann Co., The Trindl Co., U. S. Mfrs. Sales Corp. **INDIANA**—Indianapolis, Bearings & Accessory Co., The Gibson Co., Indiana-Watkins Mfg. Co., Homer & Keller Co. South Bend, Tik-Tok Auto Shops. **IOWA**—Clinton, Clinton Auto Parts Co. Des Moines, Mitchell-Morris Co. Waterloo, All States Rebabbitting Service. **KANSAS**—Wichita, Watkins Mfg. Co. **LOUISIANA**—Lafayette, Attakapas Iron Works. New Orleans, Auto Parts Co. **MASSACHUSETTS**—Boston, Bunting Branch, 36 Oliver St., Dauker & Donahue, Evans-Lawrie Co., Linscott Supply Co., Waterhouse Welding Co., John V. Wilson Co. Springfield, Highland Motor Grinding Co., L. L. Bousquet. Worcester, John J. Adams. **MICHIGAN**—Detroit, Baldwin Parts Co., Willis Warren Corp. **MISSOURI**—Kansas City, Douglas-Dahlin Co. St. Louis, Auto Parts Co., Automotive Equipment Co., Beck & Corbitt Iron Co., H. & H. Machine Co. **NEBRASKA**—Omaha, Sunderland Machine & Supply Co., W. M. Wilson Co. **NEW JERSEY**—Newark, Automotive Equipment Co., L. Lawrence & Co., Newark Auto Specialties Corp. Trenton, Chas. Schick & Co. **NEW YORK**—Albany, Detroit Supply Co. Brooklyn, G. & B. Motor Parts, Inc., E. Krieger & Son, Wallace's Cyl. Service Station, Willoughby Auto Parts Co. New York City, Bunting Branch, Grand Central Palace; G. & B. Motor Parts, Inc., L. Lawrence & Co., Motive Parts Corp., E. L. Ober Co., Inc. Poughkeepsie, Chas. M. Clays' Sons. Rochester, Rochester Auto Parts Co., Belcher Sales & Engineering Co. Syracuse, Chase Truck Service Co., Clancy Hardware Co., Onondaga Auto Supply Co., Watkins Mfg. Co. **NORTH CAROLINA**—Charlotte, Southeastern Distributing Co. **OHIO**—Ashtabula, Automotive Shop. Cincinnati, Julius Bantlin Co. Cleveland, Bunting Branch, 1362 E. 6th St., Cylinder Regrinding Co., L. Lawrence & Co. Springfield, Automotive Engineering Works. Youngstown, E. E. Emery Co. **OKLAHOMA**—Oklahoma City, Sharp Auto Supply Co., Wolff Eagen Motor Supply Co. **OREGON**—Portland, Chanslor & Lyon Co., Motor Equipment Co. **PENNSYLVANIA**—Fernwood, Starbuck Auto Co. Haselton, Benjamin Motor Supply Co. Philadelphia, Vulcan Auto Parts Co. Pittsburgh, Trauter Mfg. Co. **RHODE ISLAND**—Providence, Walter E. Thornley's. **SOUTH CAROLINA**—Columbia, E. A. Jenkins. **TENNESSEE**—Memphis, Automobile Piston Co. **TEXAS**—El Paso, Car Parts Depot. Houston, Tom L. Walker. San Antonio, American Sales Co. **UTAH**—Salt Lake City, Harry L. Bracken Co., Karl Winter. **VIRGINIA**—Richmond, Motor Parts Corp. **WASHINGTON**—Seattle, Chanslor & Lyon Co., Piston Service, Inc. Spokane, Chanslor & Lyon Co. **WISCONSIN**—Kenosha, Fred P. Rudy. Milwaukee, The Trindl Co. **WYOMING**—Casper, Harry L. Bracken Co. **CANADA**—**Alberta**—Calgary, Motor Car Supply Co. **Ontario**—Toronto, Auto Parts Co.

BUNTING BUSHINGS

PATENTED

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The Unseen Hand In Your Cash Drawer

WOULD you choose to sell a motor car on which no service was available in your territory? Of course not. To do so places too great a risk on your profits.

Then why not demand the same service facilities with the car accessories you handle?

When you sell Stewart Products, you and your customers are offered expert service at 55 exclusive Stewart Stations, located in principal cities thruout the United States.

Each Service Station and every one of the 120 Authorized Distributers carries a complete line of Stewart Products and Repair Parts. You get quick service on all orders.

Such a method of distribution and service brings right into your territory a complete stock of Stewart Accessories and a specialized Same-Day Service on all repair work. It nets you a large saving in time and transportation charges, overhead that cuts into your profits—the unseen hand in your cash drawer.

STEWART-WARNER SPEEDOMETER COR'N
CHICAGO, ILL., U. S. A.

Stewart
PRODUCTS
USED ON 7 MILLION CARS

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International

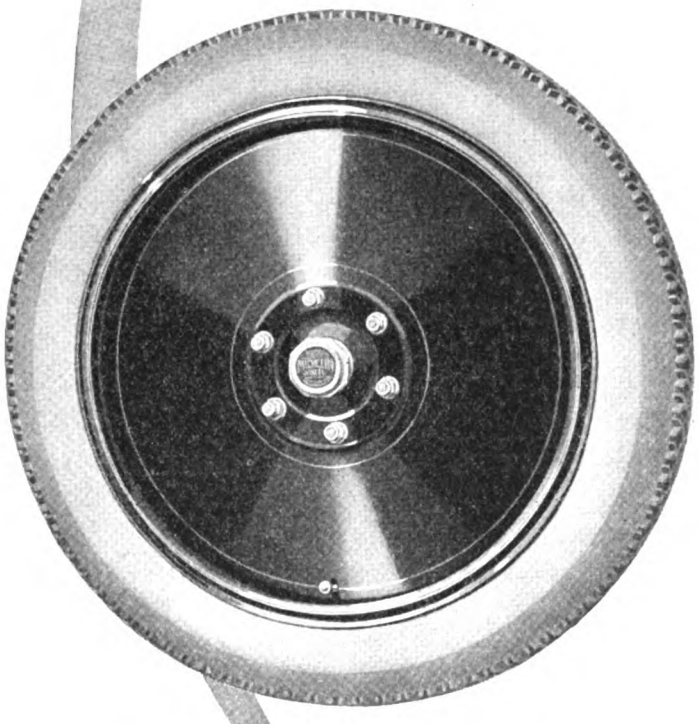
In France, in England, in Italy, wherever you go in Europe, you will find Michelin Steel Wheels predominant on the finest standard and custom built cars.

Their safe sturdiness and exquisite beauty have won for them an unrivalled position of leadership in practically every country of the world.

Dodge Brothers, Studebaker, Willys-Knight, Chalmers, Winton, H. C. S. and Nash are among those American manufacturers who have adopted Michelin Steel Wheels as standard or optional equipment.

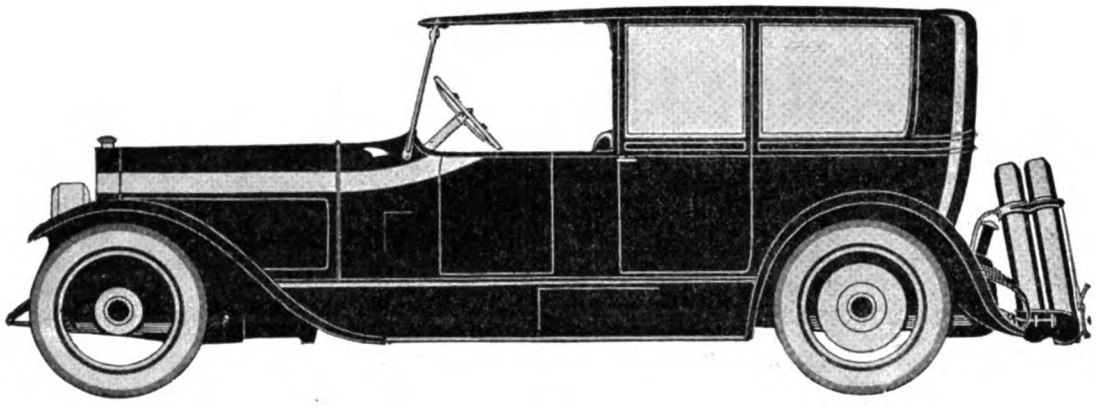
Five Convex Wheels Per Car

BUDD WHEEL COMPANY
Philadelphia



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Michelin
STEEL WHEELS

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Three-Quarter Limousine $8,900

There is no better motor car
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Stevens-Duryea

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Opportunity Knocks At Your Door, Mr. Manufacturer

Services of a man, Nationally Known, not yet over 45 years old, who has had over 25 years' experience in both selling and manufacturing, are available to you.

He wants the exclusive selling rights on a commission basis for several standard lines, representing A No. 1 companies who are known throughout the trade.

He will confine his efforts to selling stampings, forgings, castings both gray iron and malleable, and screw machine products, with offices in Detroit and Cleveland.

It is an interesting proposition. Let him tell you about it.

Address,

Box 240

AUTOMOBILE TOPICS



Union Drawn Steel Co

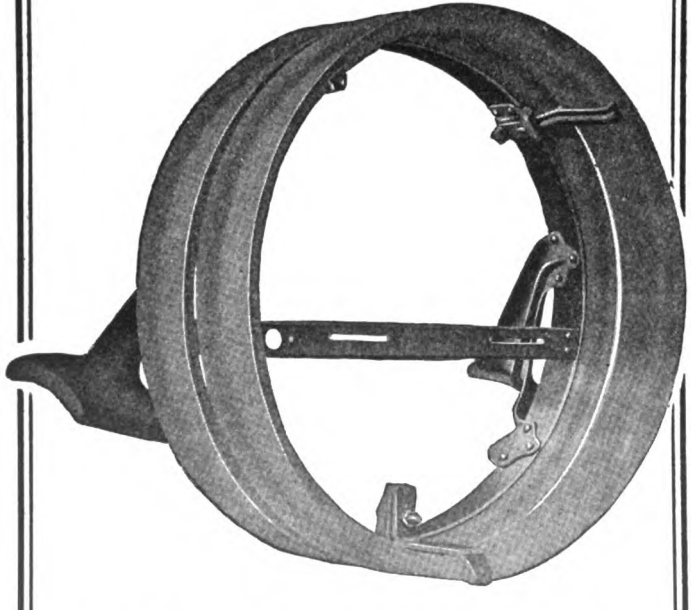
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Many manufacturers who have long thought of the possibilities of using Alloy Steels for certain parts of their products have put off and put off actually deciding the question. To determine such an important subject, they have thought, would take perhaps years of research work and otherwise be a long-drawn-out and costly process.

The fact of the matter is that our Research Laboratories have been engaged for years in the preparation and compilation of data on every kind of commercial alloy steel—Nickel, Uma, Chromium, Vanadium, Molybdenum, etc., and are in position to short-cut into the heart of any problem that is in the steel.

What is the part or product you want to make stronger, tougher, lighter, harder, more wear resistive? We can tell you the right steel quickly and prove it by experiment. Such service is without cost to you.

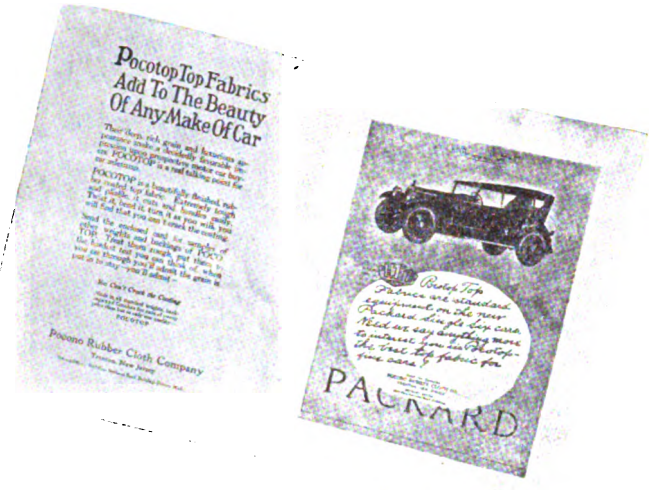
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AGATHON ALLOY STEELS

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It will interest you as it has hundreds of other automobile manufacturers, engineers and executives.

A postal will bring it, with samples of POCOTOP, the industry's most-talked-about Top Fabric.

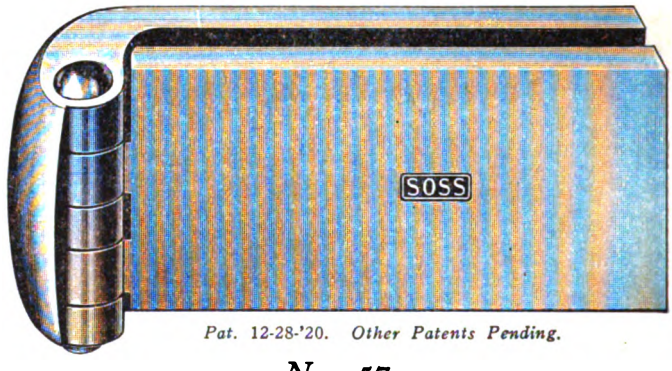
It is made in all weights and backings for cars of every price class.

You Can't Crack the Coating

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REG. U. S. PAT. OFF.

POCONO RUBBER CLOTH COMPANY
TRENTON, NEW JERSEY
Detroit Office, 1617 First Nat. Bank Bldg.

PRESSED STEEL



Pat. 12-28-'20. Other Patents Pending.

No. 57

Interchangeable Parts
Greater Strength
Reduced Cost

The use of pressed steel and new methods of quantity production have enabled us to offer this improved hinge at a substantial saving in cost. Semi-straight, covered joint type, 1¾" wide, any length to 6".

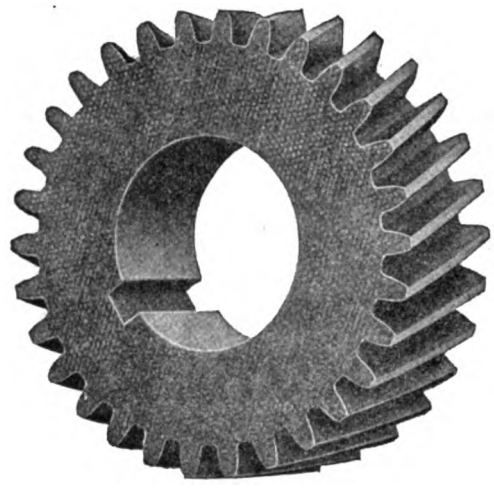
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Two Mitchell Cars, in sealed hood tests —10,000 miles over all kinds of roads, rocks and ruts—jolts and jars—through all kinds of weather—under every conceivable condition. There is a test that tells the story of

CONDENSITE CELORON

Silent Timing Gears

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Banish the noisy timing gears or rattling chain drives now. Learn more about these remarkable Celoron silent gears, that eliminate the grind of metal upon metal, that cushion the shock of gear upon gear; and that help lengthen the life of every part of the motor because they cushion and absorb the shock. Your local dealer, authorized service station or garage repair man can install them. If they can't supply you, write us direct.

Diamond State Fibre Company
Bridgeport (near Philadelphia), Penna.

Branch Factory and Warehouse, Chicago
Offices in Principal Cities

In Canada: Diamond State Fibre Company of Canada, Ltd., Toronto



A Finish Fight

THE smaller crab, more aggressive, had all the best of the battle. The larger one was handicapped because he had only one fighting claw.

How strikingly this battle sums up the story of a recent experience of our own in a large machine shop. It was a question of which should survive, old methods—or new.

The job was to remove machine oil from brass tubes before japanning. The old method of cleaning with caustic was slow and gave frequent trouble.

New methods were instituted and Oakite Platers' Cleaner went at the work aggressively, like the young crab, and took hold with all its claws. It cleaned the work perfectly, 3 times faster than caustic. The tubes were made absolutely clean before japanning, a condition never before possible when caustic was used. A considerable saving in money resulted from the elimination of rejects—and naturally O. P. C. won the battle.

Wouldn't you like to clean your work 3 times faster and cut out rejects in your shop? Let us stage a competitive test in your plant between Oakite Materials and whatever you are using. Under our liberal guarantee we will ship you enough Oakite materials for a 30 day trial. If we can't clean your work faster and better for less money, it won't cost you a cent. That's fair, isn't it? May we ask one of our experienced Service Men to call to arrange the details with you?

This Advertisement is one of a series based on actual occurrences in the

Write us.

OAKITE

MANUFACTURED BY
OAKLEY CHEMICAL CO.
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Jorgensen Hood-Silencers Stop Hood Rattles

One of the simplest and at the same time the most efficient automobile accessories introduced this season is the Jorgensen Hood-Silencer made by the Jorgensen Hood-Silencer Company of Erie, Pa. Their action is so positive and the device so simple that it is hard to understand why this invention has not been placed on the market before. The silencer is a conical dome of pure rubber with the apex of the cone so split and drilled as to fit snugly around the hood fastener, while the base of the cone is hollowed into a vacuum cup which fits snugly against the side of the hood, quickly and permanently eliminating hood rattles. The price is nominal, being $1.00 for a set of four, and they can be attached to any car in two minutes.

(Note—The editor of the American Motorist has used a set of these silencers for several weeks and has found them highly satisfactory.) Clipped from October issue.

What American Motorist, the Official Publication of the A. A. A., thinks of

Jorgensen
SILENCERS

Dealers—nice profit—snap into it—Let us hear from YOU.

Over one-sixth of a million sold in past five months.

JORGENSEN HOOD SILENCER CO.
Hampton Road, Erie, Pa.

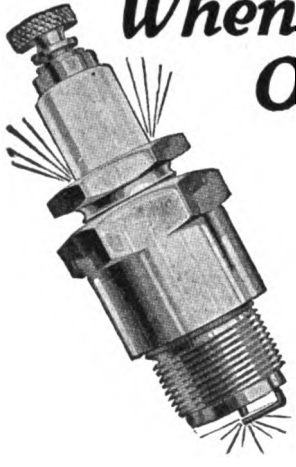
Conditions warrant a closer co-operation between Buyer and Seller.

We think we have some important matters of interest to you, and would like very much to confer with you on your future requirements.

Hoping for an opportunity to serve you.

EDMUNDS & JONES CORP.
Buchanan & Lawton Avenues
DETROIT, MICHIGAN

When the Juice Oozes out!



The spark plug is no better than its insulation. If that becomes porous and fails to carry the vital spark into the combustion chamber, good-night efficiency!

Spark plug makers who want to protect themselves and the public equip their plugs with "775", the perfect insulator. When you see "775" stamped on the porcelain you can feel assured that you are buying a good spark plug. It will pay you to buy no other.

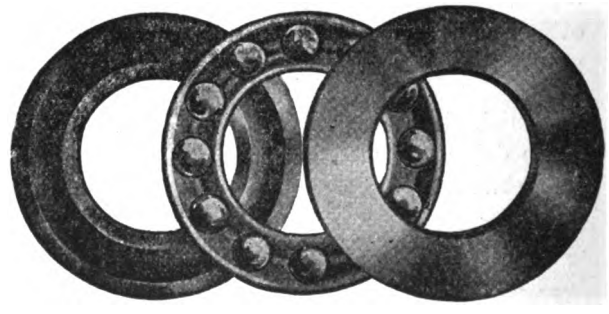
"775"

FRENCHTOWN PORCELAIN CO.
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"Established 1910—Busy Ever Since"

STANDS THE TEST

The Bearings Company of America



Your present Thrust Bearings sizes duplicated.

Thrust Ball Bearings made to your B/P's. Quotations made promptly on all inquiries.

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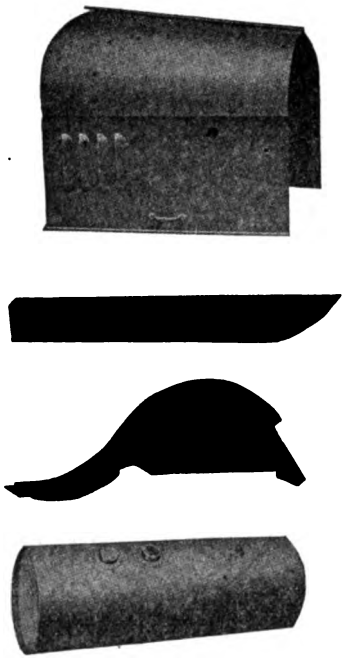
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Quality Products Throughout



195 R. H. Front Fenders.
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6 Six-cyl, Gas Tanks enamelled.
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321 prs. Hood Sills.
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8 Hoods.
164 Four-cyl. Front Shields.
23 Four-cyl. Front Shields.
46 Front Shields.
135 prs. Side Pans.
6 Crates Side Pans (13 & 15 pr. to crate).
36 Six-cyl. Bottom Pans.
200 prs. Four-cyl. Bottom Pans.
9 Radiators, complete, 6-cyl. Car.
12 Radiators, complete, 4-cyl. Car.

Here is an exceptional opportunity to secure a job lot of

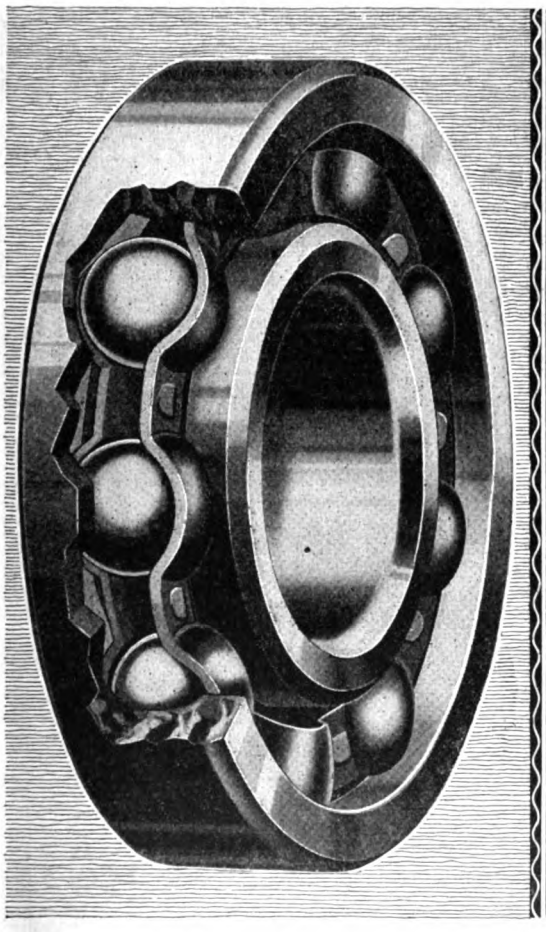
Pressed Metal Parts

of quality at a price that is lower than cost of production. They were made to order for a car now suspending output—they are new, up-to-date in design and adaptable for most medium sized cars. The sizes are popular and the hoods, fenders, etc., are of handsome type.

For Sale in Whole or in Part—

Goods are crated and held at the shipping point for immediate delivery. Such an order would take time to fill—by buying now you save time as well as money. This is an opportunity for builders of assembled cars, body-builders and parts dealers. Blue prints and full details on request.

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It is manufactured under ideal conditions in a plant specially equipped and devoted exclusively to the production of small bearings.

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Tens of thousands of Ford owners are now obtaining more miles on a gallon—quicker getaway—easier starting—increased power and speed—all because of having their cars so equipped.

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This Company manufactures Sheets adapted to every phase of the industry, Auto Body Stock, Fender and Hood Stock, Crown Fender Stock; also material for Tanks, Guards, Radiators, Frames, etc.
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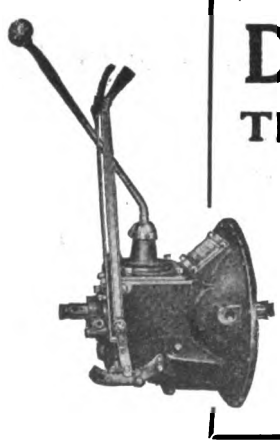
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Refer your cam and accessory drive problems to Morse Engineers

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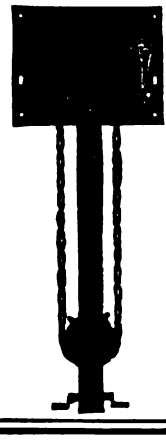
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For trucks up to one-ton capacity, and Passenger Cars.

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Worcester Division
WORCESTER, MASS.

Ingalls-Shepard Division
HARVEY, ILL.

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A well-known car manufacturer writes: "We will carefully check the proofs and advise you of any discrepancies or any changes we desire to make. Obviously, we want to cooperate with you as it is to our mutual interest and benefit that the figures and symbols be accurate in every particular."

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It is just such cooperation and willingness to cooperate, as that quoted above, that gives the Table its official character. All data listed is authorized by the manufacturers themselves.

The Table will be found on pages 1281-3 of this issue It is revised to November 6.

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MUNCIE, INDIANA

WARNER GEAR CO

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The largest and best equipped frame plant in the world

A-O-SMITH CORPORATION

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From Steel, Brass, Bronze, Copper and Aluminum.

We also specialize in Case Hardening and Tool Tempering.

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Philadelphia Office: 1218 Chestnut St.
Cleveland Office: 415 Schofield Bldg.
Detroit Office: 914 Ford Building



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HEAVY DIE FORGINGS

The Park Drop Forge Co.
Cleveland, Ohio

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A product whose uniformly high quality contributes largely to the high quality of the better class of motor cars and trucks. Send us your specifications.

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SPINDLES
RADIUS RODS
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FORTY YEARS EXPERIENCE

Anything that can be Drop Forged up to 300 lbs.

Any Analysis of Steel

Drop Forgings are made from Structural Material Uniform in Quality, Chemical and Physical Properties.

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DROP FORGINGS
UNION SWITCH & SIGNAL CO.
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TWIST DRILLS, CUTTERS, REAMERS AND SPECIAL TOOLS

NATIONAL TWIST DRILL & TOOL CO.
DETROIT, U.S.A.



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Automobile Topics

you need every week

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PRESSED STEEL

MOTOR CAR and TRUCK FRAMES
AXLE HOUSINGS, AXLE HOUSING COVERS, BRAKE DRUMS, CLUTCH DISCS, RUNNING BOARDS, STEP HANGERS, TORQUE ARMS, ETC.

SHARON PRESSED STEEL CO.
MAIN OFFICE AND WORKS:
SHARON, PA.

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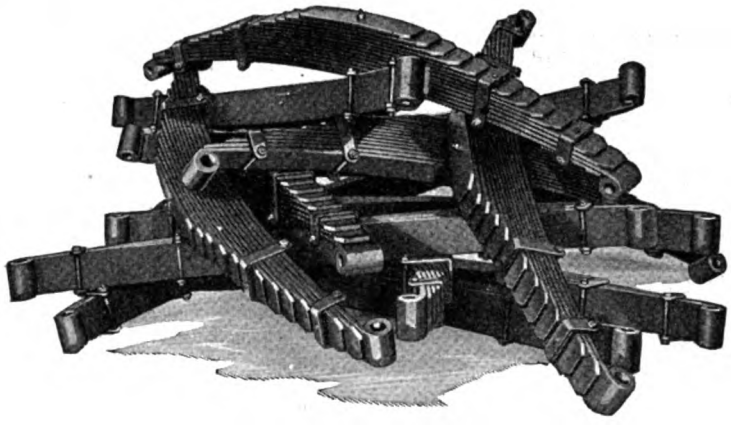
Give strength and durability to your product. Uniform in size, in metal and in balance, they finish economically. Write for a Champion Engineer or send in your blue prints.

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New York Office—30 Church St.
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Genuine Made Only By

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TOLEDO, OHIO, U.S.A.

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They should also realize that upon their death, their wives, ignorant of investment values, would be shining marks for promoters, swindlers and well meaning friends.

Now is the time for both husbands and wives to learn the principles of sound investment.

Our business is to help business men invest conservatively.

Particulars on request.

Paul Plunkett & Co.
INCORPORATED
Financial Counsel
National City Building
17 East 42 Street
New York

INDEX TO ADVERTISEMENTS

A

Ajax Rubber Co., Inc. ... 1277
American Motors Corp. of New Jersey 1296a
American Sheet & Tin Plate Co. 1322
Anderson Motor Co. 1275

B

Bearings Company of America 1320
Bearings Service Co. 1308
Bethlehem Steel Co., Inside Back Cover
Bower Roller Bearing Co. 1316
Brown-Lipe Chapin Co. ... 1322
Brown-Lipe Gear Co. 1322
Budd Wheel Co. 1314
Buick Motor Co. 1229
Bunting Brass & Bronze Co. 1312

C

Cadillac Motor Car Co. ... 1248
Central Steel Co. 1317
Chalmers Motor Car Co. .. 1224
Champion Machine & Forging Co. 1324
Connecticut Telephone & Electric Co. 1301
Continental Motors Corp., Inside Front Cover
Courier Motors Co. 1291
Crosby Co. 1324

D

Dayton Engineering Laboratories Co. 1305
Detroit Carrier & Manufacturing Co. 1316
Detroit Pressed Steel Co. 1218
Diamond State Fibre Co. 1319
Dodge Brothers 1230
Doehler Die-Casting Co. .. 1324
Durston Gear Corp. 1322

E

Earl Motors, Inc. 1273
Eclipse Machine Co. 1322
Edmunds & Jones Corp. ... 1320
Electric Auto-Lite Co., The, 1226, 1227
Empire Tire & Rubber Corp. 1311

F

Federal Bearing & Bushing Corp. 1217
Ferry Cap & Set Screw Co. 1306
Fisk Tire Co., Inc. 1225
Flint Varnish & Color Works 1223
Frenchtown Porcelain Co. 1320

G

G & J Tire Co. 1309
Gabriel Manufacturing Co. 1322
Gill Mfg. Co. 1323
Gilmer Co., L. H. ...1284, 1285
Goodrich Rubber Co., B. F. 1231

H

Hayes Wheel Co. 1298
Haynes Automobile Co., Back Cover
Hess-Bright Manufacturing Co. 1328

J

Jorgensen Hood Silencer Co. 1320

K

Klaxon Co. 1290

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INDEX TO ADVERTISEMENTS

L

Laminated Shim Co., Inc. 1297

M

Manzel Brothers Co. 1228

Mather Spring Co. 1325

Mercer Motors Co. 1304

Metal Stamping Co. 1222

Morse Chain Co. 1322

Motor-Kleen Corp. 1303

N

Nash Motors Co. 1232

National Twist Drill & Tool Co. 1324

New Departure Manufacturing Co. 1321

Norma Company of America 1219

O

Oakley Chemical Co. 1319

Olds Motor Works 1280

P

Packard Electric Co. 1293

Park Drop Forge Co. 1324

Parsons Manufacturing Co. 1279

Perfect Window Regulator Co. 1322

Perfection Heater & Mfg. Co. 1288

Plunkett & Co., Paul 1326

Pocono Rubber Cloth Co. 1318

Prest-O-Lite Co., Inc. 1300

R

Republic Rubber Co. 1292

Rubay Co. 1299

S

S K F Industries, Inc. ... 1328

Saal Co., H. G. 1296

Sharon Pressed Steel Co. 1324

Smith Corp., A. O..... 1323

Soss Manufacturing Co., Inc. 1318

Stephens Motor Car Co., Inc. 1289

Stevens-Duryea, Inc. 1315

Stewart-Warner Speedometer Corp. 1313

Stromberg Motor Devices Co. 1322

Studebaker Corp. 1221

T

Ternstedt Manufacturing Co. ..... Front Cover

Thermoid Rubber Co. 1310

U

Union Drawn Steel Co. ... 1316

Union Switch & Signal Co. 1324

U. S. Ball Bearing Manufacturing Co. 1220

United States Rubber Co. 1271

V

Vanadium Corporation of America 1302

W

War Department ... 1286, 1287

Warner Gear Co. 1323

Whitney Manufacturing Co. 1323

Willard Storage Battery Co. 1307

Wyman-Gordon 1323

Y

Yale Storage Battery Co. 1295

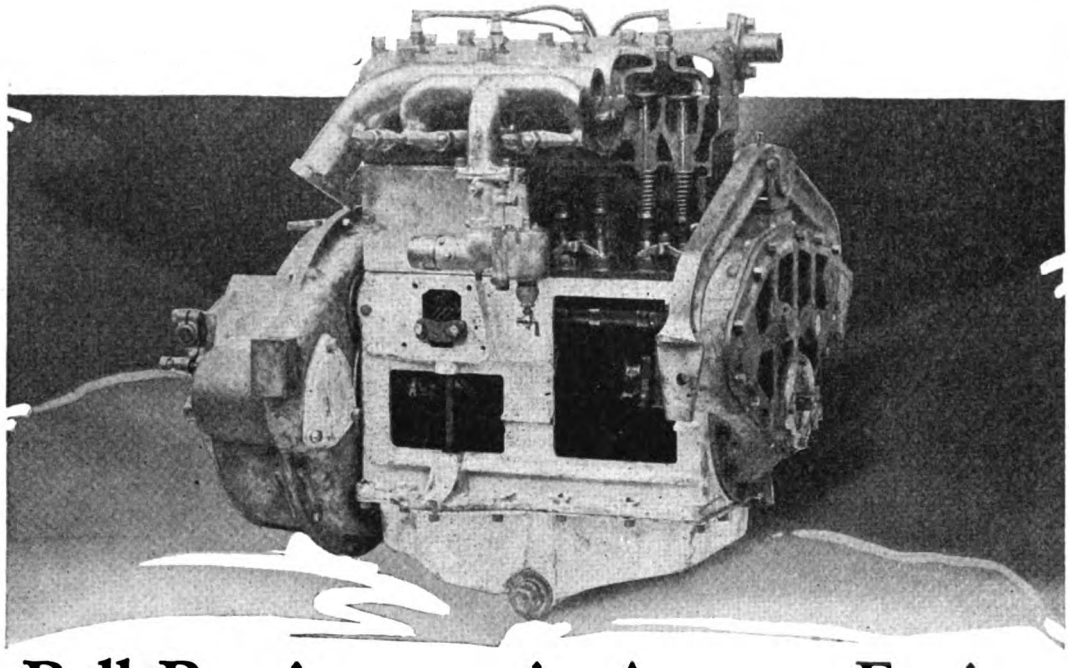
York Corrugating Co. 1321

Young Industries, Inc., L. A. 1327



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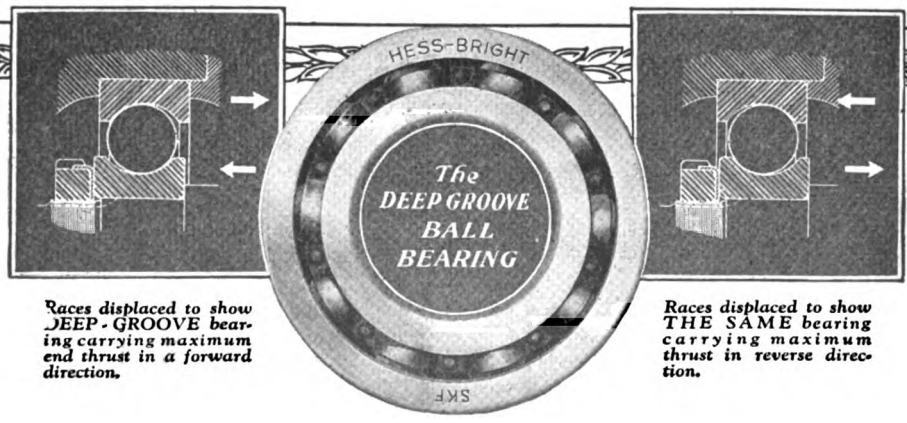
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TWO SECTIONS—SECTION TWO

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TABLE OF CONTENTS

Aug. 19, 1922
Nov. 11, 1922

A

AC Spark Plug Co. takes over Sphinx Mfg. 830
Accessories—
Good market in Australia..... 229
Business to be still better..... 525
Makers look for large future business..... 632
Accidents, 76,000 deaths charged to careless America 234
Africa, imports increase over April..... 835
Agnew, J. C., made assistant sales manager of Detroit Air Cooled Car Co. 1034
Air Reduction Co., Inc., shares listed.....1038
Ajax Rubber Co.—
Shows profits for first six months..... 626
Issues attractive booklet 1141
Akers, F. H., resigns as sales manager of Republic Truck Sales 410
Akron—
Stages closed car show 934
Closed car show goes big 1041
Alden, Herbert C., addresses S. A. E. meeting at Detroit 1137
Alden, John W., appointed sales manager of Willys-Overland Pacific Co. 31
Alfred, Frank H., urges railroads to aid industry 837
Allen, George B., named on passenger car standing committee of N. A. C. C. 926
Allen, Guy F., indicted 832
Allen, W. C., made sales supervisor of Black & Decker 410
Allen, W. H., elected director of Tire & Rim Assn. 418
Allied Automotive Industries, formed in Minneapolis 1140
Amazon Rubber Co., reduces prices 27
American Automobile Association—
Loses chance to test N. Y. ruling..... 124
Cooperating in "safety season"..... 635
Starts drive on town speed traps..... 731
To aid fight on war excise tax.....1242
American Bosch Magneto Corp. foresees big year for trade 1237
American Chemical Society, to study fuels and oils 1236
American Electric Railway Assn., to study exhibit featuring part truck manufacturers have played in developing buses..... 731
American Engineering Council, declares against 12-hour day 527
American Engineering Standards Committee, reports status of automotive standards.... 829
American Motors Corp.—
New models carry mile warranty..... 229
Coming along nicely 927
Takes assets of old company.....1039
Issues folder 1047
American Petroleum Institute—
Cooperates in fuel research project..... 838
To meet 1044
American Road Builders' Assn., lays foundation for Good Roads Congress 1047
American Rubber & Tire Co., pays dividend. 833
American Signal Co., patent injunction enforced 24
American Society of Mechanical Engineers—
To study good management subject..... 124
To meet with the American Society of Refrigerating Engineers 731
American Society for Municipal Improvements, urges standardization of traffic laws.1040
American Society of Refrigerating Engineers, to meet with the American Society of Mechanical Engineers 731
American Society for Steel Treating, to convene 420
American Welding & Mfg. Co.—
Reorganizes 22
Now producing tire bases 634
American Wire Fabrics Co.—
To be acquired by Wickwire-Spencer..... 230
Wickwire-Spencer unable to vote on purchase 415
Ames Holden Tire, would reorganize.....1038
Amorous, Clinton B., made manager of New York Locomobile branch 1034
Amos, Frank B., made manager of foreign advertising and sales promotion for Dodge Brothers 1234
Anderson, Harry W., made Stutz eastern sales manager 718
Anderson, J. D., elected director of Tire & Rim Assn. 418
Anderson, J. W.—
Elected Anderson president 229
Sees more prosperity ahead 744
Anderson Motor Co.—
Unveils new aluminum car 121
Losses end with July business 414
Anderson, W. A., elected Anderson vice-president 229
Andrews Motor Co., finds dealers not making money 631
Anklam, W. F., made president and general manager of Hall Lamp 1130
Apperson Brothers Automobile Co., will add six-cylinder model 1133
Arabia, taxicabs converted into buses..... 828
Argentina, automobile exports grow 835
Armstrong, A. G., to be in charge of Stanley New York Co. 631
Armstrong, F. S., to represent Vesta Battery at A. E. A. 1042
Associated Advertising Clubs of the World, M. A. M. A. endorses work 1046
Atlantic City Automobile Assn., joins National Motorists' Assn. 1143
Atlas Crucible Steel Co.—
Stockholders of Electric Alloy Steel agree to merger 722
Merger with Electric Alloy Steel Co. completed 1135
Atlas Electric Storage Battery Co., in hands of receiver 833
Atlas Steel Corp., formed as merger of Electric Alloy Steel Co. and Atlas Crucible Steel Co. 1135
Atwood, Frank L., to be made general manager of Hill pump plant of Midwest Engine. 622
Auburn Automobile Co., changes prices 19
Austin Motor Co., to produce new light car. 125
Australia, prestige of American cars increases 835
Autocar Co.—
Offers service to owners 22
Issues new shares 321
Passes 25th birthday 1042
Autocrest Motor Sales Co., to distribute Stutz cars in Oregon 1045
Automobile Body Builders' Assn., slash freight rates on passenger bodies 420
Automobile Dealers' Assn. of Bergen County, endorses good roads bond issue 118
Automobile Merchants' Association—
In new home 422
New York show was builder of business... 730
Automotive Equipment Association—
Merchandising work continues despite heat 235
Prepares for fourth annual show 839
Movie shows automobile crash 1046
To convene in Chicago 1243
Automotive Service Assn. of Philadelphia, contest brings out champion tire changers.. 26
Automotive Trades Assn., local unit formed by dealers in Mitchell, S. D. 1140
Ayers, Leonard P., finds business tide rises with motor output 513

B

Baker R & L N. Y. Corp., moves 726
Baltimore Automobile Trade Assn., adopts Boston used-car plan 1041
Bankers, automobile banking concerns confer 415
Bannock Motor Sales Co., sales wait on crops 423
Bantline Co., Julius J., elected to A. E. A...1042
Barker, Arthur E.—
Books return passage 118
Finds England fighting way back 410
Barley Motor Car Co., Chicago branch moves.1045
Barnard, Paul J., one of organizers of Boice, Pinney & Barnard 1034
Barnes, Claire L., made director of merchandising for William H. Rankin Advertising Agency 323
Barnum, R. N., elected Mercer president 826
Bartholemew, H., appointed general manager of Noma Motors of Chicago 29
Bartholomew, J. B., made president of National Assn. of Farm Equipment Manufacturers 1234
Baskerville, Dean E., joins Maxwell 514
Bassett, A. F., made assistant sales manager of motor bearings div. of Hyatt Bearing... 410
Bates Motor Co., sales to date more than double all of 1921's business..... 730
Bauer, G. F., sketches plan to triple exports in message to M. A. M. A. 416
Bayne, Howard, on bankers' committee for reorganization of Willys Corp. 415
Beach, James K., takes charge of Dallas district for Brunswick-Balke-Collender..... 18
Beane, R. S., made southern district manager for Hinckley-Myers 410
Bearings Service Co., plan to discontinue.... 317
Becker Auto Co., reports falling off for medium and low-priced cars 1143
Behringer, A. C., made Dorris assistant sales manager 1137
Belcher & Loomis Hdwe. Co., elected to A. E. A. 1042
Bell, L. A., Jr., joins sales force of Courier Motors 826
Bell Motor Car Co., receiver to file account.. 627
Bendix Engineering Works, Inc., announces new type of engine 526
Bennett, E., finds Moon business coming back strong in British Isles 1139

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Bernheim, Sydney, resigns as director of Keystone Tire 18
Betts, Wm. E., named on advertising committee of N. A. C. C. 926
Biflex Products Co., movie shows automobile crash 1046
Bitting, George L., made sales manager of Standard Welding 1234
Black & Decker Mfg. Co.—
Reports big sales 728
Moves offices 1245
Blackwell, Wilson H., sails for Europe.....1130
Blakeslee, Charles G., favors buses 830
Blakiston, Thomas B., made general sales manager of American Hammered Piston Ring 314
Blossom, C. W., made director of Grant-Lees Gear Co. 927
Blumberg, H. G., to have charge of combined Lone Star Motor Truck and Tractor Assn. and Blumberg Motor Mfg. Co. 131
Blumberg Motor Mfg. Co., combined with Lone Star Truck and Tractor Association. 131
Boice, John C., part of firm of Boice, Pinney & Barnard, Inc. 1034
Boice, Pinney & Barnard, formed to sell shock absorbers 1034
Bonnell Motor Car Co., reports condition better than ever before 730
Booker, George W., sees higher prices soon..1138
Books—
How to Sell at Retail, by W. W. Charters 654
Our Unconscious Mind and How to Use It. by Frederick Pierce 654
Scientific Selling and Advertising, by Arthur Dunn 654
The Reign of Rubber, by William C. Geer 654
Booth, F. E., made sales manager of motor bearings div. of Hyatt Bearing 1034
Bosch Magneto Co., sale inquiry launched again 1138
Bothell, C. A., resigns as truck sales manager of Packard of Missouri 18
Boulden, H. T., named sales director for Industrial Motors Corp. 18
Bowman Co., Inc., J. W., retires from business 718
Bowman-Gould Co., No-Leak-O Piston Ring Co. gets injunction 731
Boyd, James F., appointed Indianapolis branch manager for Willys-Overland 118
Brakes, four-wheel brakes to become a factor 932
Bray, J. B., resigns as Grant service manager to join sales force of Cleveland branch of Autocar Co. 926
Bredenberg, E. E., made sales manager for C. J. Lienhart 835
Brewer-Titchener Corp., makes changes in personnel 718
Briggs & Stratton Co., closes at Cleveland.... 628
Britton, Chas. O., dies 524
Brosseau, A. J., to represent N. A. C. C. on National Industrial Conference board 926
Brown, L. D.—
Sails for Europe 18
Returns to America 718
Brown, Thomas R., Jr., made New York district manager for Howe Rubber.....1247
Brown Co., Walter M., again becomes Stutz distributer 827
Brunn & Co., Inc., strikes new notes in open body design 1054
Buffalo Forge Co., elected to A. E. A.....1042
Buick Motor Co.—
Makes big shipments 17
Delivery cars announced 22
Expands personnel in Michigan territory.. 314
Reaches new production mark 623
Big output proves no surprise 719
775 turned out on "red letter day" 927
Mexicans like car 935
Ends record month with 1,029 on last day.1131
Output totals 17,666 for October 1237
Bureau of Foreign and Domestic Commerce—
Warns against careless methods with foreign trade 127
Calls Australia good market for accessories. 229
Bureau of Mines, studies corrosion of metals under oil film 230
Bureau of Public Roads—
Finds road-grading costs on stable basis... 126
Develops new type of concrete road filler.... 131
Prepares moving pictures to show various highway types 233
Finds Nation's business turns to highways.. 628
To spend huge sums on building roads.... 936
Finds 10,000 miles of highway added with federal aid 1047
Burgess, J. H., selling new lines 1234
Burke, Edward, placed in charge of new used car branch of Pioneer Motor Co. 1139
Burnett, Leo N., to join copy and planning department of Homer McKee Co..... 18
Burns, Ltd., John, orders two carloads of Gardner cars 835
Burry, P. B., made sales representative for Rolls-Royce 625
Buses—
London ships to Spain 29
New York needs 250,000 130
New York seeks system 231
To be used on Chicago "L" 235
Added to traction service 632
Charlotte gets lines 634
Become modern magic rugs 828
Favored by Charles E. Blakeslee 830
Bush, Willard K., elected secretary and director of Michigan Pikes Assn. 1046
Business—
Many factors clear South's sales sky..... 31
Rail strike slows up Southern trade..... 125
California retail trade holding up..... 126
Western farm belts promise large trade.... 233
Retail tire collections better..... 234
Retail sales forge upward in August..... 327
Strike settlement means boom 413
Crowding the road 513
Tide rises with motor output 513
Inflation to set in in 1924, Jordan says.... 621
Uncle Sam striding up Commerce's hill.... 634
Canada's motor industry expanding rapidly. 727
New England Winter sales promise much. 837
N. E. McDarby finds western markets good 837
U. S. census reveals state of industry.... 932
F. H. Gibbes finds prospects good in South.1045
South buying cars in greater numbers.....1045
Parts trade lively in Texas 1047
Improving in South Africa 1138
Sales reports from West show contrast 1143
Holding up well in Fall 1235
Butler, A. I., adds Philadelphia and Baltimore districts for Brunswick-Balke-Collender Co. 18

C

Cadillac Motor Car Co.—
Presents itself with "Old-Timer" 235
Building railroad dock 318
Plans for larger 1923 output 411
Closed car now bulk of output..... 423
Makes film of factory 1133
Ancient car a traveller 1139
Cadillac of New York, to expand 229
California—
Retail business holding up 126
Registration increases 316
August sales nearly up to June high records 423
Gasoline tax legislation planned 423
Truck sales large 632
California Automobile Trade Assn., studies licensing mechanics 938
California State Automobile Assn., closes successful year 1247
Cameron, Richard E., takes charge of Cincinnati district for Brunswick-Balke-Collender 18
Campbell, Heath & Co., acquires Empire Tire & Rubber Co. 415
Campbell, Solomon A., incorporator of Durant and Star agency in New Haven, Conn. 829
Campe, George, heads Northern California Assn. of Maxwell Dealers 1045
Camping, 50,000 expected in Denver's Overland park 234
Canada—
Exports increase 226
Makes important changes in invoice form.. 629
Motor industry expanding rapidly 727
Show benefits Americans 835
Farmer important automobile market 939
Motor exports grow during September....1247
Carlson, Samuel A., indicted 832
Carmody, John D., made western manager of Columbus-McKinnon Chain 1234
Carr Fastener Co., Dot lubricator gaining in use 634
Caruthers, Paul, placed in charge of wholesale department of Earl-Cincinnati Motors.....1238
Case, Fred S., elected director of Michigan Pikes Assn. 1045
Case T. M. Co., J. I.—
Making larger series "W" 121
Prices marked lower 1139
Ceylon, American products gain firm foothold 835
Chalmers, Hugh, made chairman of board of Joyce Mfg. 622
Chalmers Motor Corp.—
Adjustment plan put into operation..... 833
Noteholders accept reorganization plan..... 930
Receiver means merger near 1241
Champion, Albert, returns to America..... 820
Champion Spark Plug Co., engages MacManus, Inc., as advertising counsel 1246
Chandler Motor Car Co.—
Ships trainload 19
Adds special roadster 121
Declares quarterly dividend 419
Chandler, W. N., made retail sales manager of N. Y. branch of Van Cortlandt Vehicle ... 222
Changestrom Motors Co., finds outlook better.1246
Chapin, H. D., tells of lobby for motor truck makers 728
Chapin, Roy D.—
Sees better foreign market 18
To represent N. A. C. C. on Highway Education Board 926
Charlotte Automotive Trade Assn., to stage show 423
Chevrolet Motor Co.—
Newark branch taken over by Foley Motor Car Co. 327
To build two more factories 623
1923 models show refinements 827
New York branch leases building..... 836
Sales increasing 1035
Speeds Zanesville program 1239
Chicago—
"L" to use buses 235
Registrations grow 1042
Chicago Automobile Trade Assn.—
Holds closed car week 1045
Finds many buy cars for Christmas gifts...1247
Chicago Motor Bus Co.—
Changes hands 633
Purchased by Yellow Cab Co. 728
China—
Truck hire cheaper than coolies 129
J. Walter Drake sees big market 232
Kalgan reported as tire market..... 633
Christensen-Davis Motor Car Co., named Dort distributer 726
Chrysler, Walter P.—
Returns from abroad 514
Sees slow foreign car demand 625
Cincinnati, O., dealers to hold "at home" closed car week 1143
Clark, Emory W.,
Sees big future for U. S. cars abroad..... 119
Tells M. A. M. A. prosperity is here..... 409
Clarkson, Mrs. Anna Howell, dies..... 514
Cleveland Automobile Co.—
Profits now over million 415
Cars carry lower prices 929
Cleveland Motor Co., tests radio on car.....1058
Cleveland Tractor Co., alliance with Clement Studebaker, Jr., dropped 515
Cleveland Trust Co., says business tide rises with motor output 513

Digitized by Google

Clifton, Col. Charles—
Names 1922-1923 committeemen 926
Honored by France 1234
Closed Cars—
Low-priced cars coming ahead 221
Prices in downward trend 717
Coal—
U. S. rulings on fuel rouse motor makers. 17
Automobile makers face crisis 117
Tension less at motor factories 221
Cobleigh, H. R., plans programs for meeting of service managers 1247
Coffin, Howard E., made chairman of industrial section of Detroit Board of Commerce 314
Cole, Jirah D., made supervisor of merchandising for General Automotive Corp. 938
Cole, R. B., to become benedict 317
Cole, Roy, made assistant to James Bourquin of Continental Motors 1234
Cole Motor Car Co.—
Offers new series 315
"890" increases sales 726
Collins, G. B., made chairman of board of Grant-Lees Gear Co. 927
Collins, R. H., sees menace of unused car trouble 409
Colors—
Made trademark 317
Manufacturers seek new combinations 721
Colt-Stewart Co., did good business at New York show 730
Columbia-Kissel Motor Co., to distribute Kissel line in Philadelphia 1246
Columbia Motors Co.—
Leases former Saxon plant 21
Prices new six phaeton 411
Without New York representation..... 726
Business increases 829
Expands foreign fields staff 1034
Columbia University, to teach 'em about motors 1129
Colwell, F. C., elected president of Bureau of Retail Sales Managers of Cincinnati Automobile Dealers' Assn. 1130
Comet Automobile Co., receivers named..... 626
Comly, Joseph, elected president of Neel-Cadillac Club 1047
Commercial Credit Co., to acquire Continental Guaranty Corp. 623
Congo Rubber Co., incorporated 931
Connecticut Telephone & Electric Co., upheld in suit against Illinois Starter & Magneto Corp. 1141
Connolly, Edward J., appointed production manager in charge of body division of Wilson Body 826
Continental Guaranty Corp., to be acquired by Commercial Credit Co. 623
Continental Motor Corp.—
To expand 723
Meeting postponed 931
Increases capital 1038
To film plant 1139
Cook, C. B., made advertising manager of American Hammered Piston Ring 314
Copper, survey shows gain in use in cars.... 633
Copper & Brass Research Assn., survey shows gain in use of copper in cars 633
Corbitt, J. H., suggests Tennessee study bus-truck rules 1140
Corpus Christi Hardware Co., elected to A. E. A. 1042
Cosgrove, Allan, to continue in charge of manufacturing for Atlas Truck 18
Cotton, market rising 1035
Coughlin, Albert R., dies 826
Coughlin, C. L., resigns as secretary of Ladish Drop Forge 622
Courier Motors Co.—
Takes over former Maibohm car 125
Plans big things for new car 323
Coy, J. A., made Michigan district sales manager for Buick 314
Crabtree, W. O., made president and general manager of Franklin New York branch...1036
Craig, T. C., resigns as assistant manager for Forsyth Brothers 839
Cranner, W. S., to represent Philadelphia Storage Battery at A. E. A. 1042
Crawford, D. F., finds Europe poor market for motors 120
Crooker, R. H., outlines program of sales promotion dept. at Federal convention.....1042
Crume, H., appointed sales manager of Noma Motors of Chicago 29
Cuba, looks for revival of motor trade soon.. 127
Curry & Southworth, made Denver sales representative for Rolls-Royce 625
Cushing, George W., joins advertising staff of C. C. Winningham 829
Cutting-Larson Co., New York show builder of business 730
Cyclone Motors Corp., President C. G. Eidson made receiver 225

D

Daniels, Bruce, reports trade grows in Pacific northwest 1045
Daniels, Harry S.—
To resign as Dort advertising manager.... 514
Made director of Buick publicity 622
Darrow, B., elected director of Tire & Rim Assn. 418
Dashiell Motor Co., sees Chicago trade normal 319
Davis, James A., joins Durant Motors..... 118
Davis Motor Car Co., George W., adds to equipment furnished 318
Day, Vance—
Foresees two-section highways 649
Finds truck industry on normal basis 1246
Day, W. L.—
Honored as GMC Truck head 314
Addresses S. A. E. meeting at Detroit.....1137
Dayton Rubber Mfg. Co., breaks sales records 836
Dayton Tire & Rubber Co., New York branch moves 726
DeBear Motor Car Co., formed by Harry J. DeBear 622
Decatur, A. H., says hardware stores should devote part to motor accessories 934
Demack Motors Co., Inc., finds business better than for two years 1045
Department of Commerce—
International trade arbitration seen..... 633
Looks for trip around earth in buses before long 828
Finds automobile exports to Argentina grow 835
Derr, H. E., named on truck standards committee of N. A. C. C. 926
Detroit Air Cooled Car Co., to start January 1 937
Detroit Automobile Dealers' Assn.—
New members named 120
To stage closed car salon 231
May make closed car show annual 934
Detroit Ball Bearing Co., in new home 1245
Detroit-Cadillac Motor Car Corp., New York show was builder of business 730
Detroit Edison Co., earnings high 631
Detroit Motor Club, moves headquarters..... 227
Detroit Toledo & Ironton R. R., acquires Toledo & Detroit R. R. 31
DeWater, G. A., to go abroad 410
Diamond Taxicab Co., starts business 625
Dickson, James, Jr., made Buick Detroit branch manager in charge of wholesale distribution outside Detroit 314
Dilworth Motor Sales Corp., organized by Ernest J. Dilworth 1130
Dittenhaver, Robert, made secretary and treasurer of Joseph N. Smith & Co. 118
Dixon, James M., made director of Quaker City Rubber Co. 314
Doan, W. B., made retail sales manager of Pioneer Motor Co. 322
Dodge Brothers—
Few driveaways staged 19
Output 650 daily 119
Rail strike slows up southern trade..... 125
Coal tension less 221
Uncovers steel sedan 315
Adds another building 317
Gives parks to people as memorial..... 323
Steel sedan $1,195 411
New plant for bodies 413
Closed cars in demand 519
Has new canvassing plan 523
Dorris Motor Car Co.—
Time proves principles 852
Finds St. Louis in favorable shipping position 939
Truck owners parade 1139
Holds closed car salon 1237
Dort Motor Car Co.—
New York branch moves 726
Enlarges sales dept. 826
Executives visit points of distribution 1239
Douglas-Dahlin Co., Inc., elected to A. E. A..1042
Dragon Motors Co., charged with fraud..... 222
Drake, Fillmore A., dies 926
Drake, J. Walter—
Sees big Chinese market 232
Commends tariff bill export feature..... 516
Draper, Jesse S., made Hudson assistant sales manager 1132
Drew, H. W., made general manager of Zell Motor 31
Driggs Ordnance & Mfg. Co., to produce own taxicab 1142
Driggs Taxicab Corp., to build in New Haven plant of Driggs Ordnance & Mfg. Co.....1142
Driggs Taxicab Sales Co., Inc., to sell Driggs taxicab 1142
Driveaways—
More to follow rail tie-up 825
Increase with car shortage 1129
Continue to grow in industry 1235
Driving, Detroit to test drivers' mentality.... 527
Drumpelman, W. J., on tour 1034
Dudley, L. B., outlines program of advertising dept. at Federal convention 1042
Duesenberg Automobile and Motors Co., Inc.—
Activities increase 119
Enlarges plants 120
Getting into action 829
Duffas, Robert, made assistant manager of N. A. D. A. 1234
Dunbar, Charles B., appointed Wisconsin district sales manager for Brunswick-Balke-Collender 118
duPont, Pierre S.—
Accompanies English visitors inspecting G. M. C. 718
To speak at S. A. E. meeting 826
Durant Motors, Inc.—
Star to move to Elizabeth soon 315
Sends big shipment to Hathaway Motor Co. 327
Ships 204 to W. C. Auble Motor Co..... 631
500,000 want Stars as operations start ... 719
Oakland, Cal., plans Durant Day..... 727
Agency formed in New Haven, Conn. 829
New house organ out 836
To build in Flint for Star 1037
Lines show growing activities 1238
Durant Motor Co. of California, in production 126
Durant, R. C.—
Sails for Honolulu 926
Hangs up record 1234
Durant, W. C.—
Breaks ground for new Flint factory..... 315
Locomobile to keep policies unchanged..... 318
Offer for Locomobile accepted 1132
Durston Gear Corp., causes receiver to be appointed for Grant 1036

E

Earl Motors, Inc.—
Prospers 120
Enlarges equipment on Cabriole 421
Earle, Horatio S., elected director of Michigan Pikes Assn. 1046
Earl Philadelphia Motor Car Co., loses Earl Philadelphia franchise 514
Eastern Thomart, Inc., takes over distribution of Thomart speed truck in East 929
Eastman, Lee J., made president of Automobile Merchants' Assn. of New York 1234
Eaton, J. O., sails for England 514
Edelman, Hyman, charged with fraud in connection with Dragon Motors Co. 222
Education—
Study of gas engine in schools endorsed.. 523
Public must learn about highways, says

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H. S. Firestone 1137
Columbia University to give course in internal combustion engine 1129
Ehrlich, L. E., to address New England section meeting of S. A. E. 422
Eidson, C. G., made receiver of Cyclone Motors Corp. 225
Ekblom, John O., discontinues Westcott and Handley-Knight agency 726
Eldridge, Maurice O.—
Made executive chairman of A. A. A..... 622
Would have lights on every vehicle..... 632
Electric Alloy Steel Co.—
Merger progresses 321
Stockholders agree to merger with Atlas Crucible 722
Merger with Atlas Crucible completed....1135
Electric Auto-Lite Corp., not to be confused with Electric Auto-Lite Co. 21
Electric Storage Battery Co., business good.. 631
Electrotaxi Corp., taxicab at N. Y. show.... 934
Elgin Motor Car Corp., cuts prices 831
Elis, Roy C., appointed Courier factory representative 718
Emmons, Harold H., to act as toastmaster for S. A. E. banquet 826
Empire Tire & Rubber Co., sold to Campbell, Heath & Co. 415
Engines—
Michigan leads in U. S. census of gas motors 30
Airplane makes record 316
Run well on various fuels 838
England—
Takes steps for trade recovery 127
Limited output retards motor industry.... 324
Motorists move for new taxes 1044
Enricht, Louis, convicted 1142
Ensworth & Son, L. L., elected to A. E. A. membership 1042
Erdmann, Ernest T., takes on Chicago, Moline, St. Louis and Canada for Ryan Sales Corp. 20
Erskine, A. R.—
Tells M. A. M. A. business prospects good 409
Gives park site to South Bend 727
Erskine, Clyde E., made manager of St. Louis branch of Mack Truck 938
Ettinger, Harry, elected director of Neel-Cadillac Club 1047
Europe, battles with U. S. in Latin lands...1140
Exports—
Show better conditions in June..... 72
Imperiled by poor methods 127
Increase in Canada 226
Tariff bill export feature commended..... 516
Show stable conditions in July 629
Argentina's grow 835
Canadian motor exports grow during September 1247

F

Fageol Motors Co.—
Turns out new coach 728
Safety bus seen in East 1142
Falk, J. H., appointed Maxwell Cleveland district supervisor..... 718
Falor Rubber Co., opens new factory 929
Farmers—
Like beautiful designs 21
Own 2,000,000 cars 221
Take pride in time saving 222
Provide big markets 836
Federal Motor Truck Co.—
Light truck found favorite of buyers 29
Evolves slogan "Keep Upkeep Down" 129
Federal Trade Commission price control suit interests industry 1039
Federspeil, Henry P., sees big season ahead..1247
Fenn, F. W.—
Named on truck standards committee of N. A. C. C. 96
States trucks are factors in railroad recuperation 525
Principal speaker at Federal truck convention 1042
Ferguson, Richard, breaks connections with Grant-Lees Gear Co. 927
Fetterman, I. P., made factory representative of Jennings Corp. 523
Fifer, C. E., made factory representative for Reo in N. and S. C., Va. and Md. 1130
Finance, automobile bankers confer..... 415
Finch, E. B., wins Studebaker sales banner... 31
Findlater, James R., takes indefinite leave of absence to regain health..... 826
Fink, E. J., heads Columbia-Kissel Motor Co..1246
Finkenauer, Elmer R., made vice-president of DeBear Motor Car Co..... 622
Finkenauer, Fred J., made treasurer and secretary of DeBear Motor Car Co..... 622
Firestone, Harvey S.—
Turns movie operator..... 54
Returns to U. S..... 718
Heads church body.....1034
Says education of public needed for highways 1137
Firestone Tire & Rubber Co.—
Sees no danger from Ford..... 231
Sales at high rate..... 836
Net set at over $7,000,000.....1038
Sees 1922 as one of its best years.....1241
Fisher Body Corp.—
Makes report for quarter..... 320
Builds six assembly plants..... 411
To occupy part of Chevrolet's two new buildings 623
Production speeded at Zanesville.....1239
Fisher Body Ohio Co.—
Declares dividend 321
To operate in part six assembly plants acquired by Fisher Body Corp. 411
Fisher Body St. Louis Co.—
Incorporated 25
To operate in part six assembly plants acquired by Fisher Body Corp..... 411
Fitzpatrick, Samuel, put in charge of Columbia export sales dept.....1034
Flint Motor Co., motor shares offered..... 414
Flynn, James J., joins Durant 516
Foley Motor Car Co. takes over Chevrolet of Newark 327
Ford Dealers' Supply Co. of Indianapolis, club of dealers to buy parts in big lots..... 31
Ford, Henry—
Canvasses Mexico 30
Denies four rumors..... 721
Plans zinc oxide plant..... 831
Building plant for Czecho-Slovakia..... 837
Closes Virginia mine..... 937
Ford Motor Co.—
Settles hotel bill..... 29
Enlarges plant 126
Coal tension less..... 221
Records show large gains..... 227
Memphis dealers plan unique exhibit 235
Prepares to shut down plant..... 318
Files another record of finances..... 319
Suppliers shut down too..... 319
Indications refute threatened shut-down.... 411
Production figures out 415
"Aids" supply stores 421
Buys Antwerp site 517
Plants reopen after 4-day closing..... 517
Aims at 6,000 daily 625
To make four-door sedan..... 830
Startles trade with $50 reduction..... 925
Cut to create millions of owners.....1033
Production over last year's figures.....1037
Business boosts cotton goods.....1043
Cut sells cars.....1136
Business still growing.....1235
Ford Motor Co. of Canada—
Reduces prices 625
Earns 71 per cent 723
Pays 15 per cent dividend..... 930
Also cuts price 1035
Foreign Trade—
June exports show better conditions..... 27
Europe found poor market for motors..... 120
A. P. Sloan, Jr., sees Europe large buyer here 413
J. D. Mooney brings good South American news 519
English market for U. S. cars improves.. 625
Chrysler sees slow foreign car demand..... 625
July exports show stable conditions..... 629
Fowler, Robert, made San Jose, Cal., distributer of Rickenbacker 1130
France—
Cuts cost of operating motor cars..... 27
Does not want American war trucks..... 129
To use gasoline rail cars..... 629
Freight—
Rates increase on K. C. Mexico & Orient line 17
Rates slashed on passenger bodies..... 420
Idle cars absorbed 621
Car loadings heaviest in two years..... 717
Rates on carloads to Hawaii to be cut.... 935
Mexican rates cut 1138
Fritch, E. O., elected director of Tire & Rim Assn. 418
Frontenac Motors Co., new concern to be formed soon 24
Fuel—
U. S. rulings rouse motor makers..... 17
American Chemical Society to report on future supply..... 130
Engines run well on various fuels..... 838
To be studied by American Chemical Society.1236
Fuller Transmission Co., offers light transmission 937

G

Gabriel Mfg. Co., publishes "Foursome".... 222
Gardner, Harry T., made general manager of Cincinnati Dealers' Assn..... 936
Gardner Motor Co., Inc.—
Changes prices 19
Produced 6,300 cars in first 7 months..... 317
Gains in comparative output..... 515
Ships battery "dry" 649
Expands export organization 835
Garlock, M. L., calls Michigan show conference 324
Garman, H. B., starts own company as Garman Mfg. Co. 622
Garman, L. R., to be associated with father in Garman Mfg. Co. 622
Gary, Elbert H., defends Pittsburgh base....1239
Gasoline—
Stocks continue to decline 130
Trucks increase demand 130
Philadelphia automobile owners have large bill 130
U. S. finds quality better 130
Another price cut 230
Tax legislation planned in California..... 423
Consumption greatest in history..... 629
72,000,000 gallons evaporate 838
British motorists move for new taxes.....1044
Consumption sets new high mark.....1046
Cut again 1246
Gaston's Garage, trade good 1244
Geisler, Max, made secretary and general manager of Gillette Rubber 938
General Automotive Corp., admitted to A. E. A. 835
General Motors Corp.—
Units keep on high level of sales..... 121
Coal tension less 221
Officials to go abroad..... 410
Lines unchanged 517
Debentures sold 520
Distribution of common stock spreading.... 520
C. S. Mott finds outlook bright..... 623
Directors order dividends 627
Englishmen to make inspection tour..... 718
Holders of common increase.....1038
1922 largest year 1131
Stockholders fewer than last year.....1236
General Motors Truck Corp.—
Truck survey shows big growth in year.... 728
W. L. Day finds truck sales continue at satisfactory rate 927
Creates four divisions of sales.....1139
Big business again buying many trucks....1246
General Piston Ring Co., formerly Teetor Mfg. Co. 937
General Tire & Rubber Co.—
Reports big business 24
Cuts prices 411
Plans to double capacity 421
Shows big growth 832
Acts to double output.....1043
Georgia—
Would control bus lines..... 129
Street railway uses trucks..... 129
Gernandt, Waldo G., develops new type of engine 526
Geylor Co., Louis, finds trend of trade not encouraging for immediate results.....1143

Digitized by Google

Gibbes, F. H., predicts better business in South 1045
Gilbert, E. J., made secretary and treasurer of Pioneer Motor Co. 322
Gilbert, N. O., made general manager of Hamlin Motor Sales Co. 410
Gilbreath, Capt. W. S., re-elected president and director of Detroit Automobile Club....1046
Gill Battery Co. of Cal., erects new plant.... 728
Gilliam Mfg. Co., trade increases....1037
Gilliam, W. R., made secretary of Akron div. of American Society of Mechanical Engineers 222
Gilmore, Henry M., elected director of Neel-Cadillac Club 1047
Glatt, E. E., appointed president of Noma Motors of Chicago 29
Glidden Co., had good second quarter.... 422
Globe Mfg. Co., elected to A. E. A....1402
Golden, William A., added to National Vigilance Committee 523
Goodall, Arthur S., made Dorris advertising manager 1137
Goodrich Rubber Co., B. F.—
Sees no danger from Ford.... 234
Bonds admitted 931
Good Roads Assn. of New Jersey, to watch road cash 1242
Good Roads Congress, foundation being laid..1047
Goodwin, E. W., to devote time to creative work in design for Maxwell 514
Goodyear Tire & Rubber Co.—
Aircraft production growing 43
Sees no danger from Ford.... 231
Employes assured of coal 234
Retire more bonds 520
Answers refinancing suit 931
Answers filed in reorganization suit....1043
Executives banquet....1234
Goodyear Tire & Rubber Co. of Canada, prospers 1138
Gordon, George C., placed on centralized committee of Industrial Motors.... 18
Gracey, C. W., appointed manager of Minneapolis assembling plant of Martin Parry.... 18
Graham, C. L., made King factory superintendent 222
Graham, George M.—
Addresses Cleveland section of S. A. E.... 934
To address Highway Conference.... 937
Says highways must not be permitted to lag.1137
Grainger, C. A., made asst. general sales manager of American Hammered Piston Ring.. 314
Grand Rapids Tire & Rubber Corp.—
To have larger quarters 23
Pays dividend 833
Grant-Lees Gear Co., changes personnel.... 927
Grant Motor Car Corp., J. C. Hostetler made receiver 1036
Gray & Davis, Inc.—
Reports net profit 123
Increases stock.... 227
Stock on Boston exchange.... 627
Prospers 720
Gray Motor Corp.—
New plant unit started 121
Sends train of 40 to New England.... 318
Elected to N. A. C. C.... 625
Great Britain, to restrict rubber output.... 935
Gregory, J. K., sees one car to family.... 631
Griffin Wheel Co., cancels some stock.... 833
Griffith, E. L., made sales manager for Forsyth Bros. 1234
Grimes, Charles P., to talk at S. A. E. metropolitan meeting 1046
Grossland, J. T., made manager of Indiana branch of Signal Truck 835
Guilder, Walter C., designer and engineer in charge of production of new Goodwin-Guilder bus chassis 831
Gurley, W. S., to go abroad 410

H

Haiti, cars to take out license from Government 835
Hale, J. E., elected director of Tire & Rim Assn. 418
Hall, B. M., appointed truck sales manager for Packard of Missouri 18
Hamlet & Co., Ltd., J., Willys cars in reliability run 1046
Hanch, C. C., asks candidates how they stand on taxes 729
Hardy, A. B. C.—
To act as host to G. M. C. English visitors 718
To speak at S. A. E. meeting 826
Addresses Olds Motor Works service convention 1139
Harger, R. N., made advertising manager for Dodge Brothers 314
Harper Motor Co., Inc., expects improved Fall and Winter business 730
Harrington, A. C.—
Honored by Packard men 926
Declares service more than sale 1041
Harrington Motor Co., sees good prospects for balance of year 327
Harroun Motor Car Co., in bankruptcy 833
Harter Implement & Motor Co., finds business a trade and partial payment affair 1246
Hartig, O. C., made director of Atlas Drop Forge 622
Hartz, J. F., resigns as president and general manager of Hall Lamp 1130
Harvey, E. R., secures Anderson for China..1044
Hathaway, Charles W., resigns as director and treasurer of Detroit Dealers' Assn. 120
Hathaway, Inc., Frank E., says business depends on fruit crop movement 233
Hathaway Motor Co., receives big Durant shipment 327
Hawk, Homer V., made head of automotive products sales of Baker & Co. 222
Hayes, Clarence B., marries 514
Hayes Wheel Co.—
At capacity as demand keeps up 123
Gets big contract 229
Obtains contracts for Flint car 315
Disc wheels made in quantities 417
Opens new Detroit sales station 728
Haynes Automobile Co.—
Shows "55" in R. R. station.... 29
To hold business meeting 228
Sets date for sales conference 229
1923 "55" sport equipped.... 318
Prices "55" sport series 421
Issues new weekly 836
Dealers urged to build reputation for reliability 939
Haynes, Fred J.—
Tours West 514
Named on taxation committee of N. A. C. C. 926
H. C. S. Motor Car Co., brings out new series 4 model 21
Headlights—
Light up California's sales 126
New York to enforce new laws.... 527
New York bans many devices 1238
Heck, Otto W., discontinues Westcott and Handley-Knight agency 726
Heindel, D. A., becomes Dort distributer....1047
Heinemann, W. E., resigns as Templar eastern representative to join Matthews Engineering Co. 829
Hennessey, William J., buys last shares of Stutz stock 120
Henry Foundry Co., shuts down 319
Henshaw Motor Co., finds business good 837
Herbig, E. T., talks to G. M. C. truck dealers.1234
Hertz, John, to be associated in Chicago Bus Co. 826
Hewitt Rubber Co., tire prices lower 27
Hibben, Dr. John G., to judge "Good Roads" essays 322
Higgins, Walter F., transferred to Atlanta by Brunswick-Balke-Collender 18
Highways—
10,000 added with federal aid 1047
Represent half of state debts 1047
Education of public needed 1137
Highway Education Board—
Interest grows in conference 727
1922 safety program announced 731
To study needs of highways 839
Program filled for conference 937
Confer on highway needs 1033
Highway Industries Exhibitors' Assn., to aid in staging display at Good Roads Congress.1047
Hilbish, G. H., made special factory representative of Star Rubber 1234
Hill, P. T., made sales manager of Eaton Axle 1234
Hill, W. S., made vice-president of Eastern Thomart 929
Hillas, R. M., vice-president and sales manager of Bonnell Motor Car Co. 730
Hoagg, K. K., appointed advertising manager of Hyatt motor bearings div. 118
Hodgkins, R. T., finds western farm belts promise large trade 233
Hoepli, M. H., issues warning to American manufacturers against careless practices... 127
Hoffman, E. E., appointed plant engineer of Hendee Mfg. at Springfield 718
Hoffmann Mfg. Co., acquired by Norma Co.. 931
Hogan, Dan, flies to Indianapolis for cars... 222
Holley Carburetor Co., plans to double factory space 830
Holmes Automobile Co., in receivership.... 628
Hood Rubber Co., reports operation as normal 836
Hoover, Herbert, says to keep government out of business by organizing 938
Howe Rubber Corp., sales grow 1241
Hower, Harry C., forms Vogue Rubber Co. .. 29
Howey, L. B., made president of Security, Inc. 1236
Hubell Tire & Rubber Co., in receivership.... 933
Hudson County Automobile Trade Assn., to stage show 1045
Hudson-Essex Motors, Ltd., formed as English distributer 1132
Hudson Motor Car Co.—
Sees final half-year sales largest 119
Coal tension less 221
Lowers prices 625
Substitutes for certificates 626
Did splendid business at New York show.. 730
Opens depot for European trade 1039
Offers new plan to dealers 1237
Continues to prosper 1238
Hudson Motor Specialties Co., patent injunction enforced 24
Hufstader, William, joins Dort 826
Hughes, Frank, resigns as general manager of Western Motors 222
Hulett Motor Co., stages second "drop" sale.. 422
Hundt, J. E., to take charge of Globe Machine in West 222
Hunt, George H., put in charge of Rayfield carbureter sales to manufacturers.... 222
Hunter, Edgar G., dies 926
Hupp Motor Car Corp.—
Sales high 21
Finds future encouraging 121
Sees big Chinese market 232
Plans to cut capitalization 315
Expects to make 30,000 cars in 1922 517
To retire some stock 831
Turns 30,000 mark 927
Betters 30,000 schedule 1237
Hydro United Tire Co.—
Receivers appointed 25
Continues 527
Hyman, H. R., made director of Stutz advertising 222

I

Igou Motor Co., sales average better than Moon a day 829
Illinois, licenses mount 225
Illinois Starter & Magneto Corp., loses in suit against Conn. Tel. & Elec. Co....1141
Imports—
Portugal revises laws 22
Grow in Sweden 420
Retaliatory duties ordered 1245
Incorporations—
Delaware incorporates 17 25
Delaware charters 48 414
Delaware incorporates nineteen 930
Inderrieden, A. J., appointed sales manager of Warner-Patterson 718
India Tire & Rubber Co., business increases 24
Indiana, has many automobiles 1046
Indiana Silo & Tractor Co., in hands of receiver 731
Indiana Truck Corp.—
Trade good 129
Sees good Fall and Winter.... 319
Indianapolis Automobile Trade Assn., to stage closed car show 1140

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Industrial Motors Corp.—
Confer with Selden-Atlas men 22
Begins combining branches 129
Inland Steel Co., merger abandoned 726
Innes, George M., assigned to Cleveland and eastern Ohio for Brewer-Titchener..... 718
Insurance, plan state fund for automobiles in Pa. 1046
Intercontinental Rubber Co.—
Date set for meeting 235
Plans approved 632
Intercontinental Rubber Products Corp., incorporated 931
Intermountain Motor Sales Co., receives first Lansing Star 625
Interstate Chemical Interests, formed by merger of Miller Oil Products Corp., Lynn Ink Co., and three others 838
Iowa, claims 48 cars to one in 1910..... 634
Ives, Ralph B., resigns as president of Western Automobile Underwriters' Conference...1130

J

Jackson, Harry H., elected director of Michigan Pikes Assn. 1046
Jackson, William, made vice-president of Security, Inc. 1236
Jacobs, Joseph S., made sec. and asst. treas. of American Hammered Piston Ring 314
Japan, bad roads hinder sale of cars..... 232
Jefferson Garage, finds business and prospects good 1143
Jenkins, A. F., named Dort district sales representative 829
Jenkins Vulcan Spring Co., business grows...1037
Jewett, H. M., named on patents committee of N. A. C. C..... 926
Johnston, C. S., made N. Y., Conn. and N. J. district sales manager for Peerless of N. Y. 524
Johnston, Robert B., president of Johnston-Tongue Motor 730
Johnston-Tongue Motor Corp., business improving rapidly 730
Jones, L. A., finds prospects very bright.....1045
Jones, R. R., made chairman of Akron section of American Society of Mechanical Engineers 222
Jones-Whitaker Sales Co., sales good 233
Jordan, Edward S.—
Foresees shortage 409
Says inflation to set in in 1924 621
Opens Akron closed car show 934
To address Highway Conference 937
Hails Ford price cut as giving car to every family 1033
Jordan Motor Car Co.—
Tells of Blue Boy model 223
Blue Boy goes big 315
Reviews tendencies 518
Cuts and improves closed models..... 623
Production up 110 per cent 719
H. Sherwood finds prospects good for N. Y. 829
Does million and half monthly 927
Joyce, Frank H., made president and treasurer of Joyce Mfg. Co. 622
Joyce, William M., made secretary of Joyce Mfg. Co. 622
Justice, J. L.—
Made Pacific Coast district supervisor of Maxwell sales..... 222
Transferred to San Francisco by Maxwell.. 718

K

Kansas Automobile Owners' Assn., wants Capital highway extended 1143
Kaufmann Motor Car Co., A. G., said to have discontinued business..... 726
Keating, H. F., on Safety Congress program. 118
Kelly-Springfield Tire Co., prices lower 827
Kelsey Motor Co.—
To make geared cars 411
Tells more of geared cars..... 649
Kemp, A. P., says extravagance not style.... 939
Kennedy Motor Co., sales in better shape ... 524
Kennedy, William P., to speak at metropolitan meeting of S. A. E.....1046
Kennington, W. O., to return to England.... 410
Kentucky Motor Federation, formed by union of all clubs 131
Kern, Martin E., inquiry launched again into Bosch Magneto sale 1138
Kerruish, Edward P., to be associated in Bishop & Babcock Co. 322
Kettering, C. E.—
Entertains English party to inspect GMC... 718
Named on motor fuel committee of N. A. C. C. 926
Addresses joint meeting of automotive mechanical, civil and electrical engineers.... 934
Sees engine still in its infancy 1042
Addresses Olds service convention 1139
Kibbe, Harry W.—
Seriously ill 1130
Dies 1234
Kimball, F. L., made wholesale manager of Pioneer Motor Co. 322
King Sewing Machine Co., elected to A. E. A..1042
Kingman, Moore-Steve Solomon, Jr., find business good 31
Kingsley, W. Harold, placed in charge of Dort publicity 826
Kirkpatrick, W. J., elected director of Tire & Rim Assn. 418
Kittrell-Milling Motor Co., business good until rail strike slowed up trade 125
Klaus, F. R., takes active interest in American Welding 22
Klein, Dr. Julius, urges better salesmanship abroad 232
Kniseley, C. P., in charge of Parsons Co. Chicago office 938
Knox, L. L., resigns as director of Sharon Steel 18
Kokomo Automotive Mfg. Co., elected to A. E. A. 1042
Kranz, H. W., elected treasurer of Tire & Rim Assn. 418
Kruidenier Cadillac Co., finds business satisfactory .....;. 327
Kulas, Elroy J., made director of Grant-Lees Gear Co. 927
Kummer, W. G., brings Lanz motor tiller from Germany 30

L

L. & H. Motor Co., finds September increase reached 1,100 per cent 837
L-M Axle Co., buys plant 731
Labor, American Engineering Council declares against 12-hour day 527
LaFayette Motors Co. of Delaware, dividend for old stock 527
Laidlaw, W. R., sails for Europe 718
Lake Erie Accessories Co., patent injunction enforced 24
Lander Auto Co., sales wait on cattle 423
Lang Body Co., goes into large production schedule 231
Lang, D. A., to go abroad 410
Latham, Inc., Bert, again becomes Stutz distributer 827
Lathrop-McFarland Co., finds September trade not so good 1143
Lawrence, Ford, elected director of Tire & Rim Assn. 418
Laws—
Bay State laws on tail lights to be invoked 937
Fight California light law 1040
Standardization of traffic laws urged 1040
Leach, W. H., appointed assistant sales manager of Pence Automobile Co. 938
LeBel, L. B., elected director of Sharon Steel 18
Lee, Gordon, calls sales abroad problematical..1239
Lee Tire & Rubber Co., cuts prices 225
Leininger, C. C., resigns as general sales manager of Prest-O-Lite 118
Leishman & Co., finds Mexicans like Buicks.. 935
Leland, Henry M., addresses S. A. E. meeting at Detroit 1137
Letts, Sir William—
Finds English market for U. S. cars improves 625
Says Willys-Knight to be shown British ... 721
Lewis, Dai H.—
Resigns as acting chairman of A. A. A.... 622
Starts drive on town speed trap 731
Lewis Motor Co., finds sales fairly good.....1246
Lewis, William W., made central district manager for Cadillac 826
Lexington Motor Co., surveys used cars 225
Libby, Frank Wyman, foreign sales work unusually effective 519
Liberty Tire Corp., in receivership 226
Licenses—
Registrations in Illinois mount 225
Chicago registrations grow 1042
Illinois close to 800,000.....1046
Lienhart, C. J., made Chevrolet distributer for Adams, Neb. 835
Lincoln Highway—
Work started on ideal section 131
Ideal section delayed by strikes 936
Lincoln Motor Car Co., $5,176,119 for debt.. 627
Lind, H. H., resigns as vice-pres., treas. and director of Ohio Body & Blower Co. 1034
Linscott Motor Co., dealers visit Reo Lansing factories 631
Little, William H., dies 1130
Lockard, Paul D., made general manager of Pittsburgh electrical show 631
Locomobile Co.—
Creditors favor offer 23
To keep policies unchanged 318
Sale soon 720
Creditors approve sale 930
Durant's offer accepted 1132
New car is refined in details 1239
Lomar Cleveland Sales Co., appointed Cleveland distributer for Lomar Mfg. 835
London, to experiment with rubber streets.... 421
Lone Star Motor Truck and Tractor Assn., combined with Blumberg Motor Mfg. 131
Long, John C., to represent N. A. C. C. at Harvard conference 937
Lorimer, George Horace, to judge "Good Roads" essays 323
Los Angeles Motor Car Assn., to stage show.1045
Lumber—
Affected by car shortage 726
Industry booms 1043
Lunden, Herman, elected first vice-pres. of Michigan Pikes Assn. 1046
Lupton's Sons Co., David, elected to A. E. A..1042
Lurie, Robert, returns to New York "row" as Kelsey distributer 222
Lyford, W. H., speaks at Highway conference.1137
Lynn Ink Co., merges with Miller Oil Products Corp. and three others 838

M

McCauley, C. O., touring with "Ask 'Em to Buy" film 131
McClaren Rubber Co., prospers 517
McClure, F. E., resigns as president of Akron Auto Dealers' Assn. 826
McConnell, D. A., resigns as president and general manager of Klaxon 1034
McCord, Don C., sees good buying season in Northwest 126
McCord Mfg. Co., plant at 70 per cent 831
McCormick, A. L., made director and treasurer of Detroit Automobile Dealers' Assn... 120
McCormick, Cyrus H., in charge of International Harvester Co. manufacturing plants throughout world 1234
McDaniels, Chas. C., dies 514
McDarby, N. E.—
Leaves on tour 314
Finds western market good..... 837
McDonald, Stewart, elected director of St. Louis Chamber of Commerce 622
McDonough, C. G., appointed in charge of taxicab and commercial car sales for Willys-Overland 926
McDowell, Roy C., finds outlook good in western and southern states..... 837
McEvoy, James—
Put in charge of patent section of General Motors 410
Named on patents committee, N. A. C. C... 926
McFarlan Motor Corp.—
Increases output to maximum 417
Builds gold-plated car 1138
McHenry, Hugh, elected treasurer of Neel-Cadillac Club 1047
McLaughlin & Co., changes name to Maxwell-McLaughlin & Co. 131
McMillan, A. G., joins Kardex Sales Co. ... 118
McMurtry, Alden L.—
Resigns as consulting engineer of Motor Vehicle Dept. of Conn. 718
To speak at S. A. E. metropolitan meeting.. 1046
MacCullough, Charles, to be associated in Chicago Bus Co. 826

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MacGowan, Sir Harry—
Coming over ... 516
Heads British party to inspect GMC. ... 718
MacKay, C. H., predicts revival of Cuban automobile trade ... 127
Mack Trucks, Inc.—
20 roads use trucks ... 22
Sales smash summer trade precedent ... 319
Producing 500 monthly ... 831
Sales and profits continue high ... 1240
Mackie, J. H. W., made president of Allied Automotive Industries ... 1140
Mackin Motors, Inc., sells 400 Moons since January ... 829
Maclellan, H. W., resigns as vice-pres., director and mgr. of Nash Sales of Syracuse. 926
Maibohm Motors Co., taken over by Courier Motors ... 125
Makley, Howard, takes charge of St. Louis territory for Brunswick-Balke-Collender.... 18
Managers, plan study of goodness ... 124
M. & M. Signal Co., patent injunction enforced ... 24
Mansfield, James B., indicted ... 832
Markets, big down on farm ... 836
Markey, H. I., placed in charge of new Cleveland office of Diamond Chain ... 410
Marlin-Rockwell Corp.—
Earnings set at $883,818 ... 23
Properties to be sold ... 1039
Marmon New York Co., satisfied with results of New York show ... 730
Martin, Fred L., resigns as sales manager of Sheldon Axle to become Fageol eastern rep.. 826
Martin-Parry Corp.—
Starts new Flint plant ... 30
Baltimore assembling plant opened ... 31
Sales ahead ... 420
Sales establish new high record ... 627
Martin Rocking Fifth Wheel Co., adopts rental plan in trailer selling ... 1042
Marvin, J. S., tells N. A. C. C. railroad car shortage was 91,296 cars ... 825
Maryland, frowns on green visors ... 17
Mason, E. T., elected secretary of Ladish Drop Forge ... 622
Mason, George W., made Maxwell works mgr.. 118
Mason Tire & Rubber Co.—
Plans expansion ... 627
Advances prices ... 1043
Massachusetts—
Registrations grow ... 635
To invoke laws on tail lights ... 937
Maxwell, Lloyd, made president of Maxwell-McLaughlin & Co. ... 131
Maxwell-McLaughlin & Co., formerly McLaughlin & Co. ... 131
Maxwell Motor Corp.—
Ships to New York by boat ... 19
Arizona sales exceed all other makes ... 119
Engineers handed new assignments ... 314
1922 output expected to be 56,000 ... 518
Deposits soon due ... 522
Chalmers noteholders accept reorganization plan ... 930
Chalmers receiver means merger near ... 1241
May, Alexander H., missing ... 622
Maynard, H. E., made Maxwell asst. chief engineer in charge of technical depts. ... 314
Meixell, Harry D., campaigns for Jersey roads 118
Mell, Tod J., joins White & Co. ... 410
Mencken, S. Standwood, gives new bid for New Process Gear ... 831
Menderson, Edgar, made vice-pres. of Bureau of Retail Sales Managers of Cincinnati Dealers' Assn. ... 1130
Mergers, rumors again heard ... 1035
Merrin, J. W., returns to Detroit Cadillac branch as wholesale manager ... 410
Metz & Hart, selling 35 Moon cars a month.. 829
Metz Mfg. Co., in bankruptcy ... 120
Metzger, William E., elected director of Michigan Pikes Assn. ... 1046
Mexico—
Exempts trucks from duty ... 129
To tax automobiles ... 935
Meyer, F. H., takes active interest in American Welding ... 22
Michigan—
Leads in U. S. census of gas engines ... 30
Starts motorbus lines ... 43
Michigan Pikes Assn., to tour Canada in 1923. 1046
Middleton, Nathan A., made president of Ohio Body & Blower ... 1034
Midvale Steel & Ordnance Co., merger abandoned ... 726
Mid-West Engine Corp.—
Gets charter ... 25
Has passenger car engines ... 421
Miller, Chas. E., makes a tour ... 514
Miller, C. S., put in charge of Philadelphia territory for E. A. Myers Co. ... 514
Miller, F. Alden, to sail for Europe ... 826
Miller, Franklin A., returns to Dunlap-Ward Advertising Co. ... 1246
Miller-Judd Co.—
Opens new salesrooms ... 837
Given Nash franchise for Detroit territory. 1247
Miller Oil Products Corp., merges with Lynn Ink Co. and three others ... 838
Miller Rubber Co.—
Sales higher ... 128
Making low-priced cord line ... 130
Statisticians expect huge tire output ... 836
Minch, W. B., elected director of Tire & Rim Assn. ... 418
Miner, E. C., made sales manager of Multibestos Co. ... 1034
Miranda, Enrique, orders 35 Moons monthly. 1138
Mission Motor Car Co., finds outlook excellent 939
Mitchell Motor Co., Inc.—
Honored at Pageant of Progress ... 120
Adds De Luxe equipment ... 318
"White Streak" near home ... 421
Completes paint shop ... 623
Completes "million mile" test ... 1047
Mitchell, Sam C., made Dort assistant sales manager ... 826
Mitchell, Willard A., elected Stutz director.. 23
Mitman, Carl W., endorses study of gas engine in schools ... 523
Mitten, R. S., put in charge of Chicago branch of Black & Decker ... 410
Moehn, R. H., placed in charge of Buffalo assembling plant of Martin-Parry ... 18
Monitor Motor Car Co., plant sold to Clark Grave Vault Co. ... 225
Moock, Harry G., made Hudson sales mgr... 1132
Moon Motor Car Co.—
Increases net income ... 123
Seeks stock listing ... 125
Common stock admitted ... 226
Shows substantial income ... 227
August a record ... 515
Adds three new models ... 518
Continues to better peak sales ... 829
Cuts prices ... 932
Net profits reach $326,478 ... 1133
Foreign dealers on factory visit ... 1138
Organizes dealers in western territory ... 1139
Fall business far ahead of 1921 ... 1238
Mooney, J. D.—
Brings good South American news ... 519
Named on foreign trade committee of N. A. C. C. ... 926
Moore, Tom, finds salesmen's prize system success at New York show ... 934
Morrow Motors Corp., takes National in New York ... 422
Mosier, Harold G., elected director of Sharon Steel ... 18
Motch Motor Co., finds sales in October much better than September ... 1143
Motor Accessory Manufacturers' Assn.—
Sales records show seasonal decrease ... 228
Is assured prosperity is here ... 409
Moves New York offices ... 518
Sales records show general increases ... 628
125 members to be in big shows ... 931
Reports show seasonal sales decline ... 1035
Non-members to exhibit in overflow show in N. Y. ... 1043
Endorses work of Associated Advertising Clubs of the World ... 1046
Reaches high membership mark ... 1129
Motor Boosters, to hold outing ... 130
Motor Car Abstract Co., to start operations... 129
Motor Truck Club of N. J., spreads truck courtesy drive ... 527
Mott, C. S.—
To act as host to English visitors of GMC.. 718
Addresses S. A. E. meeting at Detroit.... 1137
Muir, James, joins Hall Lamp ... 1234
Mullins Body Corp., shows earning power.... 1244
Murphy, J. G., made Anderson Motor Co. factory manager ... 926
Muskegon Motor Specialties Co., adds pistons to output ... 731
Myers, L. M., to head Philadelphia office of E. A. Myers Co. ... 514
Myers, T. E., goes to Europe for Indianapolis Speedway ... 1034

N

Nash, Charles W., goes fishing ... 1130
Nash-McLarty Motor Co., sales in better shape ... 524
Nash Motors Co.—
Adds five-passenger sedan ... 121
Selling fast in Boston ... 327
Business gained in September ... 1035
Operating at capacity ... 1037
To close year with record output ... 1240
National Assn. of Automobile Show and Assn. Managers, hold National Used Car Conference ... 125
National Assn. of Credit Men, hits Sherman Anti-Trust Law ... 627
National Automobile Chamber of Commerce—
Finds motors saving rural schools ... 130
Urges members to write solons if provisions of reimport duty please ... 223
Courtesy campaign thrives ... 230
Finds most pastors see automobile as aid... 624
Elects Gray Motor Corp. ... 625
Urges snow removal on highways ... 720
Behind movement for increased use of truck for milk distribution ... 728
To urge tariff equalization ... 729
Asks candidates how they stand on taxes.. 729
Backs fuel research plan ... 838
Urges loose-leaf form of foreign news.... 935
Non-members to exhibit in overflow show in N. Y. ... 1043
Urges co-operation of dealers with railroads. 1129
Represents trade at Highway Education Conference ... 1137
Service managers to review big problems at convention ... 1247
National Automobile Dealers' Assn.—
Uses radio to tell nation "how to buy a car" 834
Asks dealers to help fight taxes ... 938
Charges misuse of railroad equipment ... 1233
National Hardware Assn., automobile accessory division optimistic ... 934
National Highway Traffic Assn., to study legislative programs ... 1242
National Motorists' Assn.—
Adds more members ... 731
To launch Washington branch ... 839
National Safety Council, asks uniform traffic law ... 635
National Tire Dealers' Assn.—
Sets convention date ... 933
Find makers in accord ... 933
Naylor Co., T. W. & L. O., business good.... 423
Neel-Cadillac Co., club reorganizes ... 1047
Neel, W. J., elected director of Neel-Cadillac Club ... 1047
Neidick, Herman, charged with fraud in connection with Dragon Motors Co. ... 222
Nelson, E. A., made Maxwell chief engineer 314
New England, towns bid for motor trade.... 422
New Jersey—
Good roads candidates successful ... 729
Pushes road bill ... 731
New Process Gear Corp.—
Sale held up ... 123
Sale date set ... 227
Purchased by T. W. Warner ... 321
Earnings high ... 415
Sale again delayed ... 520
More bids offered ... 831
Sale to W. C. Durant confirmed ... 1239
New York—
Seeks bus system ... 231
City police want state license fees ... 635
Nichols, John A., tours West ... 514
Nichol Co., John, made Liberty distributer for Chicago ... 938

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No-Leak-O Piston Ring Co., gets injunction against Bowman-Gould Co. 731
Nordyke & Marmon Co., brings out new model 19
Norma Company of America, takes over Hoffman Mfg. Co. 931
North Carolina, awards road contracts..... 422
North Carolina Motor Club, committees appointed to organize 422
North East Electric Co., adds speedometer to line 1243
Northern California Assn. of Maxwell Dealers, formed 1045
Northwestern Motors, Ltd., finds business coming back strong 1138
Norwalk Iron Works Co., opens Chicago office.1245
Nosovitsky, Jacob, convicted under "bulk sales" law 131
Notman, William, made general superintendent of Chevrolet motor and axle div. 718

O

Oakland Motor Car Co.
Run shows economy 23
New models improved in details 223
Tells dealers of flat rate 318
Wins another economy run 417
Output 150 daily 719
New York branch satisfied with show..... 730
Recommends shop equipment 836
Has biggest month in September 1036
O'Brien, Thomas, addresses Olds service convention 1139
O'Brien, William F., incorporator of Durant and Star agency in New Haven, Conn..... 829
Offensend, C. F., elected director of Tire & Rim Assn. 418
Ohio Automotive Trade Assn., "all set" for convention 422
Ohio Motor Vehicle Co., Ferris definitely discontinued 1039
Oil—
Crude production gains 633
Burned successfully by French car 726
To be studied by American Chemical Society 1236
Oldfield, Barney, to celebrate "999" days ... 222
Olds Motor Works—
Celebrates anniversary 21
Wins European contest 22
Gives nine acres for Lansing power plant.. 421
Improves California top 539
Cuts four and light eight 625
Wires driveaway warning 719
Opens new Detroit salesroom 726
Tests all nickel-plated parts 744
Service managers meet 939
Convention on service successful 1139
Production records broken 1235
Oliver, Norman E., elected vice-pres. and director of Quaker City Rubber 314
Ollier, L. J., enjoying Alps 410
Orr, G. V., made Overland distributer for Iowa 118
Ostby, Oscar F., appointed general sales manager of Prest-O-Lite 118
Ott, Bruce W., made factory manager of Fisher Body in Cleveland 1130
Overland Texarkana Co., finds sales about 60 per cent normal 1246
Overland Waterloo Co., tells of closed car popularity 327

P

Pacific Nash Motors Co., no longer distributes Nash for Salt Lake City 1047
Packard Motor Car Co.—
Increases exports 21
Outlook bright 225
Enters new field 421
Earnings running at rate of $500,000 monthly 522
To celebrate 23rd anniversary 830
Orders to carry into November 927
Export trade continues to expand 1036
Page, J. Murray, made manager of Chicago Locomobile branch 1034
Palm, J. V. O., made manager of automotive appliances div. of Bishop & Babcock 322
Pandolfo, Samuel C., charged with fraud..... 228
Parker, D. K., made Grant purchasing agent 18
Parker, W. J., resigns as director of Sharon Steel 18
Parsons Mfg. Co., opens Chicago office 938
Paul, Gustavo J., arrives here 826
Peasley, G. H., addresses Olds service convention 1139
Peck, Edward O., elected director of Sharon Steel 18
Peerless Motor Car Co.—
New car to be an eight 19
Production already sold 223
New car higher 225
Still progressing 522
Breaks all production records 1235
Perfection Heater Mfg. Co., elected to A. E. A.1042
Perry-Curtis Co., Inc., finds orders 200 to 300 cars ahead of deliveries 31
Peterson-Keyes Co., Jordan dealership transferred 31
Petrie, F. A., finds Pacific Coast outlook excellent 939
Petroleum, specifications approved 1238
Phelps, William Elliott, made Roamer general sales manager 314
Philadelphia Automobile Accessories Business Assn., aids safety plans 1143
Philadelphia Storage Battery Co., elected to A. E. A. 1042
Phipps, H. P., made Hudson export manager.1132
Pickens, B. F., made sales manager of Tuscora Rubber 934
Pierce-Arrow Motor Car Co.—
August sales a record 412
Price cut energizes sales 518
Cuts down loss in third quarter 1135
Pierce, F. L., talks at Federal truck convention 1042
Pioneer Motor Co., opens used car branch....1139
Plath, John J., visits California 1234
Poertner Motor Car Co., pleased with results of New York show 730
Porter, W. S., made manager of Boston Locomobile branch 1034
Postal, Charles L., elected president of Motorists' Assn. of Michigan 118
Powe, W. R., to concentrate on general traffic management of A. E. A. 222
Poxson, E. G., made manager of Dort direct factory sales and service office at Detroit..1234
Prather, P. I., visits East 222
Preferred Utilities Corp., adds Monogram Lens representation 231
Premier Motor Corp., set final distribution .. 723
Premier Motor Sales Co.—
Formed by William F. Troescher 118
Sales better than ever 1143
Prest-O-Lite Co., Inc., offices moved to plant..1139
Prices—
New offerings may offset cuts 19
Closed cars in downward trend 717
Rising rubber costs cause no alarm 1141
Production—
July figures show shrinkage 221
Flood of motor cars engulfs 1921 output 313
Crude rubber still stretching 419
1,667,402 in August 717
2,400,000 in 1922, Alfred Reeves asserts... 925
Declines in September 1033
Steel output exceeds estimates 1036
October exceeds September 1129
Pullman Co., body work increasing 229
Pyle, Blair, appointed Cleveland distributer for Lomar Mfg. 835

R

Radoye, Gilbert U., appointed director of Haynes sales and advertising 18
Raskob, J. J., returns from Europe 118
Rawlings, Ralph, made president of Western Automobile Underwriters' Conference.....1130
Registration—
Reaches 13,000,000 for whole world 30
California increases 316
Massachusetts grows 635
Grows large in Canada 939
Increases in South Carolina 939
Remy Electric Co., half-million sets 1922 mark.1245
Rench Motor Sales Co., N. R., reports Piqua favors Hudson and Essex 719
Renick, W. M., appointed Cleveland distributer for Lomar Mfg. 835
Reo Motor Car Co.—
Pays extra dividend 226
Starts Saturday work 223
To hold annual fair 422
Stages big driveaway 719
Repairs, outside man viewed with alarm 825
Republic Iron & Steel Co., merger abandoned 726
Republic Motor Truck Co., reorganization plans reported approved 25
Republic Rubber Corp.—
Sales continue to increase 26
Progresses 930
Youngstown plant at work 1241
Republic Truck Sales Corp.—
Providence, R. I., orders buses 233
To show four types of buses to American Electric Railway Assn. 731
Revere Motor Car Corp.—
To be sold this month 727
Plant is closed 1239
Reynolds Spring Co., reveals balance.....1038
Rice, H. H., to go abroad 410
Richardson, F. Earl, made pres. and general mgr. of Avenue Motor Co..... 29
Richwine, W. A., says dealers can't solve used-car problem 524
Rickenbacker, Maj. Edward—
Marries 514
Visits Berlin shows 826
Rickenbacker Motor Car Co.—
Six makes record 324
Delivered 3,000th car last week 522
Rickenbacker-Philadelphia Co., gets Winton branch 729
Riegel Brothers, finds business on upward trend 631
Ritchie, John A., resigns as pres. of Fifth Avenue Coach to head Chicago Bus 826
Roads—
Weeks hints U. S. may take over roads.... 117
U. S. develops new type of concrete road filler .....l. 131
Moving pictures to show highway types.... 233
Federal-aid roads grow by 600 miles..... 235
Nation's business turns to highways 628
New Jersey pushes bill 731
U. S. to spend huge sums on building 936
Wisconsin spends $9,000,000 1235
Far Eastern Republic sees future 1243
Roamer Motor Car Co., new "6" out soon in 3 types 225
Robb, O. P., made vice-pres. and sales mgr. of Stephens Motor Car Co. 18
Robbins, A. W., joins Bearings Co. of America 410
Robert Bosch Magneto Co., Inc., opens Chicago branch 539
Roblin, Sir Rodman, takes on Gardner distribution in Winnipeg, Canada 835
Roddey Motor Co., finds business growing better 31
Rohde, O. H., elected director of Tire & Rim Assn. 418
Rolls-Royce of America, Inc.—
Prospers 29
Passes 350 output mark 229
Names sales representatives 625
Reports English company at capacity 629
Offers bonds 1135
Rolls-Royce, Ltd.—
"Baby" Rolls for Europe only 836
Straight-side tires on "Baby" 1043
Ross, R. R., made retail sales manager for Sills-Chevrolet Co. 718
Rossel, Ralph M., made manager of crude rubber and raw material div. of White & Co. 731
Rubber—
July imports bound up 9,000 tons 27
Dutch government will leave situation alone 234
Imports in August 21,764 tons 419
Crude production still stretching 419
British committee sees demoralization of market 632
Prices rise to valuation plan 928
Manufacturers make profits 931
Flood reported in September 933
British to restrict output 935
Rising costs cause no alarm 1141
English plan forwarded 1245
Rubber Assn. of America, Inc.—
Tire trade gives six months' report 513
Cooperates with National Tire Dealers' Assn. 933
Studies British restriction 1131

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Rubber Growers' Assn. of London, balks at limiting output 231
Rueschaw, R. C., named on insurance committee of N. A. C. C. 926
Rugg, W. S., made general manager of sales of Westinghouse E. & M. Co. 826
Russell, H. W., made Columbia European representative 1034
Russell Motor Car Co., profits decrease 930
Rutherford, W. O., returns to America 718
Ryan, A. A., starts again 516
Ryan Co., Allan A., started by Allan A. Ryan 516

S

Sales—
September shows slight slump 730
M. A. M. A. reports shows seasonal decline 1035
Called problematical abroad 1239
Salinas, General Gustavo, erects building for Gardner distribution 835
Sanders-Haynes Motor Co., obtains larger quarters 1143
Sauzedde, Claude, made asst. chief engineer in charge of Maxwell design dept. 314
Saxon Motor Car Corp.—
Lists 213,000 shares on exchange 521
Refinancing progresses 723
S. B. I. Motor Sales Co., anticipates good Fall trade 423
Schmidlapp, H. R., made service manager of Pioneer Motor Co. 322
Schwab, Charles M., sees "greatest" future..1239
Schweinert, M. Charles, returns from England, restored 314
Scott, R. H., elected president of Atlas Forge 622
Seaholm, E. A., to go abroad 410
Security, Inc., incorporated 1236
Seiberling, Frank A., upheld in big patent suit 1043
Seiberling Rubber Co., Boston branch to be directed by New York city branch 128
Selden, Cass G., made president of Joseph N. Smith & Co. 118
Selden Truck Corp., executive offices now at plant 1236
Shafer Bearing Corp., to expand 321
Shaw, A. J., named Dort district sales rep... 829
Shaw, J. W., takes Earl for Coast 222
Shelburne Motor Co., experiencing remarkable trade 524
Sheldon, George H., made general manager of Thresher Service 1247
Sherman, George E., made manager of Wright-Kenderine Co. 420
Sherman, Ray E., visits West 926
Sherman, Russell S., finds business mostly trades 1246
Sherwood Automobile Co., New York show was builder of business 730
Shipments—
Greater care urged in shipments to Canada 29
Railway shipments in August break record 420
Short, Charles R., to go abroad 410
Shows—
Second annual show planned by body builders 29
Charlotte to hold tractor exhibit 129
Memphis preparations progress 231
59 makes scheduled in closed car show 327
Space drawing scheduled for October 5..... 409
Tractor exhibit holds crowds 417
Chemists show worth to motor industry .. 421
Sales good at Indianapolis 422
Akron to hold open air exhibits 423
Electric show for Pittsburgh 631
Car makers draw for national space 717
Entries coming in for New York Salon 726
Paris salon brings out record exhibit 726
New York's was builder of business 730
Detroit closed car exhibit may be annual.. 934
Overflow show in N. Y. projected 1043
Jersey City stages third 1045
Los Angeles to stage show 1045
Cincinnati used car exhibit effective 1140
May be staged at Greenville, N. C. 1143
Oakland plans its fifth 1247
Shuler Axle Co., again in active operation...1135
Signal Truck Corp., opens Indiana branch ... 835
Simmons Mfg. Co., patent injunction enforced 24
Simmons Motor Car Co., stages driveaway ... 953
Simon Auto Co., sales increase steadily 31
Simons, F. E., resigns as vice-pres. and director of Grant-Lees Gear Co. 927
Singer, Charles A., Jr., dies 314
Sloan, Alfred P., Jr., returns to America ... 118
Sloan Motor Co., sales 50 per cent better than last year 1045
Small, Frederick M., placed on centralized committee of Industrial Motors 18
Smith, Alfred E., to direct motorist school... 120
Smith, Harold O., resigns as general manager of Racine Tire 514
Smith, James C., advanced to sales promotion dept. of Mack Chicago branch 938
Smith, Jamie H., promoted to sales manager of Butler-Veitch 1247
Smith, L. H.—
Transferred to Briggs-Stratton factory, in charge of eastern equipment div. 628
Made assistant to sales manager H. V. Rohm of Briggs & Stratton 829
Smith, Lon R., resigns as director of sales and adv. of Midwest Engine 516
Smith, R. P., resigns as Mercer president ... 826
Smith, W. A., made Mercer first vice-president 826
Society of Automotive Engineers—
Announces section meetings 230
New England section to meet Sept. 22 422
To see ordnance tests 633
Cooperates in fuel research project 838
To hold production meeting 839
Mid-West section meets 934
Cleveland section meets 934
Buffalo section studies weight reduction ... 934
Metropolitan section plans fine program ..1046
Praised for work for production 1137
Soule Co.,, W. E., reports increase in sales... 30
Southwest Nash Motor Co., sales in better shape 524
Spencer, LeRoy, made general manager of Western Motors 222
Spicer Mfg. Corp.—
Plants busy 515
Retires more notes 832
Spokane-Nash Motor Co., finds trend of business upward 631
Standard Automobile Mutual Casualty Co., offers time-payment insurance 124
Standard Motor Car Co., lowers open car prices 625
Standard Motor Co., finds sales good 1045
Standard Oil of Indiana, cuts gas price 830
Standard Oil of Louisiana, cuts gasoline price 25
Standard Oil of N. J.—
Cuts gasoline price 727
Cuts price on gasoline 1044
Standard Parts Co., to make payment 723
Stanley New York Co., to handle car in Metropolis 631
Starkweather Corp., appointed Michigan Locomobile distributer 31
Starkweather, G. C., made assistant to pres. of Buffalo Pressed Steel 18
Star Motor Car Co., thirty sales companies incorporated 417
Star Motor Co. of New Jersey, to distribute Star 1037
Star Motors, Inc.—
To be moved to Elizabeth, N. J., soon 315
Intimates it will not cut price 929
Production growing 1131
Star Rubber Co., reports record business 836
Steel, ouput exceeds estimates 1036
Steger, E. N., made Buick Detroit sales manager 314
Steinmetz, Charles P., tests out new car....1133
Stephens Motor Car Co., finds outlook good.. 837
Stephens New York Co.—
Appointed distributer for Stephens in New York city 31
Business gaining 727
Stewart-Warner Speedometer Corp.—
Sees big business ahead 25
Retires all notes 411
Sales high 722
Uses plant to capacity 1036
Stoughton Wagon Co., speed truck $1,095.... 831
Stratton-Bliss Co.—
Moves 726
New York show builder of business 730
Street, E. G., made Klaxon southern representative 524
Strickland, William R., made Cadillac assistant chief engineer 826
Stromberg Carburetor Corp.—
Second quarter shows gain 321
In strong financial position 833
Studebaker Corp.—
Coal tension less 221
Analysis shows large profits 226
100,000 cars estimated for year 515
New York branch finds show successful.... 730
20,000 for fourth quarter 1035
90,252 sold in nine months 1133
Boost in price impresses 1233
Stutz Motor Car Co.—
Changes prices 19
More stock sold 26
Adds new speedway roadster 121
Schwab's interests reflected by dealers 225
Running full 721
Plans refinancing 931
To produce six-cylinder car 1132
Reports sales gain 1133
Capital increased 1135
Stutz-Oregon Co., again becomes Stutz distributer 827
Stutz Sales Co., Charles E., made Jordan Indianapolis dealer 31
Supreme Motors Corp.—
In receivership 225
Schedules assets 833
Surrell, W. W., made wholesale mgr. of Peterson Motors for Philadelphia and Baltimore 829
Swartout, B. K., resigns as president of Ohio Body & Blower 1034
Swayne, Alfred H., returns from Europe 118
Sweet, William M., made Klaxon general manager 926
Syracuse Rubber Co., receiver appointed 1245

T

Tanner, F. O., made superintendent of Detroit Chevrolet gear plant 718
Tariff—
Car makers to urge equalization..... 729
Retaliatory duties ordered on imports....1245
Tate Motor Co., finds trade good..... 327
Taxes—
Woman protests U. S. stock tax..... 938
British motorists move for new taxes.....1044
Taxicabs, owners study ethics of morality.... 31
Templar Motors Co., plant to reopen soon.... 832
Texas Co., reduces gasoline prices.....1046
Thayer, Eugene R. V., elected Stutz director.. 23
Thefts—
Urge Congress to pass statute 128
Has marking scheme to foil car thieves.... 326
Thomas, Joseph B., to build 243 garages in New York.....1047
Thompson, Henry L., elected chairman of directors and of executive committee of Willys-Overland 827
Thompson, William N., to continue as Stutz president 23
Timken Roller Bearing Co.—
Offers stock 122
Swings over to nibless bearings..... 830
Profits grow.....1235
Timken Roller Bearing Sales & Service Co., formed to handle servicing of Timken bearings 317
Tires—
Output for August continues high..... 128
Retail collections better..... 234
Straight-side markets increased..... 234
Makers record less output in July..... 325
Makers finding bus trade valuable..... 418
Seek more economic distribution..... 518
August trade maintains balance..... 836
Huge output expected..... 836
Sales good.....1035
Tires & Rim Assn. of America, Inc., reincorporated Tire & Rim Assn..... 418
Tisdale, Glenn A., resigns as general manager and pres. of New York Franklin branch....1036
Titchener, W. E., assigned to St. Louis and vicinity for Brewer-Titchener 718
Toland, William G., heads Eastern Thomart, Inc. 929

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Tower, D. Burnett, transferred to Buffalo by Brunswick-Balke-Collender 18
Towson Body Co., formerly Anderson Electric Car Co..... 235
Tractors, solve problem of cultivating marsh land 130
Trade Associations, urged to help in research..1136
Traffic, standardization of laws urged 1040
Traylor Engineering & Mfg. Co., lists assets.. 723
Tremaine, H. E., made president of Grant-Lees Gear Co..... 927
Trexler Co., increases capitalization..... 931
Troescher, William F., joins Premier Motor Sales Co. as special representative..... 118
Trucks—
Used by postoffice..... 117
Electric parade scheduled..... 129
War trucks not wanted by French.....129
Anti-truck attack overreaches itself..... 324
Wanted by rural counties..... 417
Factors in rail recuperation..... 525
N. Y. city electric truck dealers want slogan 631
California sales large..... 632
H. D. Chapin tells of lobby for makers.... 728
Widely used for milk distribution..... 728
Aid steel industry..... 728
Survey shows big growth in year..... 728
Used by Poland in rebuilding wrecked homes 729
Business due for prosperous era.....1042
Big business again buying many.....1246
Turner, Earl, made manager of Automotive Electric Assn..... 314
Tway Co., Charles W., no longer Texas distributer for Haynes.....1130

U

Uhler, Col. William D., dies.....1130
Underwood, A. G., joins Goodrich Rubber..1130
United and Globe Rubber Corp., incorporated.. 931
United Auto Sales Co., expects 1922 sales to double that of 1921..... 730
United Motor Products Co., sales good..... 939
United Motors Corp., finds price cuts of September hurt business.....1143
United Motors Service, Inc., to handle servicing of Hyatt and New Departure bearings.. 317
U. S. Light & Heat Corp., presents report.... 521
United States Rubber Co.—
Buys Anglo-Dutch output 23
Seen in strong position..... 123
Postpones meeting..... 626
Calls in notes..... 931
Used cars, need campaigns to sell..... 939

V

Vacuum Oil Co., warns against imposter.....1139
Vail, E. L., to visit England 926
Van Alstyne Motor Corp., satisfied with New York show..... 730
Van Cortlandt Vehicle Corp.—
To move 524
Satisfied with results of New York show.... 730
Vandar Motor Sales Corp., reports sales not as good as August..... 730
Vandersall, Leonard, transferred to Brazil for Maxwell-Chalmers 18
Van Kleeck Motor Co., made Rolls-Royce sales rep. in Pittsburgh..... 625
Velie Motors Corp., new brougham $1,795.... 852
VerLinden, Edward, named in new car project 317
Vesta Battery Corp., elected to A. E. A.....1042
Victor Rubber Co., tire sales greater 27
Vogue Rubber Co., organized..... 29

W

Wagner Electric Mfg. Co., plan progresses.. 1240
Waller, W. M., dies.....1034
Waltham Watch Co., to maintain output.....1036
Warner, T. W., purchases New Process Gear. 321
Warren-Nash Co., New York show builder of business 730
Washburn, Frank Sherman, dies..... 926
Watkins, W. H., resigns as director of Sharon Steel 18
Watson Truck Corp., takes over assets of Watson Products 226
Weaver, O. L., resigns as vice-president of Star Rubber 410
Webb, Earl W., put in charge of Detroit office of legal dept. of GMC. 410
Webster Electric Co., elected to A. E. A. 1042
Weeks, J. Borton, goes to Europe..... 516
Weiner, Harry E., made general manager of DeBear Motor Car Co. 622
Westcott Motor Car Co., tells of best six months' business..... 125
Westinghouse E. & M. Co., sees good business 727
Wetherald, C. E., made Chevrolet asst. general manager 718
White, John A., made vice-president of U. S. Light & Heat 222
White Motor Co., denies merger rumor.....833
Whyte-Duffield Mfg. Co., moves..... 728
Wichita Truck Co., consolidates offices..... 422
Wickwire Spencer Steel Co.—
Profits $188,035 125
To acquire American Wire Fabrics Co. 230
Meeting adjourned 415
Stock changed 832
Williams & Hastings, Inc., finds business has fallen off somewhat.....1143
Williams, Henry W., gives new bid for New Process Gear Co. plant 831
Williams, H. P., made sales manager of Joseph N. Smith & Co. 118
Williams, Inc., L. V., finds sales 50% above last year..... 125
Williams, O. H.—
Sails for Europe 118
To operate Hudson-Essex Motors, Ltd. 1132
Wills Sainte Claire of Pa., to move..... 423
Willys, John N., returns from Europe..... 314
Willys-Overland Co.—
Reports large sales..... 23
Cuts prices 518
Inaugurates flat service 1041
Statements reveal large gains.....1241
Willys-Overland Co. of Boston, Willys-Knight completes non-stop run..... 632
Willys-Overland Co. of St. Louis, radio caravan starts trip..... 420
Willys-Overland-Crossley, Ltd., tells of plans 721
Willys-Overland, Inc.—
Passes 900,000 119
August breaks more records..... 317
Wilmot, Walter, elected secretary of Allied Automotive Industries 1140
Wilson, Earl B., made Chalmers director of sales 1130
Winther Motors, Inc., may make stock offering 627
Winton Co., changes at Philadelphia..... 729
Wolverton, Oscar G., made Haynes Texas district sales manager 1130
Wood, C. L., talks on Federal trucks at convention 1042
Woodruff, Charles H., dies.....1130
Wright Buick Co., sales increase 1045
Wright-Moses Motor Co., erects new sales-service station 1045
Wright, Walter F., given Overland distribution in Cleveland 523
Wright, Warren, made president of Akron Auto Dealers' Assn. 826
Wrigley, William, Jr., to be associated in Chicago Bus Co..... 826
Wyman Gordon Co., reduces capital..... 833

Y

Yale Tire and Rubber Co., expands distribution 1241
Yellow Mfg. Co.—
Plans increased output..... 631
Buys Chicago Bus Co. 728
Profits high 1135
Younger, John, elected vice-president and director of Tire & Rim Assn..... 418

Z

Zimplemann, P. J., assigned to part of Ohio, all of Indiana and southern states for Brewer-Titchener 718

DEPARTMENTS IN THIS VOLUME

SHOP AND FACTORY EQUIPMENT

Acme pumping system runs by electricity.... 45
Ames attachment meets all gauging requirements 956
Bethlehem Spark Plug makes Quickway socket wrench 956
Branford water nozzle has spray adjustment.. 542
Brown safety hook easily handled..... 46
Champion Tool offers utility clipper..... 745
Davis lifter raises car four feet..... 541
Durham offers adjustable commutator contactor 956
Edlund bench hack saw is portable device... 541
Elwood Gravi-meter is controlled by vacuum.. 46
Fits-All wrench is handy tool..... 542
Goodell-Pratt introduces No. 569 feeler gauge 956
HB charging outfit is smaller in size..... 744
Hyrate volt checker has zero center scale.... 46
Jenkins rim wrench and tire tool a popular combination 46
K. & B. wrench is high grade tool..... 542
Kant-Slip wrench is all-round tool..... 955
Luther grinder adapted to tire repairs..... 542
Milburn makes American garage outfit..... 955
Milwaukee split rim tool made in two types.. 955
Onli-1 socket wrench uses two bevel gears... 745
Pelican Pliers disconnect terminal clamps.... 955
Racine Junior is built like machine tool..... 45
Reed inside micrometer has lower range..... 541
Rose bushing remover is strong tool..... 745
Roy's valve lifter made in two sizes..... 542
Sauer engine time indicator acts as check... 956
Stevens piston tool does double service..... 542
Stevens puller and driver are Ford tools.... 745
Thomson-Friedlob offers Apex piston ring compressor 745
Unitron Rectifier a simple battery charging outfit 45
Van Dorn offers special radial arm drill..... 541
Western Rubber truck tire mold has semi-flat tread 956
Westinghouse offers motor-operated snap switch 955
Westinghouse portable power stand new product 955

COMPONENTS

Basco extended-handle switch an efficient design 539
Blackmore shock preventer offered for light cars 744
Bock Bearing producing roller bearing with improved cage 539
Dooley clutch presents several interesting features 648
Manzel hydraulic shock absorber has automatic control 952
Midwest Engine goes in for passenger car engines 538

NEW CARS; NEW MODELS

Anderson adds $1,195 light aluminum six to line 42
Anderson shows coach on light six chassis... 435
Barley six makes first appearance..... 649
Chalmers to push new five-passenger coach....1258
Chandler special roadster carries extras..... 249
Cleveland has new low-priced closed type....1058
Cleveland new models attract attention.....1158
Cole "Eight Ninety" an improved car..... 434
Columbia Elite series has larger engine..... 339
Columbia shows new special phaeton..... 538
D.A.C. engine is twin-three with staggered cylinders 953
Dorris offers custom-built touring sedan.....1058
Dort adds sport models..... 852
Earl new closed car priced at $1,395..... 142
Elcar new taxicab is landaulet type.....1059
Haynes makes several improvements in "55". 851
H. C. S. series "IV" better car all around.. 142
H. C. S. offers closed car for touring..... 435
Jordan Blue Boy distinctive sport model..... 338

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Jordan reduces and improves closed models.. 743
Liberty Commander coupe attractive job.... 340
Maxwell Club coupe destined for popularity. 743
Mercer now making six in addition to four.. 952
Moon Tourlux ideal Winter-Summer car 1160
Nash adds five-passenger sedan to six line... 249
Nash adds much equipment to sport model.. 850
Nash roadster now companion to new sport..1058
Oakland offers innovations on 1923 series... 338
Oakland new car has interesting developments 434
Oakland showing two new closed body types. 648
Oakland 1923 sedan has Fisher body..... 851
Olds to make lower-priced closed model..... 248
Olds adds sport roadster to eight..... 850
Peerless has host of interesting details.....1059
Reo new closed cars designed to boost sales.. 744
Rubay design is of high interest.....1159
Stephens new closed car generously sized... 852
Studebaker closed car line has six models.... 850
Studebaker adds new big-six closed model..1159
Stutz Speedway roadster is fully equipped... 249
Stutz new sportsedan custom-built job.....1059
Templar starts production on new coupe.... 339
Velie shows what $60 will add to car..... 43
Westcott makes new larger six series..... 42
C. H. Wills adds brougham..... 649
Willys-Knight seven-passenger in demand...1258

OVER THE COUNTER

American Bosch ignition for Overlands.... 652
American Bosch shows plug at A. E. A. show.1261
Apco windshield cleaner is magnetic..... 854
Aske electric Fuemizer is Ford engine starter.1162
Au-To offers Oro line at A. E. A. show....1265
Benzer has windeflectors 1262
Black & Decker cuts price.....1266
Bonney tools are new 1262
Bosk signal warns both front and rear..... 854
Bowen products presented at A. E. A. show.1261
Bridgeport Brass presents products at show...1268
Bulldog lock safeguards tires 252
Burgess-Norton Co. reveals new plans at show.1267
Bussmann offers fuse assortment case.....1264
Cinco Left-rite stop signal is rear guard 1162
Cino inner-control spot-lite has handy switch 854
Clayton & Lambert improves needle burners..1267
Clearview cleans shield on downward stroke. 651
Conant & Donelson exhibit "reliable" line.....1268
Connecticut Tel. & Elec. shows 190-Y switch..1262
Curtis reveals 1923 line at A. E. A. show..1266
Detroit Pressed Steel reports big demand for disteel wheels 342
"Directometer" is guide 1260
"Direx" rear traffic signal has three lights..1161
"Doo-hick-ee" is automatic air regulator..... 437
Dover stamping novelty 1262
Dow metal pistons made of light alloy..... 652
Dutch brand products win new friends.....1267
Edelmann has spotlight 1262
Elite brings out four new "reliables".....1267
Elmco equipment popular at A. E. A. show.1268
Empire tire valve and cap strongly built.... 437
E-Vap-O heater prevents oil freezing.....1064
Eveready spotlight throws beam 300 feet.... 252
Farco foot accelerator is Ford device..... 252
Fargo ash receiver made in two models.....1161
"Fay-Oh-Rite" valve lifter acts quickly.....1162
Fitzgerald gasket seen at A. E. A. show.....1266
Fyrac Ford heater easily regulated..... 854
Gasolarm sounds warning signal..... 438
Gas "Stew Pot" volatizes heavy ends..... 251
Gemco adds new series 1260
Gibson introduces oil gauge 438
Gill Mfg. introduces two new rings.....1266
Gilmer new fan belt shown at A. E. A. show.1265
Globe to handle sales of Ford lock..... 438
Graynie spare tire lock fits all cars.....1063
Hastings curtain lights designed for Fords..1064
Hastings 100% piston ring durably made....1064
Henry pump keeps Ford engine cool..... 146
Hercules protector guards spare tires.....1161
Holden shock absorber compresses own air.... 145
Hoof town plates come in neat designs..... 652
Imperial carbureter control adjusts mixture.. 251
Imperial spare tire lock protects the valve.. 651
J & B master coil shown at A. E. A. show..1266
Jiffy windshield cleaner dries both sides.... 854
Johns-Manville shows standard line at show..1262
Kay Bee headlight powerful reflector 146
K-D offers new drum spot lamp at A. E. A. show 1264
Kennedy kits attract attention at show.....1265
Keystone adds to line at A. E. A. show....1268
Klaxon has new model 1260
Las-Stik Patch is a strong tube patch.....1266
Lawco moto-meter lock screwed on radiator.. 651
Leterain keeps windshield free from rain.... 438
Lite-Site aids motorist in emergencies..... 652
Lovejoy shock absorber has cushion of oil..1063
Lubri-Tector affords engine protection..... 145
McQuay-Norris shows ring at show.....1265
M. & R. timer in new box 1268
Mitchel Gas is scientific blend..... 438
Motor Specialties exhibits at A. E. A. show.1264
Multibestos shows how to reline brakes.....1261
National Standard shows towing ambulance...1264
New England tube on hand.....1267
No-Leak-O features piston ring at show 1261
Oberdorfer offers wide line of radiator caps. 653
Oilwatch oil gauge measures accurately..... 653
Packard Electric has novel setting at show...1264
Pathfinder has inside control..... 146
Paul Rubber now supplying Tirometer.....1267
Pelton piston ring made in two pieces.....1063
Petry offers wide line at A. E. A. show....1267
Piel reveals new product at A. E. A. show..1267
Polson shows latest at A. E. A. show.....1268
Powerlite is flashlight without battery.....1161
Presto cigar lighter new.....1264
Pyrene shows fire extinguisher at show.....1262
"ReDee" loads springs for easy riding..... 653
Roller-Smith indicators for Dodge Brothers.... 251
Rose lubricator makes bow at A. E. A. show.1268
S. & M. Spot-Lite throws powerful beam.... 651
Security glare eliminator relieves eye strain.. 653
Sentree whistles to warn of engine troubles.. 652
Snappy-Cap opens by pressing trigger..... 651
Spee-Dee offered in handy tube..... 438
Spencer-Smith shows line at A. E. A. show..1264
Splitdorf line familiar 1260
Sterling offers piston ring and starting cranks 1064
Sterling rectifier on view at A. E. A. show..1265
Stevens has new outfit 1261
Stirling Lok is safeguard to moto-meter..... 146
Stover signal has green running light..... 342
Surlok is a new locking steering wheel..... 342
Thermoid has wide line on view at show.....1264
"Three-in-One" keeps Ford engine cool..... 252
Tingley shows many tire devices at show....1266
Trojan signal device is plainly visible..... 146
Universal Controller dims lights slowly.....1064
Valley buffer in postoffice garages..... 342
Van gasoline filter is new visible purifier.... 437
Vanguard bumper is new.....1265
Vesuvius intensifier also protects all plugs..1162
Victor heater is played-up at A. E. A. show.1261
V-P groove cleaner removes carbon quickly..1161
Walker jacks exhibited at A. E. A. show...1266
Walter spring oiler lined with oil-soaked felt. 252
Warner-Patterson shows solder at show.....1261
Weaver indicator measures running alignment 252
Wedford savex warns of engine trouble.....1162
Weed safety bumper in new Ford type.....1063
Wire Wheel No. 3 house wheel has new hub cap 1063

TRUCKS FOR HIGHWAY HAULAGE

Bethlehem producing three improved trucks.. 953
Buick delivery line includes six bodies..... 143
Goodwin-Guilder is new motor bus chassis...1060
Hoover bus body with driver's housing.....1061
Indiana speed truck uses Laycock springs...1061
International Harvester adds bus to truck line 42
Kissel Coach Limited is 18-passenger bus.... 143
Republic introduces its new interurban bus...1060
Selden special equipment of interest to cities.1061

MERCHANDISING

A Penny Postal Card Tells the Story. 650
"Ask 'em to Buy for Christmas"..... 948
Be Your Own Press Agent, Scouten Advises 1056
Customers' Index "Hits the Bull's Eye" 341
Dissatisfied Customers Are Danger Signals 1254
"Don't Miss It," Urges New York Trade 536
Faunce Welds Chain of Merchandising Links 740
Full Value Always, Is Darling's Motto 40
How About a Good Crop of Fall Business? 853
If the Buyer Can't Come to You—Go to Him 954
Local Color Adds to Sales Picture.... 646
Mr. Motorist Looks, Reads—Then Acts 540
"$1,000 for a Name" Brings in the Crowds 250
$1,500 for Your Opinion, Mr. Car Owner 951
One Way to Boost Tire Sales and Shop Work 1156
Order in the Store Brings Order to the Store 1062
Pitching Camp on the Prospect's Doorstep 1057
Products Properly Displayed—Move.. 144
Publicity Keeps the Wheels Turning Round 140
Sales Contest Proves to Be Powerful Elixir 537
"Say It with Something for the Car".. 1259
Served with a Dash of Atmosphere... 336
"Service First" Is Slogan of Marco Garage 44
Showroom Salon Whets the Public Appetite 348
"To the Ladies," Says the Car Dealer.. 246
What Is Wrong with That Sales Letter? 432
Where Two Heads Are Better Than One 436

FEATURES IN THIS VOLUME

Dort Branches Out Into Light Six Field 1151
Fitting "Made in U. S." to the World 331
Highways—The Pressing Problem.... 1147
House the Curb-Parked Car—We Need More Room 1053
By Harry D. Dunn
Lubricating Systems May Be Improved 1051
By F. R. Porter
Making the Headlight Laws National 427
New Peerless a Typical Collins Triumph 135
New York "Try-Out" Booms Closed Cars 639
Presents a Radically Different Spring 334
Proving It Pays to "Ask 'em to Buy".. 1251
Railroad Regulation of Prime Importance 244
By George C. Conn
Satisfaction—The Goal of Every Customer 534
By Gordon M. Mather
Should the Roads Be Hard or Soft?... 643
Struggling for Ideal Transportation.. 943
Teach the Boy About Motors!..... 239
The Production Man Has His Problems 1149
By A. B. C. Hardy
Tractors Pull the Farmer Through... 35
Wherein a Trailer Doubles for a Magic Carpet 531
Why Not Teach Boys About Motors? 843
"You Made It—Help Solve It"..... 735

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The Crowded Field

A Passing Glance is Sufficient

Six four-cylinder sedans are listed at $1,070 or less today.

Fourteen four-cylinder sedans and 18 sixes sell somewhere between the limits of $1,070 and $1,995.

Above $1,995, but under $4,000, it is possible to buy seven fours, 42 sixes and eight eights.

A more complete analysis shows that between $1,500 and $3,500 there are offered 68 models by 56 makers. Thirteen of these are fours, 50 sixes, five eights.

AUTOMOBILE TOPICS'
Table of Passenger Car Selling Points
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Proves that specifications tell a more conclusive story than a mere price list.

The table appears every week. It is revised to date from information supplied directly by the manufacturers. Every issue is printed from new plates to ensure legibility.

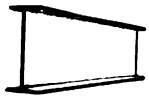
AUTOMOBILE TOPICS
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Made of *rolled* steel —and why



The Bethlehem method of making a truck wheel from a rolled steel I-beam produces a wheel that is simple in construction and strong and durable in service.

THE reason for the all-round better service and economy of Bethlehem Rolled Steel Truck Wheels lies chiefly in their method of construction.

Selected Bethlehem steel is rolled into I-beams by an exclusive Bethlehem process. From these I-beams, simple, compact wheel structures are made, by a series of punching and bending operations, performed on cold metal.

The wheel produced by this method is unlike any other wheel, not only in its construction but in the service it gives.

The Bethlehem Wheel combines abundant strength with lightness and resiliency—a combination that goes far toward explaining the added serviceability and economy of trucks that run on Bethlehem Wheels.

BETHLEHEM STEEL COMPANY, Bethlehem, Pa.

Sales Offices in the following cities:

New York Boston Philadelphia Washington Pittsburgh Detroit St. Louis
Baltimore Atlanta Cleveland Buffalo Chicago San Francisco

BETHLEHEM
ROLLED STEEL TRUCK WHEELS

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"No Extras to Buy"

is a powerful selling appeal for the New, 1923

HAYNES 55 SPORT SERIES

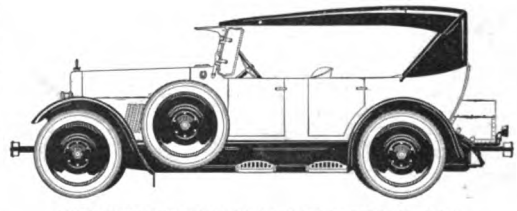
ALL that experience can suggest and the heart can desire in a sport model, will be found in the lavish completeness of equipage which distinguishes this newest offering of Haynes foresight.

It is distinctly what the motoring public wants. Any true sport model should possess such accessories as six disc wheels, six cord tires and tubes, sun visor, trunk and protection bars in rear, as well as the smartness of individual fenders and individual aluminum steps, and the convenience of handsome windshield wings on open models.

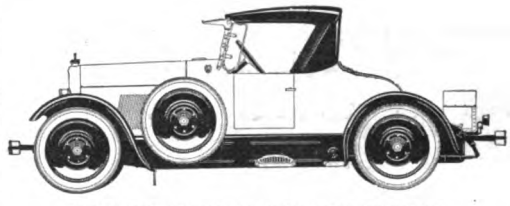
You find all these essential features on the new 1923 Haynes 55 Sport Touring Car —on a graceful body of rich maroon, with Spanish leather upholstery, and an accurately tailored top. The famous Haynes-built six-cylinder motor supplies the dependable performance and power which assure perfect motoring satisfaction.

With such a series to supplement the standard 1923 Haynes 55 and 75 models, the open territory available to good dealers becomes doubly valuable.

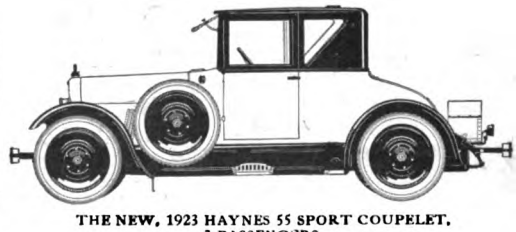
Are you qualified to represent the Haynes? Write, telephone or telegraph for an appointment — confidential if you desire. Address Dept. 1151.



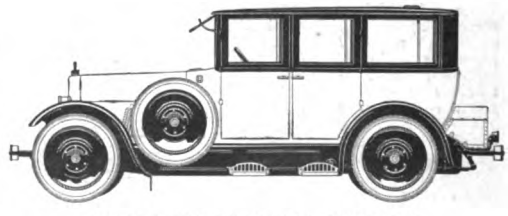
THE NEW, 1923 HAYNES 55 SPORT TOURING CAR, 5 PASSENGERS



THE NEW, 1923 HAYNES 55 SPORT ROADSTER, 2 PASSENGERS



THE NEW, 1923 HAYNES 55 SPORT COUPELET, 3 PASSENGERS



THE NEW, 1923 HAYNES 55 SPORT SEDAN, 5 PASSENGERS

THE HAYNES AUTOMOBILE COMPANY, *Kokomo, Indiana*

EXPORT OFFICE: 1715 Broadway, New York City, U.S.A.

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